EDITED BY
KARRIE A. SHOGREN
AND MICHAEL L. WEHMEYER

HANDBOOK OF ADOLESCENT TRANSITION EDUCATION FOR YOUTH WITH DISABILITIES

SECOND EDITION

ROUTLEDGE

Handbook of Adolescent Transition Education for Youth with Disabilities

Now in a thoroughly revised and updated second edition, this handbook provides a comprehensive resource for those who facilitate the complex transitions to adulthood for adolescents with disabilities. Building on the previous edition, the text includes recent advances in the field of adolescent transition education, with a focus on innovation in assessment, intervention, and supports for the effective transition from school to adult life. The second edition reflects the changing nature of the demands of transition education and adopts a "life design" approach. This critical resource is appropriate for researchers and graduate-level instructors in special and vocational education, in-service administrators and policy makers, and transition service providers.

Karrie A. Shogren, PhD, is Professor in the Department of Special Education and Director of the Kansas University Center on Developmental Disabilities. Her research focuses on assessment and intervention in self-determination and supports needs assessment and planning.

Michael L. Wehmeyer is Ross and Marianna Beach Distinguished Professor in Special Education, Chair of the Department of Special Education, and Senior Scientist and Director of the Beach Center on Disability, all at the University of Kansas. His research focuses on self-determination, applications of positive psychology to the disability context, and applied cognitive technology.

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and Michael L. Wehmeyer*

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Contributor Biographies

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Diane S. Bassett, PhD, is Professor Emerita of the University of Northern Colorado. She was an author for the first edition of the *Handbook*. Diane is a past president of DCDT and is still actively engaged in transitioning secondary youth.

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State. His areas of work include instructional technology, electronic books, assistive technology, distance learning, ESOL education, and teacher education. He has been an educator for over 35 years at the college and secondary level teaching science and educational technology in the United States, China, Korea, Bahrain, Kuwait, Cambodia, and the Caribbean.

Dr. Stephanie W. Cawthon is a professor in the College of Education at the University of Texas at Austin and the director of the National Deaf Center on Postsecondary Outcomes. Her background includes a focus on research and policy as they related to the accessibility of education environments for students with disabilities and English learners, with a specific expertise in the influence of systemic factors on postsecondary success for deaf people.

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Kelly A. Clark, PhD, is currently Program Director of Transition and Education and Senior Extension Associate at the K. Lisa Yang and Hock E. Tan Institute on Employment and Disability at Cornell University. Her research has focused on the development of a curriculum to teach employment soft skills, as well as evidence-based practices for secondary students with disabilities.

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Maryann Davis, PhD, is Director of the Transitions to Adulthood Center for Research at the University of Massachusetts Medical School. She is an internationally recognized expert on services for transition-age youth and young adults with serious mental health conditions. Her focus is on improving treatments and services for this population that help support the development of adult role functioning during the transition from adolescence to mature adulthood. She has examined the ways in which policies and practices support or impede the healthy development of this unique age group.

Evan E. Dean, PhD, OTR/L, is Associate Director at the Kansas University Center on Developmental Disabilities. His research focuses on promoting participation and self-determination for people with intellectual disability or autism. He has published peer-reviewed articles on career design, employment, participation, and supported decision making for adults with intellectual disability and transition-age youth with autism.

Malarie Deardorff, MEd, is a PhD candidate at the University of Oklahoma in Educational Psychology. She currently serves as the assistant director at the Zarrow Center for Learning Enrichment. Her

research interests are in transition assessments, incorporating transition practices into elementary and middle school classrooms, and compliance and quality transition planning.

Dr. Stacie L. Dojonovic is a lecturer in the Department of Special Education the University of Kansas and coordinator for the Online Transition Certificate and Master's Program. Stacie has over 20 years of experience as an educator and transition specialist in both urban and suburban school districts. Her passion through the years has been to continue to engage diverse audiences in order to implement research practices to improve the postschool outcomes of all youth.

Dr. Lyman L. Dukes III is Professor of Special Education at the University of South Florida St. Petersburg with 25 years of educational experience. His research interests focus upon the preparation for and transition to postsecondary education.

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Marsha Langer Ellison, PhD, has served as deputy director of the Transitions to Adulthood Center for Research at the University of Massachusetts Medical School for the past ten years. The mission of this federally funded center and the focus of much of Ellison's research is to improve the interventions and supports that assure successful employment and education outcomes for youth and young adults with serious mental health conditions including students with emotional behavioral disturbance. Most recently she has developed three guides for evidenced-based transition planning for these students through the project "Translating Evidence for Successful Transitions."

Jane Erin is Professor Emerita at the University of Arizona, where she coordinated the Program in Visual Impairment from 1994 until 2015. Prior to this, she was a teacher of students with visual impairment at the Western Pennsylvania School for Blind Children in Pittsburgh, Pennsylvania, and a faculty member at the University of Texas at Austin. She served as the editor in chief of the *Journal of Visual Impairment and Blindness* and has published widely on topics related to the education of children with visual impairment.

Dr. K. Brigid Flannery has worked in the field of special education and at-risk youth for the past 45 years. She is Associate Professor/Senior Research Professor in Educational and Community Supports at the University of Oregon. Currently her areas of interest focus on the retention and completion of high school for all students and implementation of positive school cultures in high school.

Allison R. Fleming, PhD, CRC, is Assistant Professor in Counselor Education and Rehabilitation and Human Services at Penn State University. She has 15 years of experience in rehabilitation as a practitioner and researcher/educator. Her research interests include postsecondary education and employment outcomes for individuals with disabilities.

Dr. Grace L. Francis is Assistant Professor of Special Education at George Mason University. Her research interests include transition to adulthood and family support policies and practices that result in a high quality of life for individuals with significant support needs.

Sonja R. Gadd is a doctoral candidate in the Curriculum and Instruction/Urban Education program at the University of North Carolina at Charlotte. Her research interests include social justice, educational policy reform, discipline disparities, culturally responsive teaching, and classroom management.

Dr. Carrie Lou Garberoglio is Associate Director of the National Deaf Center on Postsecondary Outcomes. Her research focuses on the psychological factors involved in the transition from high school to beyond for deaf people.

Nicholas W. Gelbar, PhD, is an associate research professor at the University of Connecticut and a licensed psychologist in Connecticut whose research and clinical work has focused on supporting adolescents with autism spectrum disorder. He received his PhD in Educational Psychology with a concentration in School Psychology from the University of Connecticut in 2013 and completed a post-doctoral fellowship focused on autism spectrum disorder at the University of Connecticut University Center for Excellence in Developmental Disabilities (UCEDD) in 2014. He served as the research director of the UConn UCEDD from 2014–2019.

Laura Golden, BA, is a research project director at the Transitions to Adulthood Center for Research at the University of Massachusetts Medical School. There she manages research studies regarding the school and work activities of young adults with mental health conditions including the "Translating Evidence for Successful Transitions." She is a doctoral student in Sociology at the University of Massachusetts Boston.

Meg Grigal is a senior research fellow at the Institute for Community Inclusion at University of Massachusetts Boston and co-director of Think College, a national initiative focused on research, policy and practice in inclusive higher education and people with intellectual disability. She serves as a principal investigator on a variety of research grants including the National Coordinating Center for the Transition Programs for Students with Intellectual Disabilities (TPSID) Model Demonstration Programs. Meg has been writing, training, and conducting research in the area of inclusive higher education for over 20 years.

Michael F. Hock, PhD, is Director of the Center for Research on Learning, Senior Research Scientist at the University of Kansas, and Courtesy Associate Professor in KU's Department of Special Education. His research involves the development and validation of adolescent reading and student motivation interventions that respond to the needs of districts or schools. His interests include the design and validation of instructional strategies and practices for improving student outcomes for adolescents who have limited reading proficiency. His interests also include professional development, instructional coaching, and the change process related to getting research to practice.

T. Rene Jamison, PhD, is a licensed psychologist and associate professor at the University of Kansas Medical Center and is the director for the Kansas LEND (Leadership Education in Neurodevelopmental Disabilities) program. She has clinical and research interests around autism in females and interventions that promote meaningful outcomes. Jamison is the founder and director of the Girls Night Out program, an initiative continually informed by the families, students and community partners.

David R. Johnson, PhD, is the Birkmaier Professor of Educational Leadership, College of Education and Human Development at the University of Minnesota. His research has focused on special education and transition policy and services, studies on the postschool outcomes of students with disabilities, cost-benefit analysis of employment programs, and secondary and postsecondary student engagement and dropout prevention strategies.

Hyejung Kim, PhD, is an assistant professor at Texas A&M University-Commerce. She studies the intersectionality of disability, race, and language, especially for transition-age youth with autism spectrum disorders. In her recent studies, she investigated the spatial and temporal fluidity of transition

experiences and delineated the intersectional experiences embodied in the educational trajectories of students on the spectrum.

Marisa Kofke, PhD in Education, University of Delaware, specializing in sociocultural and community-based approaches. Her research interests include the intersection of autism with gender, transition, social skills curriculum, and inclusive education.

Larry Kortering is a professor in special education at Appalachian State University. His research focuses on the issues of school completion, transition assessment, and the school-to-work transition.

Stephen Kwiatek is a second-year doctoral student at the University of North Carolina at Charlotte and a graduate research assistant at the National Technical Assistance on Transition (NTACT). He has two primary research interests: (1) general education teachers' roles in the transition process and (2) the predictors of postschool success. Prior to beginning his doctoral studies, Stephen worked with students with low- and high-incidence disabilities, their families, and community agencies in Illinois.

David W. Leake obtained a PhD in Medical Anthropology and a Master of Public Health from the University of Hawai'i at Mānoa, where he worked with the Center on Disability Studies for nearly 28 years until his retirement in 2018. He served on a variety of research and systems change projects on topics including transition to adulthood, child and adolescent mental health, self-determination, and visitable (accessible) housing.

Jennifer H. Lindstrom, PhD, is an associate professor in the Department of Communication Sciences and Special Education at the University of Georgia. Her teaching and research focus on the provision of classroom and testing accommodations among children, adolescents, and adults with learning and attention issues.

Dr. Lauren E. Lindstrom is Professor and Dean of the School of Education at University of California, Davis. Her program of research is focused on designing career development interventions and improving postschool outcomes for young adults with disabilities. In 2017, she received an international "Innovative Practice" award from the Zero Project in recognition of her work promoting employment and access for young women with disabilities.

Will Lindstrom is the director of the Regents' Center for Learning Disorders at the University of Georgia, an evaluation, training, and research center dedicated to serving postsecondary students with learning-related disabilities. His primary research interests relate to the assessment and documentation of postsecondary learning-related disabilities.

Allison Lombardi, PhD, is an associate professor in the Department of Educational Psychology at the University of Connecticut. She teaches undergraduate and graduate courses in the Special Education Program. Her research examines the transition from adolescence to adulthood for youth with disabilities, with a particular focus on defining and measuring college and career readiness.

Joseph W. Madaus, PhD, is a professor in the Department of Educational Psychology in the Neag School of Education at the University of Connecticut. His research and publication interests include postsecondary education, transition, assessment, and postschool outcomes of adults with disabilities.

JoAnne M. Malloy, PhD, MSW, is a research associate professor at the Institute on Disability at the University of New Hampshire, where she has worked for over 25 years with a focus on strengths-based

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Matthew T. Marino, PhD, is a professor of exceptional education at the University of Central Florida and a former secondary special education, science, and technology teacher/coordinator. His research has been supported by the Institute of Education Sciences, the Office of Special Education Programs and the National Science Foundation. He focuses on the design, implementation, and assessment of technology-enhanced STEM curricular materials.

Dr. James Martin is Zarrow Family Professor Emeritus and former director of the Zarrow Center for Learning Enrichment at the University of Oklahoma. His professional interests focus on the transition of youth with disabilities from high school into postsecondary education and the workforce and facilitating success in high school and postsecondary environments. He examines identifying, assessing, and teaching secondary-age youth and adults with disabilities generalizable self-determination and other skills that when learned will increase the likelihood of desired educational and employment outcomes.

Valerie L. Mazzotti, PhD, is an associate professor in the Department of Special Education and Child Development at the University of North Carolina at Charlotte. Valerie's research interests include self-determination, secondary transition evidence-based practices and predictors of postschool success, and interagency collaboration for students at risk for, or with, high-incidence disabilities.

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Jessica Monahan, MA, is a doctoral candidate in the Department of Educational Psychology at the University of Connecticut and a research manager at the Center for Disabilities Studies at the University of Delaware. Her interests include understanding college and career readiness and how teacher expectations and behaviors impact an individual's readiness for postschool environments. Additionally, she focuses on exploring postsecondary supports for individuals on the autism spectrum through active participant and applied research.

Dr. Mary E. Morningstar is a professor in the Department of Special Education at Portland State University and director of the Transition Coalition, which offers online professional development and resources for secondary special educators and transition practitioners. She teaches classes for pre- and in-service educators associated with students with significant disabilities and preparing students for the transition to adulthood. Her research agenda includes evaluating the impact of secondary teacher quality and professional development on transition practices and student outcomes.

Michelle G. Mullen, MS, CRC, CPRP, PhD (candidate), is a senior research project director at Transitions to Adulthood Center for Research at the University of Massachusetts Medical School, where her research focuses on strategic human capital development and developing pathways to economic self-sufficiency for young adults with mental health conditions. She is the clinical developer of HYPE, a fully integrated model of career services that prioritizes postsecondary education attainment as a method to enhance long-term employment outcomes of this group.

Leslie K. O. Okoji is an associate specialist at the Center on Disability Studies (CDS) at the University of Hawai'i. She has worked in public education for over 20 years in the field of K–12 school counseling and postsecondary research, education, and evaluation with a focus on disability and diversity.

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Clare Papay is a senior research associate at the Institute for Community Inclusion, University of Massachusetts Boston, where she conducts research on inclusive higher education for students with intellectual disability. Clare works for the Think College National Coordinating Center for the Transition and Postsecondary Programs for Students with Intellectual Disabilities model demonstration program funded by the U.S. Department of Education, Office of Postsecondary Education. Prior to joining Think College, she was assistant professor and director of inclusive special education programs at Arcadia University.

Karen B. Patterson, PhD, is Professor of Special Education, Dean of Undergraduate Studies, and Associate Vice President for Faculty Resources at the University of North Florida. Her research interests include classroom management and academic interventions to improve postschool outcomes for college students with disabilities.

James R. Patton is currently Associate Professor of Instruction at the University of Texas at Austin. He has taught students with special needs at the elementary, secondary, and postsecondary levels of schooling. His areas of academic interest include transition assessment, differentiating instruction in general education settings, international special education, and individuals with special needs in the criminal justice system.

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Jessica Oeth Schuttler, PhD, is a psychologist, assistant professor, and training director for the Kansas LEND (Leadership Education in Neurodevelopmental Disabilities) program and the site director for Kansas University Center on Developmental Disabilities at the University of Kansas Medical Center. She is also an associate director of the Girls Night Out program. She's grateful to the many teachers (students, clients, families and faculty/staff members) she has had the good fortune to learn from in each of these roles and to her family for all the ways they support her participation in this work.

LaRon A. Scott, EdD, is Associate Professor of Special Education at Virginia Commonwealth University in Richmond, Virginia. His work centers on race and gender inequities in recruiting and retaining special education teachers, universal design for learning and transition practices, and secondary transition for Black students with disabilities. He is the director of multiple grant-funded projects and serves as a co-editor of *Inclusion*, the online journal of the American Association on Intellectual and Developmental Disabilities.

Janice Seabrooks-Blackmore is Professor of Exceptional Education with the Florida Center for Students with Unique Abilities. Her primary area of interest is transition of youth with disabilities to postschool settings, particularly postsecondary education. Much of her work stems from instructional strategies and collaborative interactions that support empowering others to attain their goals.

Karrie A. Shogren, PhD, is Professor in the Department of Special Education and Director of the Kansas University Center on Developmental Disabilities. Her research focuses on assessment and intervention in self-determination and supports needs assessment and planning.

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Dr. Monica L. Simonsen is the faculty director of Special Education Online Programs at the University of Kansas (KU) and was previously the program coordinator for the Secondary Transition Online Graduate Program. She is a former special educator and transition specialist in Maryland and studies the impact of family engagement and collaboration to promote seamless transition outcomes for students with disabilities. As a founding member of the College Online Research Leaders (CORAL), she is researching effective organizational structures and practices for online program management.

James Sinclair, PhD, is a research associate at the University of Oregon in the Center on Human Development. His research focuses on promoting positive postschool outcomes for individuals with disabilities. His current focus includes understanding the intersection of mental health and disability and how anxiety and depression impact youth who experience a broad range of disabilities.

Seena M. Skelton, PhD, is the director of operations of the Midwest and Plains Equity Assistance Center at Indiana University–Purdue University Indianapolis. In her role, she oversees the provision of technical assistance, resources, and professional learning opportunities to public education systems, as well as conducts research related to educational equity, civil rights, and equity-focused systemic school reform.

Fred Spooner, PhD, is a professor in the Department of Special Education and Child Development, College of Education, University of North Carolina at Charlotte. He coordinates the graduate-level personnel preparation program in severe disabilities. He was co-editor of *TEACHING Exceptional Children* (1988–1996), an associate editor for *Exceptional Children* (2000–2003), and co-editor of *Teacher Education and Special Education* with Algozzine (2003–2009). Currently, he is co-editor-in-chief for the *Journal of Special Education* and associate editor for *Research and Practice for Persons with Severe Disabilities* (*RPSD*). In 2006, he co-edited a special issue of *RPSD* on accessing the general curriculum. Most recently, he served as guest co-editor with Singer and Agran (2017) for an additional special issue on evidence-based practices in severe disabilities. His research interests have focused on instructional applications for persons with severe disabilities, evaluations of distance learning delivery, and practitioner-oriented writing. Since 2008, he has served as co-principal investigator for two Institute of Education Sciences Projects focused on developing high-quality mathematics and science instruction (Project MASTERY) and mathematical problem solving (Project Solutions) for students who participate in alternate assessments judged against alternate achievement standards (the 1%).

Robert A. Stodden has worked more than 35 years in the fields of disability studies and special education, with many of those years focused upon the career/vocational development and transition of youth with disabilities to adulthood. He is the founding director of the Center on Disability Studies at the University of Hawai'i at Mānoa and is currently working in Japan and China as an emeritus professor and international ambassador.

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Joshua P. Taylor is a technical assistance training associate for the Virginia Commonwealth University (VCU) Autism Center for Excellence, research associate for the VCU Rehabilitation Research and Training Center, and a doctoral student at the VCU School of Education. His primary research interests include promoting inclusive education, transition, employment, community engagement, and equity for individuals with autism and other disabilities.

David W. Test, PhD, was a professor in the Special Education Program at University of North Carolina at Charlotte, where his interests included secondary transition, self-determination, and applied behavior analysis. As professor emeritus his current interests include golf, pickleball, travel, and reading for pleasure.

Colleen A. Thoma is a professor in the department of Counseling and Special Education at Virginia Commonwealth University and a graduate of the PhD in Curriculum and Instruction program at

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Audrey A. Trainor, PhD, Professor of Special Education at New York University, studies equity in the opportunities and outcomes of students with disabilities during the transition from high school to adulthood. Using capital theory, her projects examine how economic, cultural, and social capital coalesce and function as levers for power and agency in special education processes.

Le M. Tran is currently a researcher and lecturer at the University of Texas at Austin. She has taught students with special needs at the preschool, elementary, and secondary levels – most recently with undergraduate pre-service teachers in a variety of roles. Her areas of academic interests include transition services, culturally and linguistically diverse exceptional students, and IEP development.

Deanne K. Unruh, PhD, is an associate research professor at the University of Oregon and directs the Secondary Special Education Research Unit. Her research is focused on interventions for youth with disabilities who experience complex interagency collaborative needs that intersect the juvenile justice system, schools, and individualized community-based supports to improve their postschool outcomes related to employment and postsecondary education attainment.

Ashley P. Voggt is a doctoral candidate in Special Education at the University of North Carolina at Charlotte and a research assistant for the National Technical Assistance Center on Transition. Ashley's research interests include using multi-tiered systems as a framework of support and evidence-based practices targeting academic, social, and transition skills for secondary students with extensive support needs.

Paul Wehman is Virginia Commonwealth University Professor of Physical Medicine & Rehabilitation, Chairman of Rehabilitation Research, Director of the Rehabilitation Research and Training Center on Employer Practices for Individuals with Disabilities, and Director of the Autism Center for Excellence. A nationally recognized expert in transition and supported employment, his career is dedicated to the employment of people with physical and intellectual disabilities, working daily with people with disabilities, policy makers, and professionals related to disability. He recently received two major research grants: Employment of Persons with Intellectual and Developmental Disabilities (IDD) and Transition to Employment for Youth with Disabilities.

Michael L. Wehmeyer is Ross and Marianna Beach Distinguished Professor in Special Education, Chair of the Department of Special Education, and Senior Scientist and Director of the Beach Center on Disability, all at the University of Kansas. His research focuses on self-determination, applications of positive psychology to the disability context, and applied cognitive technology.

Dr. Kendra Williams-Diehm is Professor of Special Education at the University of Oklahoma and serves as Director of the Zarrow Center for Learning Enrichment. Her primary research interests include comprehensive transition services with a focus on self-determination and postsecondary outcomes for students with disabilities, with particular interest with starting the process at early grades. She has authored numerous journal articles and book chapters and has served as PI of multiple federal grants.

Dr. Karen Wolffe manages a private practice as a career counselor and consultant in Austin, Texas. She coordinates content for the World Blind Union's employment resources website, Project Aspiro; consults with organizations and schools worldwide on employability skills training and transition programming for individuals with disabilities; and teaches distance education courses via Salus University (formerly Pennsylvania College of Optometry) and Fitchburg University through the Perkins eLearning program. She has written extensively on the importance of careers and employment, social skills development, self-determination, and transition in the lives of people with vision disabilities.

Kathryn K. Yamamoto has been working in the field of vocational rehabilitation and disability services for over 30 years. She earned a Master of Education degree in Rehabilitation Counseling and a PhD in Special Education. She is currently Associate Professor and Director of the University of Hawai'i at Mānoa's Rehabilitation Counselor Education Program.

Dr. Dalun Zhang is Professor of Special Education and Director of the Center on Disability and Development at Texas A&M University. He is also Director of Faculty Development for the College of Education and Human Development. His research interest is centered on assisting youth with disabilities to make a successful transition from school to self-determined adult life.

Tables and Figures

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Foreword

"Transition is complex because it occurs over time, across settings and domains, and it represents both processes and results and, over time, a need to expand the framework for transition has evolved" (Trainor et al., 2019). When the Division on Career Development and Transition began its work over 40 years ago, few imagined that the field would evolve and expand into the critical arena it holds today. We know that 21st-century academic and work skills, coupled with self-determination and family involvement, are imperative for all youth to live as productive citizens and are inherently embedded in the field of transition. When the first edition of the *Handbook* was published, it was thought (hoped) that our work would foster enormous gains in the postschool realities of youth with disabilities. Unfortunately, this is not yet the case. Young adults may still find themselves underemployed, isolated, and dependent on others in ways that segregate them from society. Diverse youth continue to experience marginalization and persistent poverty. As transition educators and researchers, our passion for justice for these youth compels us to discern how to wrong these rights. We dig deeper and expand upon our prior knowledge and experience. Today, transition encompasses a life design framework that deepens career and college readiness skills, enhances knowledge of self-determination and self-advocacy, provides more specific functional and academic skill building in general education settings, and collaborates with school systems cognizant of effective transition practices.

Improvement in our understanding of a multifaceted approach to the field of transition has been aided by the recent identification and codification of evidence-based predictors that help us recognize the effectiveness of our practices and efficiently work within this framework. The use of these predictors, painstakingly developed by some of the best researchers in our field and provided through the National Secondary Transition Technical Assistance Center, provides us with a clearer path to measure successful outcomes for the youth we serve in the areas of postsecondary education, employment, and community participation. The *Handbook* stands as a repository for much of this work.

The first edition of the *Handbook of Adolescent Transition Education for Youth with Disabilities* was published in 2012 and featured 29 chapters written by leading researchers in the field. It stood as a veritable "Who's Who" in the field of transition and offered a powerful compendium of the breadth and depth of transition issues. Now, professors Karrie A. Shogren and Michael L. Wehmeyer have wisely chosen to update the *Handbook* to reflect the significant changes the field has undergone, including new practices and research that undergird its strength. Both Shogren and Wehmeyer are prolific researchers and writers who have made great strides across the field of transition; they are the perfect team to lead this work. The *Handbook* is now comprised of 33 new and updated chapters; it utilizes the talents of previous authors who need no introduction along with a healthy dose of new scholars who represent the best of new research and scholarship in our field. Six sections delineate the broad strokes of best practice in the field. These include an introduction and overview of adolescent transition, education planning, student development, program structure, and disability-specific transition education.

This *Handbook* stands as a foundational work to all who wish to learn about transition, including educators, family members, employers, policy makers, and even youth themselves. Since none of us can know everything about the many facets of our field, the *Handbook* provides a valuable resource that can be used across time and settings. As I have read some of the updated and new chapters in the *Handbook*, the drive to achieve effective transitions to adult life for all youth reaffirms itself, and I realize the immense power and enthusiasm of our field. I am proud to count myself as a colleague of the fine authors of this book. I invite you to use the *Handbook* to inform, to affirm, and to sustain the passion for transition that we share.

<div align="right">

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An Introduction to the Second Edition of the *Handbook of Adolescent Transition Education for Youth with Disabilities*

Karrie A. Shogren and Michael L. Wehmeyer

Since the publication of the first edition of the *Handbook of Adolescent Transition Education for Youth with Disabilities*, much has changed in the world and in the field of adolescent transition education. But the transition from secondary education to adulthood remains a period of major change during which adolescents face changing roles, responsibilities, and support systems. This creates a consistent and ongoing need for effective supports for students with disabilities as they transition from school to postsecondary education and begin to design their careers, to create new social networks, to make decisions about where and without whom to live, and to take more and more responsibility for their health and financial affairs. However, the conditions under which these transitions are occurring have changed and continue to change. With regard to higher education, there are both a growing number of opportunities for students with intellectual disability and autism spectrum disorders to attend college, but at the same time, there are ongoing challenges related to the increasing financial costs of higher education as well as ongoing issues related to disparities in access and completion for students from diverse backgrounds, who are first-generation college students, or who have disabilities. The same is true in employment. Whereas in the past, employment trajectories for many people were stable within an industry or role, in today's economy there is significant volatility as career pathways have opened and closed because of technological innovation and the growing globalization of our economy. Planning for a job can no longer be the target; instead, designing a career (and life) characterized by the ability to adapt to changes that will continue to emerge both in the work sector as well as in the communities within which we live is a necessity.

Given these issues, the second edition of this handbook attempts to build on the foundation of the first edition by highlighting what we have learned in the field of transition since its inception, as well as introducing new areas of focus and directions that have emerged in the intervening years. The goal is that this handbook can serve as a comprehensive resource to students, communities of educators, related service and agency personnel, families, support providers, counselors, and really anyone who supports the complex process of transition to adulthood for adolescents with disabilities.

Chapters in this text provide an in-depth review of the historical foundations of transition (Chapter 2) as well as an overview of the history and current focus of transition policy (Chapter 3). However, as an introduction, the Individuals with Disabilities Education Act (IDEA), the federal law requiring all students with disabilities to receive a free, appropriate public education, has, since 1990,

also required the educational programs of adolescents with disabilities receiving special education services to include a focus on services and instructional needs to enable the student to "transition" from secondary education to postsecondary education, employment, and community life. While there have been slight changes to the transition mandates in IDEA since their introduction in 1990 (e.g., changing the age at which transition planning is required to begin from 14 to 16), there has been remarkable consistency in the law and in research and practice that suggests this is a critical period that requires targeted and specific supports to lead to successful outcomes.

In fact, early definitions of transition that emerged after the introduction of the mandates in IDEA continue to have relevance today. The Division on Career Development and Transition developed one of the most comprehensive, early definitions (Halpern, 1994). This definition underscores that the transition period is a time of change and that being proactive is central to students achieving the adult outcomes that have meaning to them.

> Transition refers to a change in status from behaving primarily as a student to assuming emergent adult roles in the community. These roles include employment, participating in postsecondary education, maintaining a home, becoming appropriately involved in the community, and experiencing satisfactory personal and social relationships. The process of enhancing transition involves the participation and coordination of school programs, adult agency services, and natural supports within the community. The foundations for transition should be laid during the elementary and middle school years, guided by the broad concept of career development. Transition planning should begin no later than age 14, and students should be encouraged, to the full extent of their capabilities, to assume a maximum amount of responsibility for such planning.
>
> *(p. 117)*

These concepts of proactivity (Chapter 18 on planning for transition in middle school), community supports (Chapter 25), collaboration (Chapter 21), student involvement (Chapter 9), and self-determination (Chapter 14) continue to be emphasized in this text, and each chapter highlights where we have progressed through research and where we have to go in implementation to actualize the outcomes that are the goal of both IDEA and other laws that have more recently emphasized the criticality of the transition process, such as the Workforce Innovation and Opportunity Act (WIOA).

Other concepts that have been recognized as critical throughout the transition period, such as meaningful transition assessment (Chapter 8), individualized education program (IEP) development (Chapter 7), family involvement (Chapter 10), life skills (Chapter 12) and social skills (Chapter 13), and preparing transition professionals (Chapter 26) continue to be highlighted while new and emerging directions in the field that address the changes we are experiencing in transition education and our broader community and society are also introduced. For example, chapters on career design (Chapter 5), effective academic instruction to facilitate transition (Chapter 11), and college and career readiness (Chapter 19) highlight these new directions. Emerging directions related to technology (Chapter 17) and promoting school completion (Chapter 16) and job development (Chapter 24) and structured work experiences (Chapter 15) are also introduced. Ways to enhance our recognition of the complexities of diversity and to promote equity in transition processes and outcomes (Chapter 20) are also emphasized, as are ways to promote both access to (Chapter 22) and completion of postsecondary education (Chapter 23). Finally, specific considerations based on disability-related needs are highlighted (Chapters 27–33).

The emergence of evidence-based practices in each of these areas (Chapter 4) as well as the ongoing needs for additional research on implementation and scaling up are highlighted through the text. And these ongoing needs for research, implementation supports and scaling up of effective practices cannot be understated. Although progress has been made since the introduction of the transition mandates and the publication of the first edition of this text, we can only hope that by the time the

third edition is being conceptualized, the disparities experienced by young people with disabilities in so many domains of their lives have been eliminated. There continues to be a pressing need that must drive all of us to recognize the need for complex, collaborative efforts that are driven by advocates with disabilities themselves to address the vexing problems that have limited our progress in addressing the disparate postschool outcomes of young adults with disabilities.

In the first edition of this text,[1] findings from the emerging data quantifying these outcomes that highlighted the desperate need for attention to transition were summarized. A quote was used to characterize these findings emerging in the 1980s and 1990s:

> The outcomes experienced by youth with disabilities for employment, residential status, and social and interpersonal relationships are disappointing. Although rates vary from state to state, most youths with disabilities are either not employed or underemployed. Few youths live independently, many are not well integrated into their communities, and some appear to be lonely. Overall, youths with disabilities face a very uncertain future that holds little promise of improving as they age.
>
> *(Chadsey-Rusch, Rusch, & O'Reilly, 1991, p. 28)*

Unfortunately, all too similar conclusions can be drawn today about the postschool outcomes of young adults with disabilities. While some improvements, particularly in access to postsecondary education and employment, have been seen in certain disability groups, there remain persistent disparities, some of which continue to grow. As highlighted in chapters throughout this text, the National Longitudinal Transition Study-2 (NLTS-2) as well as the more recent National Longitudinal Transition Study 2012 (NLTS 2012) continue to suggest that students with disabilities experience highly disparate outcomes and that these outcomes are influenced by disability label, race/ethnicity, gender, and socioeconomic status.

For example, recent cross-sectional data collected by NLTS 2012 (in 2012 or 2013) while youth were still in school suggest:

- Youth with disabilities are more socioeconomically disadvantaged than their peers without disabilities.
- Youth with disabilities are more likely to struggle academically and less likely to take necessary steps during school toward postsecondary education and employment.
- Youth with intellectual disability, autism, deaf-blindness, multiple disabilities, and orthopedic impairments experience the most risk in their transition planning and outcomes (National Center for Education Evaluation, 2018).

Perhaps the most troubling finding from NLTS 2012, particularly for readers of this text, was that while youth with disabilities are more likely to be engaged and use some supports while in school (compared to previous NLTS data) youth were less likely to participate in transition activities than in the past. This suggests that there have actually been decreases in engagement in transition planning, which we know has the potential to reduce the disparate postschool outcomes. This suggests an ongoing need to promote both implementation and scaling up of the practices described in this text.

This is particularly important as the longitudinal data from the NLTS-2, collected between 2001 and 2009 by following youth with disabilities as they completed secondary school and transitioned into adult life, suggested that up to eight years after youth exited high school, youth with disabilities were:

- Less likely than peers to have enrolled in any postsecondary education and significantly less likely to have completed postsecondary education.
- When working, earning significantly less than their peers without disabilities.
- Less likely to be establishing financial accounts, such as checking accounts or credit cards than their peers without disabilities (Newman et al., 2011).

These differences were even more disparate for those with specific disability labels; for example, those with intellectual disability were significantly less likely to be enrolled in postsecondary education as well as be employed at any level than those with other disability labels. There are also differences based on gender, with males working significantly more hours when employed than females, African American youth being less likely to establish financial accounts, and those living in lower socioeconomic strata being less likely to be employed (Newman et al., 2011).

These data suggest the compelling need to continue to advocate for the implementation of effective transition supports, using the core values that have driven the field of transition since its inception, and integrating emerging directions, particularly related to student self-determination, promoting college and career readiness, merging academic and transition instruction, considering how to leverage emerging supports for collaboration such as WIOA, and promoting access to and completion of postsecondary education and meaningful career design and community participation.

Overall, we must be driven by key values as we support young people to create meaningful adult lives.

- Transition efforts should start early.
- Planning must be comprehensive.
- The planning process must consider a student's preferences and interests.
- The transition planning process should be considered a capacity-building activity (i.e., consider a student's strengths).
- Student participation throughout the process is essential.
- Family involvement is desired, needed, and crucial.
- The transition planning process must be sensitive to diversity.
- Supports and services are useful, and we all use them.
- Interagency commitment and coordination are essential.
- Timing is crucial if certain linkages are to be made and a seamless transition to life after high school is to be achieved.
- Transition continues, and the focus must be on career and life design, enabling self-determination across the life course.

Ways to support these outcomes will be the focus of the second edition of this text.

Note

1. Dr. Kris Webb, who was a co-editor for the first edition of the handbook, has retired and has not been involved in the editing of this edition. However, the editors want to acknowledge Dr. Webb's significant role in the first edition, which almost certainly is reflected to a degree in this edition.

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A History of Adolescent Transition Education

*Robert A. Stodden, David W. Leake, Kathryn K. Yamamoto,
Leslie K. O. Okoji, and Kelly D. Roberts*

Writing a piece on history that one has actually lived through can be classified more as a personal experience than a historical piece. The lead author of this chapter started as an industrial arts woods teacher in the early 1970s when he knew little about the emerging field of special education. One day a teacher from the fenced-off "Trainable Mentally Retarded" (TMR) Center dropped by to borrow tools because she had been told to start a woods program on a counter in her classroom. He suggested instead that he could try to include some of her students in his shop class. His students worked in mentor-mentee pairs at a series of workstations, each designed to enhance specific carpentry and related math and reading skills. He assigned his first student with a disability to the "finish table" for sanding, squaring, and leveling wood. With a mentor's assistance, that student quickly excelled at these tasks, adapted well to the shop setting, made friends, and, most impressively, made similar progress as other students in meeting skill development expectations.

Six months later the collaborative venture abruptly ended when the TMR Center administrator questioned why his students were leaving the fenced-in grounds. The lead author often wondered what happened to that first student with a disability who showed so much promise. Did he have opportunities to explore the world of work and develop postschool goals, did he receive any services to help him achieve those goals, and did key people believe in his potential and help ensure he would have an equal opportunity to partake in and benefit from real work?

The term "transition" was yet to be coined, and little was known about what happened to students with disabilities after leaving lower education. On one hand, many things have changed for students with disabilities as they prepare for and transition to adulthood, yet on the other hand, some things have not changed. This chapter will summarize key historical events in the emergence of the field of transition and will analyze trends and themes that have surfaced along the way in serving "youth with disabilities," referring to persons between the ages of 14 and 24 years.

We often think that a key reason for studying history is to understand where we came from, to learn about those things that worked and were of benefit, and to understand events so as to not make the mistakes of the past. As readers will experience in this chapter, there are many influences upon the sequence of historical events, as well as patterns of human and institutional behavior, that affect the way history is applied, or not applied, to present and future behavior and decisions. When considering the transition initiative for youth with disabilities, there is a rich history to be shared and a better understanding of where we are in the field to be had.

Halpern (1992) provided one of the early historical overviews of the transition field, identifying three transition movements. The first came during the 1960s with work/study programming, which failed to deliver on its promise due to funding and administrative barriers to the necessary cooperative agreements between schools and vocational rehabilitation agencies. Next, during the 1970s was the career education movement, aimed at the total student population in all grades through career-education–infused curricula. However, its viability for students with disabilities was greatly reduced in 1982 when Congress repealed the Career Education Implementation Incentive Act of 1977, which specified persons with disabilities as one of its target populations. Then came the transition initiative launched by the U.S. Department of Education's Office of Special Education and Rehabilitation Services (OSERS) in 1983, information about which will be detailed subsequently.

In his review, Halpern (1992) applied the metaphor of "old wine in new bottles" to drive home the point that past efforts ended up addressing the same or similar issues, which were likely to remain with us and before long require another "new bottle" or label but with the same old wine in it. The implication was that we keep doing the same thing over and over, just renaming and repackaging it. As a result, the basic problems and underlying needs of youth with disabilities in transition are never fully addressed or solved.

Stodden and Leake (1994) furthered the discussion by highlighting the need to change the contents of the bottles rather than continually recycle them. They noted the tendency in systems providing transition-related services to use an approach referred to as the "add-on syndrome" to try to solve systemic problems, rather than transforming the system itself. Examples of "add-ons" include curricula or programs to increase student capacity for self-determination or to enhance social skills, which are thought to be problem areas for many youth with disabilities. However, from a systemic perspective, all students would be better served if schools and their personnel were focused on establishing campus and classroom climates that enable inclusive education and foster development of not only academic skills but also social–emotional skills, self-determination, planning for life after high school, and other essential functional life capacities. For the transition stage in particular, Stodden and Leake (1994) suggested an essential advance would be for schools to create effective transition supports and services through strong collaborative relationships with families, related services agencies, employers, and public service organizations.

Historical Roots of the Transition Initiative, 1916–1960

The roots of transition education for youth with disabilities can be traced to World War I, when it was realized that many U.S. military veterans returning to civilian life were having difficulty finding a job. This was especially true for those with few job skills, limited literacy, and/or injuries sustained during service. When the U.S. Congress passed the National Defense Act of 1916, potential benefits for veterans included vocational education (to prepare for industrial or commercial occupations) and vocational rehabilitation services (to support persons with disabilities to overcome barriers to employment) (Stodden & Roberts, 2006).

Table 2.1 provides a comprehensive listing of federal legislation impacting the field of transition beginning with the National Defense Act of 1916. The table clearly reflects how, over succeeding years, many of the advancements in serving youth with disabilities were contained in vocational rehabilitation and vocational education legislation, often in response to the needs of World War I and II military veterans. Further impetus was provided by legislation assuring the equal access to services and facilities of persons with disabilities, especially special education services as specified in the Education for All Handicapped Children Act of 1975 and subsequent reauthorizations (which have changed the title to the Individuals with Disabilities Education Act, or IDEA).

During World War II, urgent workforce needs drove legislation to expand vocational rehabilitation. For example, the Vocational Rehabilitation Act Amendments of 1943 added medically related

Table 2.1 Federal Legislation Relevant to Adolescent Transition to Adulthood

Year	Legislation	Relevance to Adolescent Transition
1916	National Defense Act (P.L. 64–85)	Funded vocational rehab and education programs for World War I veterans with limited literacy and job skills
1917	Vocational Education Act (P.L. 64–347)	Established Federal Board for Vocational Education; first federal support for secondary schools to provide vocational rehabilitation and education
1918	Soldiers Rehabilitation Act (P.L. 65–178)	Provided veterans with disabilities further assistance upon discharge from military service
1920	Vocational (Industrial) Rehabilitation) Act (P.L. 66–236)	Added civilians to those eligible for vocational rehabilitation and education
1921	U.S. Veterans Bureau Act (P.L. 67–47)	Streamlined services for veterans to address problems due to complicated benefits system and poor management
1930	U.S. Veterans Administration Act	Authorized president to consolidate U.S. Veterans Bureau, U.S. Bureau of Pensions, and National Home for Disabled Volunteer Solders into new U.S. Veterans Administration
1935	Social Security Act (P.L. 74–271)	Established permanent funding streams to enable long-term planning for programs for persons with disabilities
1943	Vocational Rehabilitation Act Amendments (P.L. 78–113)	Added medically related services for those with physical disability, blindness, mental retardation, and mental illness; created Office of Vocational Rehabilitation
1944	Servicemen's Readjustment Act, known as the G.I. Bill (P.L. 78–346)	Benefits included low-interest business loans and coverage of education expenses, but exclusion of soldiers of color from many benefits increased racial inequality
1946	Hospital Survey and Construction Act (P.L. 79–725)	Funded improved physical accessibility; research to develop effective services; and workforce development for providing therapy and supports to persons with disabilities
1954	Vocational Rehabilitation Act Amendments (P.L. 83–565)	Funded personnel training plus research, leading to development of work-study programs, sheltered workshops, job placement, and post-employment supports
1963	Vocational Education Act (P.L. 88–210)	Expanded vocational programs and training for persons with disabilities
1964	Civil Rights Act (P.L. 88–352)	Outlawed discrimination based on race, color, religion, sex, or national origin
1965	Elementary and Secondary Education Act (ESEA) (P.L. 89–313)	Established Title I with funding to public schools serving high numbers of at-risk students, which still represents an important funding source for many schools
1965	Vocational Rehabilitation Act Amendments (P.L. 89–333)	Extended services to persons with severe disabilities; promoted "social rehabilitation" to decrease reliance on institutionalized care and to promote independent living
1966	Elementary and Secondary Education Amendments Act (P.L. 89–750)	Designated students with disabilities as Title I target population; added Title VI establishing grants program to assist states in educating students with disabilities
1967	Vocational Rehabilitation Amendments Act (P.L. 90–99)	Funded research, demonstration, and training projects, plus recruiting and training service providers; required 10% of program funds be used for youth with disabilities

(*Continued*)

Table 2.1 (Continued)

Year	Legislation	Relevance to Adolescent Transition
1968	Vocational Education Amendments Act (P.L. 90–576)	Promoted "ready access" to vocational training by youth with disabilities; reserved 10% of program funds for persons with disabilities
1973	Rehabilitation Act (P.L. 93–112)	Required federal contractors to have affirmative action employment plan for persons with disabilities; required nondiscrimination by training institutions and employers; prioritized persons with severe disabilities with sheltered workshops a suitable option; required individualized plans with goals, objectives, services, and timeframes
1973	Comprehensive Employment and Training Act (CETA) (P.L. 93–203)	Reorganized existing employment and vocational programs, with a focus on meeting needs of unemployed persons with few occupational skills
1973	Rehabilitation Act of 1973 Amendments (P.L. 95–602)	Established National Institute of Handicapped Research
1974	Elementary and Secondary Education Amendments Act (P.L. 93–380)	Included all key components of following year's landmark P.L. 94–142, except activities timeline; established Office of Career Education within U.S. Office of Education
1975	Developmental Disabilities Assistance and Bill of Rights Act (P.L. 94–103)	Launched University Affiliated Facilities to promote research-based approaches in surrounding communities
1975	Education for All Handicapped Children Act (known as EHA, now IDEA) (P.L. 94–142)	Promoted free and appropriate public education (FAPE) and least restrictive environment (LRE) through partial funding to states to include all students with disabilities (usually ages 3–21); established due process and required IEPs that could have transition-related vocational objectives and related services
1976	Vocational Education Amendments Act (P.L. 94–482)	Increased funding for vocational education and continued the 10% funding earmark for persons with disabilities
1977	Career Education Incentive Act (P.L. 95–207)	Promoted career education for students of all ages (however, the act was repealed in 1981 due to budget cuts)
1982	Job Training Partnership Act (P.L. 97–300)	Strengthened CETA with funding specifically for youth with disabilities
1983	Education for All Handicapped Children Amendments Act (P.L. 98–199)	Added Section 626, Secondary Education and Transition Services for Handicapped Youth Programs; specified transition outcomes; funded research and program development (including OSERS transition initiative)
1984	Carl D. Perkins Vocational and Technical Education Act (P.L. 98–524)	For youth with disabilities, mandated services be provided in the LRE according to vocational goals and objectives specified in their IEP
1988	Technology-Related Assistance for Individuals with Disabilities Act (Tech Act) (P.L. 100–407)	Funded state systems change to increase the access of persons with disabilities to assistive technology, which is often an important success factor in transition

Year	Legislation	Relevance to Adolescent Transition
1988	Department of Veterans Affairs Act (P.L. 100–527)	Upgraded the U.S. Veterans Administration into a cabinet-level Department of Veterans Affairs
1990	Americans with Disabilities Act (P.L. 101–336)	Required equal access to school and work environments through reasonable accommodations
1990	Reauthorization of EHA as Individuals with Disabilities Education Act (IDEA) (P.L 101–476)	Defined transition services and required statement of those needed in IEPs, beginning by at least age 16; promoted planning focused on postschool goals (expanded to include independent living and community participation)
1993	Job Training Reform Amendments (P.L. 102–367)	Funded Job Corps Centers for disadvantaged youth needing job skills training
1992	Rehabilitation Act Amendments (P.L. 102–569)	Used the same definition of transition as IDEA of 1990
1994	National Service Trust Act (P.L. 103–82)	Created disability-accessible voluntary program in which community service could earn college scholarships
1994	School-to-Work Opportunities Act (P.L. 103–239)	Provided seven-year grants for states to develop school-to-work systems for all students with work-based learning, school-based learning, and connecting activities
1998	IDEA Amendments Act (P.L 105–17)	Lowered transition planning start age from 16 to 14; promoted self-determination and involvement of other agencies in planning; required results-oriented process toward postschool goals; ensured students with mild disabilities have transition plans; required states develop statements on transfer of rights under IDEA to students at age of majority; restructured discretionary programs to be more readily justified for continued congressional funding
1998	Workforce Investment Act (WIA) (P.L. 105–220)	Consolidated numerous federally funded initiatives to enable seamless one-stop disability-accessible services
1999	Ticket to Work and Work Incentives Improvement Act (P.L. 106–70)	Amended the Social Security Act so persons with disabilities could be employed without losing all their cash benefits and health-care coverage
2001	Reauthorization of ESEA as No Child Left Behind Act (NCLB) (P.L. 107–110)	Imposed annual standardized academic subject testing, which led to reduced functional life skills training needed for transition success for some students but greater inclusion in regular academic classrooms for others
2004	Reauthorization of Technology-Related Assistance for Individuals with Disabilities Act (P.L. 108–364)	Refocused the act to providing direct aid to individuals, increasing access to assistive technology needed by youth to achieve productive postschool outcomes
2004	Reauthorization of Individuals with Disabilities Education Improvement Act (IDEA) (P.L. 108–446)	Changed IEP requirements to lessen administrative burdens, including raising planning start age from 14 back to 16; required summary statement of student's academic achievement and functional performance at end of special education eligibility, with recommendations for assistance to reach postschool goals; integrated NCLB provisions

Table 2.1 (Continued)

Year	Legislation	Relevance to Adolescent Transition
2008	Americans with Disabilities Act Amendments (ADA) (P.L. 110–325)	Made it easier to establish disability status within the meaning of the ADA, potentially increasing access to transition supports and services
2014	Workforce Innovation and Opportunity Act (WIOA) (P.L. 113–128)	Improved access to education and workforce services and required state vocational rehab agencies to allocate at least 15% of funding for pre-employment transition services
2015	Reauthorization of NCLB as Every Student Succeeds Act (ESSA) (P.L. 114–95)	Required states to try to increase high school graduation rates, potentially boosting low rates of youth with disabilities and enhancing prospects for transition success

services, such as medical exams, corrective surgery, prosthetic devices, and occupational and physical therapy, thereby enabling more persons with physical, sensory, intellectual, and mental disabilities to access services (Reed, 1992; Stodden & Roberts, 2006). When that act was updated in 1954, it funded professional development for rehabilitation personnel; research to develop effective services; and training of providers in occupational therapy, physical therapy, speech and hearing pathology, nursing, and special education (Switzer, 1969). The research and training promoted the development of work-study programs, sheltered workshops, job placement and work-related activities, and post-employment activities for persons with disabilities, including those of transition age (Stodden & Roberts, 2006).

Legislation of the 1960s and 1970s: Advancing Disability Rights

The Civil Rights Act of 1964 outlawed discrimination based on race, color, religion, sex, or national origin and also energized a movement to gain similar anti-discrimination requirements for the basis of disability. Although that goal was not fully realized until the passage of the Americans with Disabilities Act of 1990, other landmark federal laws were passed in the 1960s and 1970s that prohibited discrimination based on disability throughout most of the federal government's service domains. Many of these laws reflected new understandings about why and how people with disabilities face low expectations and discrimination and highlighted the importance of adhering to such concepts as social inclusion, self-determination, person-first language, free and appropriate public education (FAPE), and least restrictive environment (LRE) (Scheerenberger, 1987; Stodden, Okoji, & Nagamatsu, 2018; Stroman, 2003).

Supports and services relevant to transition were expanded by several vocational education and vocational rehabilitation laws during the 1960s (as shown in Table 2.1), with particular attention to including people with severe disabilities, as advocated by President John F. Kennedy in his 1962 State of the Union address. For this population, the usual focus on vocational rehabilitation was supplemented with programming for social rehabilitation to decrease reliance on institutionalized care and to promote independent living (Switzer, 1969). States were also required to reserve 10% of their federal matching grant funds in vocational rehabilitation for serving youth with disabilities and also reserve 10% of their matching funds in vocational education for people with disabilities, including youth.

The Rehabilitation Act of 1973 broadened the concept of rehabilitation to include services and accessibility for independent living. Section 503 stipulated that businesses with federal contracts must have affirmative action employment plans for persons with disabilities. Section 504 required

nondiscrimination by schools and other training institutions as well as by employers. The act also required rehabilitation counselors to write individualized plans that included goals, objectives, services, and timeframes, a requirement that served as a model for later legislation (Reed, 1992).

Increased responsibilities of public schools in serving students with disabilities were specified in the Education for All Handicapped Children Act of 1975 (commonly referred to as the EHA). FAPE and LRE were guiding principles, with most states interpreting the law to include all students with disabilities from ages 3 to 21. In addition, all students identified with disabilities were to be educated according to an individualized education program (IEP). The emergence of attention to the transition-to-adulthood period was seen in IEP criteria that allowed for the inclusion of career and vocational objectives and other related services, if deemed appropriate by the IEP team.

Another significant influence on the development of the field of transition was the founding of what is now the Division on Career Development and Transition (DCDT), organized in 1976 as the 12th Division of the Council for Exceptional Children. DCDT was founded by researchers and practitioners whose work in career development opened up the way for the work/study movement of the 1960s and the vocational and career education for students with disabilities movement that dominated the 1970s. This work influenced initial work-study models and career and vocational education efforts focused on students with disabilities, which in turn influenced early transition models (Halpern, 1985; Will, 1984) and OSEP Secondary Education and Transition Services branch research activities leading to early transition taxonomies (Kohler & Rusch, 1994). These early researchers and theorists (e.g., Donn Brolin, Patricia Sitlington, Gary Clark, and Oliver Kolstoe, to name a few) saw the need for a professional organization around the emerging theme of transition were grounded in career development theories and career and vocational guidance. Donn Brolin, was the first president (1976-1978) of what was called the Division on Career Development. Brolin's work in vocational preparation of students with disabilities, based upon career and vocational development theories, was among the earliest transition formulations and resulted in the development of the Life-Centered Career Education curriculum, which is still published by CEC. Gary Clark significantly influenced practice and policy related to career development of children and youth with disabilities, and along with Patricia Sitlington, pioneered assessments in career development and transition. DCDT and the research leading up to the 1980s set the stage for a major transition initiative.

Emergence of the OSERS Transition Initiative as a National Priority in the 1980s

From the 1970s into the 1980s, quite a few studies were conducted to assess the extent to which youth with disabilities were achieving valued outcomes in adulthood by tracking samples for some period into adulthood with outcome data collected at one or more points. Results almost always showed youth with disabilities fared much worse compared to the general population. For example, Martin (1972) projected that, of students with disabilities leaving school within the next four years, only 21% would be fully employed or go on to postsecondary education while about 40% would be underemployed and 26% unemployed.

Such findings helped establish the rationale for the U.S. Congress to pass the Education for All Handicapped Children Amendments Act of 1983 with the inclusion of Section 626, entitled *Secondary Education and Transition Services for Handicapped Youth Programs*. This new section listed appropriate transition outcomes as "postsecondary education, vocational training, competitive employment, continuing education, or adult services" and authorized funding for transition research and program development.

Section 626 gave OSERS the authority and funding to develop and implement a transition initiative to improve postschool outcomes. OSERS assistant secretary Madeline Will led the initiative's development by a task force with representatives of the Office of Special Education Programs, the Rehabilitation Services Administration, and the National Institute of Handicapped Research.

OSERS developed a model to guide states and local education agencies in planning and designing transition programs, with the high school serving as the *foundation* by bringing together and coordinating special education, vocational education, and other school–based services.

Will (1983) described the following three basic assumptions underlying the OSERS model:

- **Complexity of postschool services:** The K–12 education system provides fairly comprehensive services under one roof for students with disabilities across the country, but once they leave high school, they are likely to encounter barriers to services because of the *complexity of adult service systems*, with a confusing array of different public and private agencies with differing funding streams and eligibility requirements.
- **Focus on all students with disabilities:** At that time an estimated 250,000 to 300,000 students left special education each year, and OSERS maintained that all should have access to the specialized services they might need to obtain employment.
- **The goal of employment:** Employment is a critical aspect in the lives of most adults in U.S. society and should be available to all persons with disabilities so they can enjoy its social and economic benefits. Will (1983, p. 3) noted: "Of course, this concern with employment does not indicate a lack of interest in other aspects of adult living. Success in social, personal, leisure, and other adult roles enhance opportunities both to obtain employment and to enjoy its benefits."

These three assumptions led to development within the OSERS model of three "bridges," or levels of transition support (see Figure 2.1):

- **Transition without special services:** Many youth with disabilities are able to navigate the transition to adulthood without using specialized disability services, but rather use their own resources or those generally available to everyone, notably attending postsecondary education.
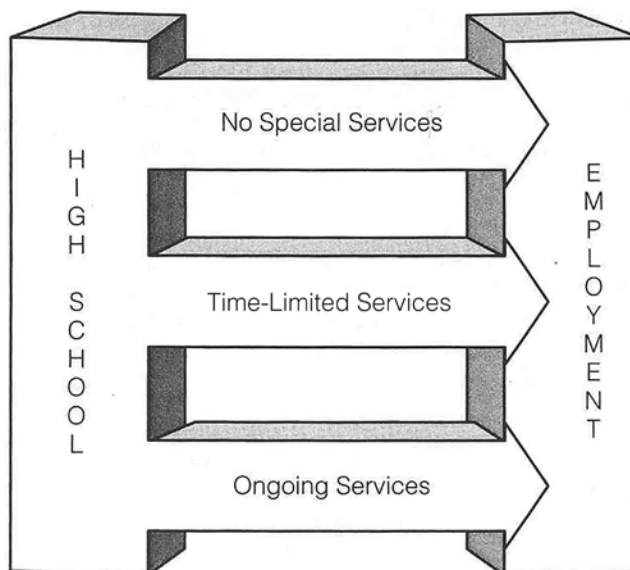
Figure 2.1 OSERS transition model

Source: Will, M. (1983). *OSERS programming for the transition of youth with disabilities: Bridges from school to working life.* Washington, D.C.: OSERS, page 5. This product is in the public domain.

- **Transition with time-limited services:** After leaving school, some youth with disabilities can improve their employment prospects through specialized temporary services, such as job training programs and vocational rehabilitation services.
- **Transition with ongoing services:** While ongoing services at that time focused on custodial care for persons with severe disabilities, the OSERS model proposed a "fundamental change" to this system by prioritizing employment through "supported employment" and other strategies.

However, the OSERS model's focus on employment sparked controversy, especially regarding persons with intellectual or other severe disabilities. For example, Halpern (1985) argued that while employment might be an appropriate goal, its attainment does not guarantee success in other life domains, notably inclusive community living. He therefore presented a model in which the primary goal of transition services should be community adjustment with a supportive social network, with the goal of employment adjusted to fit individual circumstances. Other early leaders in the transition field adopted similar orientations in developing their own transition models (e.g., Rusch, Destefano, Chadsey-Rusch, Phelps, & Szymanski, 1992; Wehman, Moon, Everson, Wood, & Barcus, 1988).

Over the years, succeeding pieces of federal legislation sought to improve various components of the complex system of high school and postschool services and their coordination. For example, the Carl D. Perkins Vocational and Technical Education Act of 1984 mandated that youth identified as disadvantaged or having disabilities be provided with vocational assessment, counseling, support, and transition services. For students with IEPs, the act mandated that vocational goals and objectives be included and that training be provided in the LRE.

Shifting Transition Requirements in the IDEA of 1990, 1998, and 2004

In 1990, the EHA (P.L. 94–142) was reauthorized as the Individuals with Disabilities Education Act (IDEA), with some notable revisions to the concept of transition and its implementation. The array of appropriate "postschool activities" was expanded by adding independent living and community participation, and a definition of transition was provided that highlighted the importance of self-determination:

> A coordinated set of activities for a student, designed within an outcome-oriented process, which promotes movement from school to post-school activities, including postsecondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation. The coordinated set of activities must: (a) be based on the individual student's needs; (b) take into account student preferences and interests; and (c) must include instruction, community experiences, the development of employment and other post-school adult living skills, and functional vocational evaluation.
>
> *(Section 602(a))*

The IDEA of 1990 also extended the one-year timeframe of IEPs to accommodate longer-term transition planning. It mandated that transition services be addressed in IEPs with postschool goals for each student age 16, or younger if appropriate, and that "transition service needs" be addressed by IEP teams for all students age 14 and over; that all involved agencies be listed along with their responsibilities; and that an explanation be included if the IEP team determined services were not needed in one or more of the required areas (instruction, community experiences, employment, and other postschool adult living). Funding was continued for a variety of transition research, demonstration, and training projects, with the notable addition of a program offering states five-year grants to undertake systems change for transition, which was taken advantage of by 45 states (Williams & O'Leary, 2001).

By defining transition services, and by requiring a statement of such services in the student's IEP, the IDEA of 1990 did more than any of the previous EHA amendments to promote the development of educational programs focused on postschool goals. These changes clearly underscored the importance of the transition initiative as part of the delivery of special education services to youth with disabilities.

The passage of the Americans with Disabilities Act (ADA) also occurred in 1990. By prohibiting discrimination against persons with disabilities in the areas of private employment, public accommodation and services, transportation, and telecommunications, the ADA promoted increased access to numerous facilities and resources of potential importance for successful transitions.

The intent of the IDEA of 1990 with regard to transition was also reinforced in the Rehabilitation Act Amendments of 1992, which defined transition services in the same language as the IDEA and required states to plan and define how their education and vocational rehabilitation service systems would collaborate in transition service provision. Both of these acts reinforced the rights of persons with disabilities and responded to their desires for self-determination and valued social roles that had been brought to national attention by the disability rights movement.

The IDEA was next reauthorized in 1998 and then again in 2004 (notable adjustments to the transition initiative are summarized in Table 2.1). Since 2004, federal legislation relevant to transition has continued a long-term trend of promoting greater coordination between and closer integration of the education and vocational rehabilitation systems in particular. For example, the Workforce Innovation and Opportunity Act (WIOA) of 2014 required state vocational rehabilitation agencies to allocate at least 15% of their funding to provide pre-employment transition services, for which students with disabilities are required to have an individualized plan for employment (IPE) that is aligned with their IEP. Such developments reflect longstanding beliefs in work as a foundation of positive self-identify and social inclusion that should be available to persons with disabilities, with postsecondary education or training seen as important to the extent it supports employment goals, as indicated by Will (1983). This collaboration between the education and vocational rehabilitation systems is clearly reflected in Figure 2.2 showing a flowchart suggested by OSERS for achieving employment as a postschool goal. However, youth with intellectual and other severe disabilities are also likely to have independent living, community inclusion, and/or adult service goals, for which collaboration with other agencies is likely to be required. For example, Hawaii has developed a more complex flowchart with a significant role for the State Department of Health's Developmental Disabilities Division, in addition to public education and vocational rehabilitation.

How Well Have Transition Programs and Services Been Implemented?

The OSERS flowchart in Figure 2.2 represents an idealized view of how different agencies are expected to provide *seamless service delivery* by collaborating with each other to align the different individualized plans that were supposed to have been developed in close partnership with youth and their families. As explained by Will (1983), the complexity of postschool services is so significant that it was adopted as one of the three basic assumptions underlying the OSERS transition model. Any shortcoming in one component of a complex transition system has the potential to negatively impact other components, whether it is lack of qualified personnel, insufficient funding, inability to form partnerships with youth and families, procedures and policies that do not respond to actual needs, bureaucratic barriers, and/or interagency conflicts. Add to this complexity the effects of political shifts that sometimes reverse the course of service systems or disrupt their operations and it is little wonder that numerous transition program evaluations and research projects over the years have generally found operational deficiencies and failure to meet program goals. An illustrative sampling of some of these findings warrants discussion.

KEY POINTS IN THE TRANSITION PROCESS
Alignment: IEP and IPE alignment facilitates a seamless service delivery process.

#1	Individualized Education Program	**Participate** in your IEP or child's IEP development to **ensure** that transition services are addressed in your child's IEP by age 16 (or earlier, depending on your state's laws). Students with disabilities and their representative are critical members of the IEP Team and have valuable information that is needed for quality transition planning.
#2	Be Familiar with the Steps to Transition Planning	Schools should: 1. **Invite** student; 2. **Administer** age appropriate transition assessments; 3. **Determine** needs, interests, preferences, and strengths; 4. **Develop** postsecondary goals; 5. **Create** annual goals consistent with postsecondary goals; 6. **Determine** transition services, including course of study needed to assist your student in reaching those goals; 7. **Consult** other agencies, in particular, the VR agency; and 8. **Update** annually.
#3	Implementation of Transition Services	Provide transition services as identified in the IEP. Pre-employment transition services are provided under the *Rehabilitation Act*. Alignment of the IEP and IPE facilitates a seamless service delivery process.
#4	Referral to VR and/or Other Adult Agencies	1. Pre-employment transition services provided under the *Rehabilitation Act*, as appropriate; 2. Familiarize yourself with laws relating to other programs; and 3. Learn about community agencies that provide services to support students, such as travel training and daily living skills.
#5	VR Application Process	1. **Share employment interests** and capabilities during the intake interview. 2. **Focus on assessment(s)** to lead to the student's postsecondary goals.
#6	Individualized Plan for Employment	**Once a student has been determined eligible for VR services,** the IPE must be developed and approved within 90 days, and no later than the time student leaves the school setting.
#7	Common VR Services Available under the *Rehabilitation Act*	1. Transition services; 2. Vocational counseling; 3. Vocational training; 4. Postsecondary education; 5. Supported employment services; 6. Career development; and 7. Job placement.
#8	VR Service Record Closure	As a result of the student or youth with disability: 1. Achieving an employment outcome; or 2. No longer pursuing an employment outcome and, therefore, determined ineligible for VR services.

Figure 2.2   Sample OSER Transition Flow Chart for Employment as a PostSchool Goal

Source: U.S. Department of Education, Office of Special Education and Rehabilitative Services. (2017). *A transition guide to postsecondary education and employment for students and youth with disabilities*. Washington, D.C.: OSERS, page 22. This report is in the public domain.

In the realm of vocational programming, legislation during the late 1960s mandated that 10% of vocational education funds going to each state under matching grant programs be reserved for persons with disabilities (including youth) and 10% of vocational rehabilitation funds be reserved for youth with disabilities. However, program reviews indicated small numbers of youth served and poor postschool outcomes, such as low rates of competitive employment (Kohler & Rusch, 1994; Sarkees-Wincenski, Scott, & Donnelly, 1995). These results could be traced to most states expending only a small proportion of the 10% set-asides, which led to widespread failure to develop necessary integrated programs and develop a workforce of qualified personnel (Olympus Research Corporation, 1974; Weisenstein, 1976; Tindall, 1977). D'Alonzo (1978) concluded that "the states have responded only minimally to the spirit and the letter of Congressional intent" (p. 6), a verdict that could be applied to many transition system components beyond this example.

In the realm of special education, OSERS' Office of Special Education Programs (OSEP) regularly monitors entities receiving federal education funds for adherence to IDEA requirements, including transition. Williams and O'Leary (2001) analyzed OSEP state monitoring reports for the four years from 1993 onward that it took to finish a monitoring round across the country, which was the first such round to address transition. Based on their results and those of earlier studies in several states that directly examined IEPs for transition content, Williams and O'Leary (2001) concluded that many schools were not inviting students to IEP meetings, indicating student participation was not seen as a priority; collaborative linkages between schools and outside agencies were lacking, indicating a need for more pre- and post-service personnel training in this area; and about half the states were failing to create IEP statements of needed transition services that contained the required components.

The disruptive potential of political pressures is reflected in the increase of the minimum age to include transition planning in IEPs from 14 years in the IDEA of 1998 up to 16 in the IDEA of 2004. This age change was part of an effort to ease the administrative burdens of the IEP process, in response to lobbying by administrative groups, but went against recommendations by many in the education, vocational rehabilitation, and youth development fields, where it is well recognized that transition planning is most effective when started as early as possible. This early planning perspective was supported in research by Cimera, Burgess, and Wiley (2013), who compared postschool outcomes for youth with autism spectrum disorder in states that chose to keep the 14-year age requirement versus those in states adopting the 16-year requirement. They found that youth from the age-14 states were significantly more likely to be employed than those from age-16 states and also appeared to have higher earnings while costing less to serve.

With the many transition-related development and research grants awarded by OSERS and other agencies, we might expect there to be an array of evidence-based transition practices and strategies to choose from. Here again, however, results are disappointing. Meta-analyses using strict criteria have generally identified only a few practices with a strong level of evidence (and therefore classified as evidence based), with most practices instead found to have a moderate level of evidence (classified as research based) or a potential level (classified as promising) (Cobb et al., 2013; Test et al., 2009). More recently, the National Technical Assistance Center on Transition (2019) released a listing of practices with evidence of efficacy. There are more practices that reach the level of evidence-based practices, but most practices still fall short of that standard.

Shaw and Dukes (2013) identified a major research gap as that of how to effectively support youth with disabilities to succeed in postsecondary education, which has emerged as a postschool IEP goal for 80% or more in view of its critical importance for success in employment. We have only limited knowledge of the postsecondary education experiences of youth with disabilities largely because at age 18 they become responsible for seeking services requiring disability status, such as services provided by the disability support offices of nearly all postsecondary institutions (Stodden, Conway, & Chang, 2002). However, the great majority of such students are unknown to their

institutions because they never self-identify and therefore are generally not included in research that tests supportive interventions or tracks their progress (Belch, 2011; Gerber & Price, 2008). Valentine et al. (2009) attempted a meta-analysis to identify evidence-based practices and strategies for supporting disadvantaged populations, including youth with disabilities, to transition to and succeed in postsecondary education. However, their examination of about 8,000 publications identified only 19 studies that used comparison groups, and even these studies were "methodologically suspect" and not considered to provide a good basis for policy-making decisions, leading to a recommendation to fund higher quality research.

The lack of quality disability data in the postsecondary education domain is underlined by the U.S. Department of Education's reliance on its annual National Postsecondary Student Aid Study (NPSAS) to estimate the proportion of students with different types of disabilities. Because the study relies on self-disclosure in response to questions during telephone interviews, it produces unreliable data because many students do not self-disclose due to disability stigma as well as the feeling by many of those with milder disabilities that they should not even be considered disabled (Newman et al., 2011). As a result, students with learning disabilities, for example, are seriously undercounted by the NPSAS (Leake, 2015).

This leads us to highlight a bright spot in research on youth with disabilities, the series of National Longitudinal Transition Studies, which provide the most reliable and valid data available on the postschool outcomes and experiences of youth with disabilities (Leake, 2015). Results from these studies will be summarized in the following section to help illuminate how transition services and outcomes have changed over time.

What Has the Transition Initiative Achieved?

Developers of the transition initiative had the foresight to include a strong evaluation component from the start, through a requirement for a National Longitudinal Transition Study (NLTS) in the Education for All Handicapped Children Amendments Act of 1983. The study design overcame methodological deficiencies of previous longitudinal studies, including small sample sizes, limited geographic coverage, and divergent definitions and outcome measures that prevented the comparison or pooling of results (Halpern, 1990). By contrast, the NLTS followed a nationally representative sample of more than 8,000 high school students in special education in the 1985–1986 school year for between three and five years (Wagner & Blackorby, 1996).

The NLTS was followed by the NLTS-2, which tracked about 11,300 students receiving special education services from school year 2000–2001, when they were between the ages of 13 and 16, through the 2008–2009 school year. Data were collected every two years through mail surveys and telephone interviews with youth themselves and/or their caregivers. Unfortunately, the third iteration, called NLTS 2012, was cancelled without public explanation after collecting data only from before the sample of about 12,000 high school students with IEPs and a comparison group of about 3,000 regular education students even began to transition from school. As a result, due to another apparent example of political lobbying with negative consequences, the field of transition lost an extremely valuable data source that today could be informing the field about whether youth with disabilities are achieving better postschool outcomes than during previous decades.

NLTS and NLTS-2 results indicated that youth with disabilities, compared to peers without disabilities, generally had much higher school dropout rates and much lower postschool participation rates in postsecondary education and competitive employment. To assess how these and many other indicators changed over time, Newman, Wagner, Cameto, Knokey, and Shaver (2010) compared results from the two studies for youth who had been out of high school for up to four years, based on the final data collection wave in 1990 for the NLTS and at the half-way point for the NLTS-2 in 2005. Their analyses examined the data from many angles, comparing experiences and outcomes

based on disability category, ethnic-racial heritage, socioeconomic status, and sex. Figure 2.3 summarizes some of the key indicators for the full samples, with additional results shown for NLTS-2 youth out of school for up to eight years and with comparison data for youth in the general population where available.

For the area of postsecondary education, Newman et al. (2010) found a highly significant increase in the percentage of youth with disabilities having ever enrolled in any postsecondary school, from 26.3% in 1990 to 45.6% in 2005, which increased to 60.1% in 2009. Youth in the general population also enrolled at higher rates over time, but the increase was much more rapid for youth with disabilities, suggesting that efforts to increase their postsecondary education participation were having a substantial impact.

For the area of employment, rates of paid employment at the time of interview were found to be between 56% and 66% across time and for youth with or without disabilities. However, not shown in Figure 2.3 are the findings of Newman et al. (2010) that there was a trend towards youth with disabilities being engaged in both postsecondary education and employment at the same time. In 1990 the rate was 65.1% and in 2005 it was 86.0%, a highly statistically significant increase (p < .001) that suggests the postschool employment rates of youth with disabilities may have gone down rather than up because more youth were investing more of their time in postsecondary education.

For the area of community living, Newman et al. (2010) found increases from 1990 to 2005 in the rates at which yes answers were given for virtually all community living indicators, with additional NLTS-2 data from 2009 showing participation rates continued to rise (Newman et al., 2011). The value of collecting longitudinal data for as long as possible is reflected in the indicator for living independently at the time of interview, which stayed level at under 25% from 1990 to 2005 but then jumped to about 45% in 2009 (compared to 59% for youth in the general population), when study participants had been out of high school for up to eight years. However, in the negative direction, there was a statistically significant increase from 1990 to 2005 in having ever been arrested, with the percentage of such youth reaching 32.3%.

Although the NLTS 2012 failed to collect postschool outcome data, it did gather valuable information about the experiences of youth with disabilities while in high school. Liu et al. (2018) compared and contrasted the results with those of the earlier NLTSs specifically for high school youth with an IEP ages 13–15 years, although only a few comparisons with the first NLTS were possible. Figure 2.4 summarizes the findings for a relatively small proportion of the many comparisons made.

On the positive side, there were statistically significant increases for nearly all support services in the percentage of youth receiving them, although the increase in use of prescription behavioral medicine from 17% in 2003 to 26% in 2012 might well be criticized as reflecting unnecessary overprescription. On the negative side, regarding youth and family involvement in transition planning, which is widely considered critical to plan success, from 2003 to 2012 there were statistically significant decreases (p < .05) in either youth or parents reporting they had "ever met" school staff to discuss transition. On the other hand, in 2012 they reported relatively high rates of attending an IEP meeting within the past two years, at 81% for youth and 91% for parents. Most indicators of school engagement did not change appreciably from 2003 to 2012, although there were statistically significant positive increases (p < .05) in percentages of youth who agree "a lot" or "a little" that a school adult cares about them (to 91%) and who agree "a lot" that they are part of the school. Particularly worrying is that, in both 2003 and 2012, about a third of youth ages 15–18 got out-of-school suspensions, with likely disruptions to their educations.

The overall picture provided by the two-and-a-half NLTS cycles reflects generally greater provision of transition-related services and improved postschool outcomes particularly for postsecondary education, for which participation rates for youth with disabilities from 1990 through 2009 increased at a faster pace and were catching up to those of their general population peers. In 1990, the percentage of youth with disabilities four years postschool who ever enrolled in a postsecondary school was

POSTSECONDARY EDUCATION		
% of youth ever enrolled in any postsecondary school (2-year, 4-year, vocational, business, technical):		
Youth with disabilities (4-year comparisons: p < .0001)	1990 – 4 years	26.3% (2.13)
	2005 – 4 years	45.6% (3.33)
	2009 – 8 years	60.1% (2.63)
Youth in general population (4-year comparisons: p < .0001)	*1990 – up to 4 years post-school*	*54.0% (0.81)*
	2005 – up to 4 years post-school	*62.6% (0.88)*
	2009 – up to 8 years post-school	*67.4% (0.60)*
% of youth "ever enrolled" who went on to graduate or complete a postsecondary education program:		
Youth with disabilities (4-year comparisons: not signif.)	1990 – 4	16.9% (3.51)
	2005 – 4	17.8% (4.26)
	2009 – 8 years	40.7% (3.71)
Youth in general population	*2009 – 8 years*	*52.4% (3.71)*
EMPLOYMENT		
% of youth with paid employment at time of interview:		
Youth with disabilities (4-year comparisons: not signif.)	1990 – 4 years	62.2% (2.81)
	2005 – 4 years	56.3% (4.79)
	2009 – 8 years	60.2 (2.65)
Youth in general population (4-year comparisons: not signif.)	1990 – 4 years	60.4% (0.79)
	2005 – 4 years	59.1% (0.89)
	2009 – 8 years	66.1 (0.60)
% of employed youth with disabilities who got benefits at work:		
Paid vacation or sick leave (4-year comparisons: p < .01)	1990 – 4 years	59.8% (3.78)
	2005 – 4 years	38.0% (6.78)
	2009 – 8 years	54.6% (3.31)
Health insurance (4-year comparisons: not signif.)	1990 – 4 years	51.9% (3.85)
	2005 – 4 years	33.1% (6.53)
	2009 – 8 years	47.7% (3.32)
COMMUNITY LIVING		
% of youth with disabilities who:		
Live independently at interview (4-year comparisons: not signif.)	1990 – 4 years	24.4% (2.02)
	2005 – 4 years	22.7% (2.80)
	2009 – 8 years	44.7% (2.68)
Youth in general population	*2009 – 8 years*	59.0% (1.63)
Had a savings account (4-year comparisons: p < .01)	1990 – 4 years	44.1% (2.42)
	2005 – 4 years	56.1% (3.71)
	2009 – 8 years	59.0% (2.86)
Had a checking account (4-year comparisons: p < .001)	1990 – 4 years	25.4% (2.11)
	2005 – 4 years	46.5% (3.73)
	2009 – 8 years	58.7% (2.85)
Used a credit card (4-year comparisons: not signif.)	1990 – 4	18.5% (1.89)
	2005 – 4 years	27.9% (3.37)
	2009 – 8 years	41.4% (2.85)
In community group(s) past year (4-year comparisons: not signif.)	1990 – 4 years	20.7% (2.35)
	2005 – 4 years	30.8% (4.35)
	2009 – 8 years	38.8% (2.67)
Driver's license/learner's permit (4-year comparisons: not signif.)	1990 – 4 years	61.0% (2.35)
	2005 – 4 years	70.0% (3.38)
	2009 – 8 years	77.7% (2.40)
Registered to vote (4-year comparisons: p < .01)	1990 – 4 years	53.2% (2.45)
	2005 – 4 years	67.0% (3.55)
	2009 – 8 years	71.0% (2.64)
Had ever been arrested (4-year comparisons: p < .01)	1990 – 4	16.1% (1.78)
	2005 – 4 years	27.2% (3.18)
	2009 – 8 years	32.3% (2.51)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
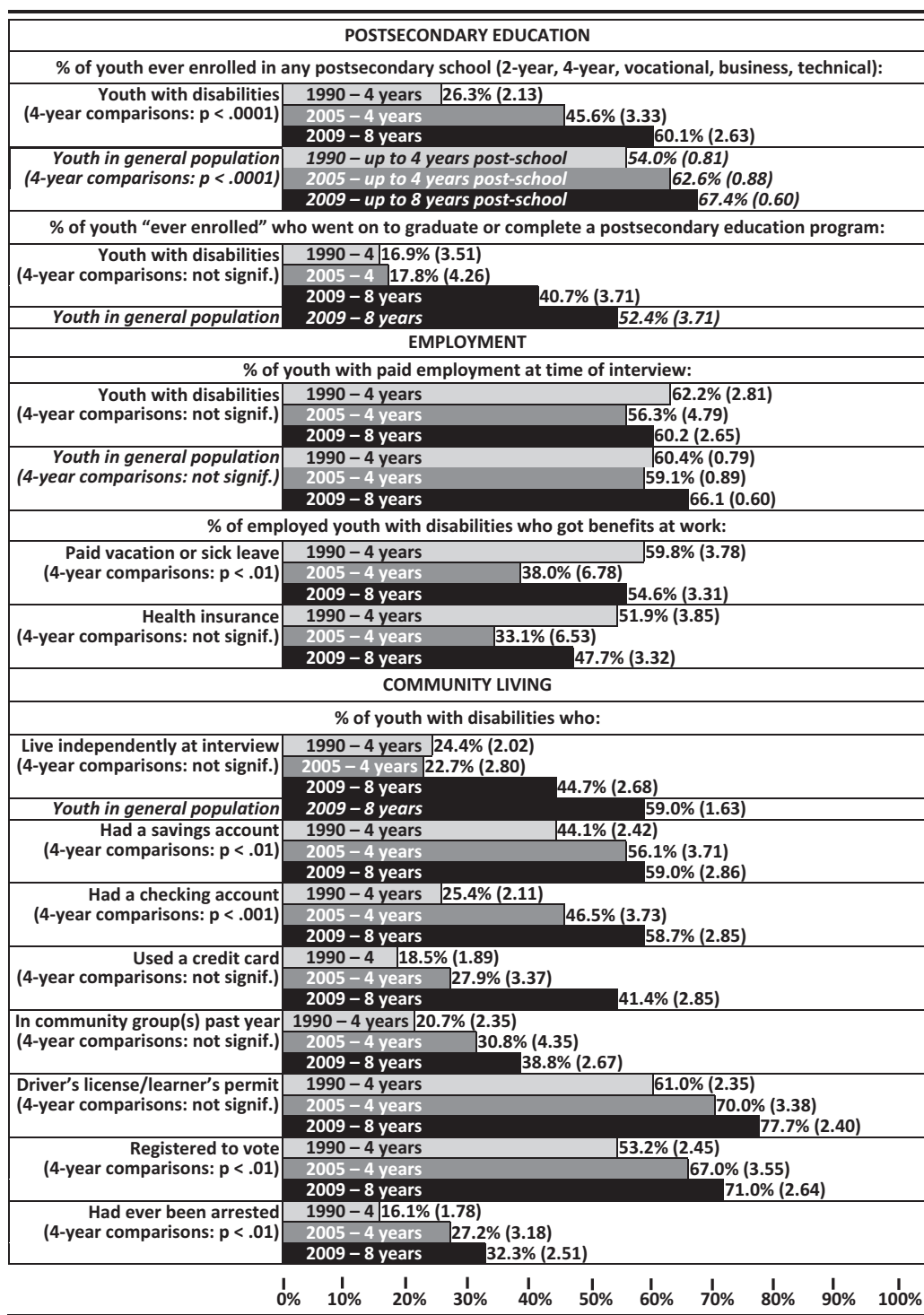
Figure 2.3 Comparison of Outcomes for Youth up to Four Years after High School for NLTS (1990 Data) Compared to NLTS-2 (2005 Data), Plus up to Eight Years after High School for NLTS-2 (2009 Data)

Note: Standard errors in parentheses.

Sources: Newman et al. (2010), figures 1, 6, 7, 12, 14, 18, 19, and 20, and Newman et al. (2011), figures 1, 17, 19, 25, 36, 40, 42, and 44.

% of youth with an IEP who received selected support services in high school or help at home in past year:		
Any services past year at school (1987 and 2003 compared to 2012: p < .05)	1987	37%
	2003	44%
	2012	65%
Tutor or interpreter services (1987 and 2003 compared to 2012: p < .05)	1987	16%
	2003	18%
	2012	33%
Psych/mental health counseling (1987 and 2003 compared to 2012: p < .05)	1987	8%
	2003	13%
	2012	28%
Speech/language therapy (1987 and 2003 compared to 2012: p < .05)	1987	15%
	2003	18%
	2012	24%
Physical/occupational therapy (2003 compared to 2012: p < .05)	1987	13%
	2003	6%
	2012	13%
Using prescription behavioral medicine (p < .05)	2003	17%
	2012	26%
Got homework help at home at least once a week (p < .05)	2003	62%
	2012	55%

% of youth with an IEP who engaged in work activities:		
Had paid job not sponsored by school (p < .05)	2003	27%
	2012	19%
Had school-sponsored work activities (difference not signif.)	2003	14%
	2012	13%

% of youth who themselves or a parent participated in IEP development and transition planning:		
Youth "ever met" school staff to discuss transition (p < .05)	2003	79%
	2012	70%
Parent "ever met" school staff to discuss transition (p < .05)	2003	79%
	2012	60%
Youth at IEP meeting in past 2 years (difference not signif.)	2003	74%
	2012	81%
Parent at IEP meeting in past 2 years (difference not signif.)	2003	89%
	2012	91%

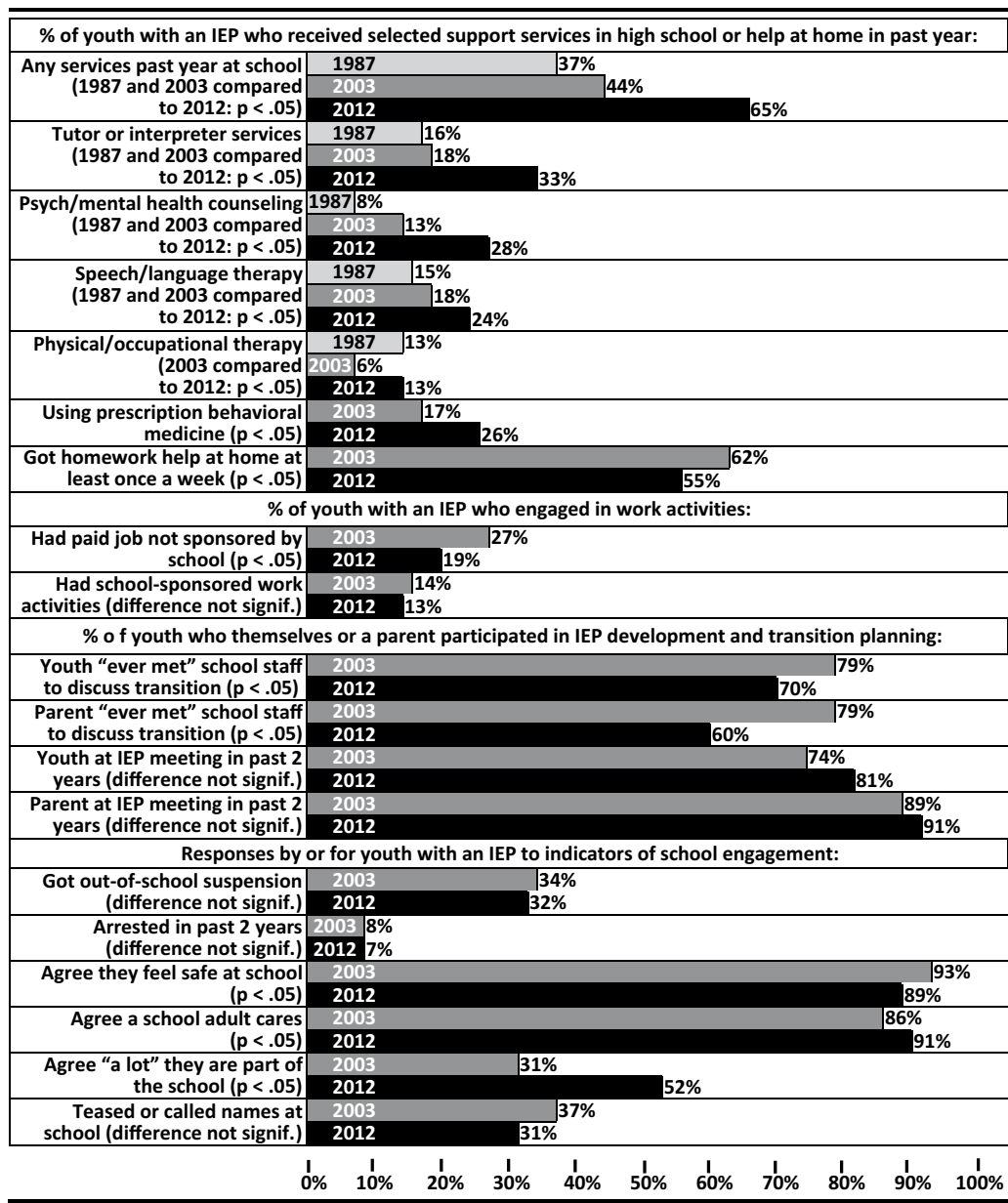| Responses by or for youth with an IEP to indicators of school engagement:		
Got out-of-school suspension (difference not signif.)	2003	34%
	2012	32%
Arrested in past 2 years (difference not signif.)	2003	8%
	2012	7%
Agree they feel safe at school (p < .05)	2003	93%
	2012	89%
Agree a school adult cares (p < .05)	2003	86%
	2012	91%
Agree "a lot" they are part of the school (p < .05)	2003	31%
	2012	52%
Teased or called names at school (difference not signif.)	2003	37%
	2012	31%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Figure 2.4   Comparison of High School Experiences of Youth with an IEP and Still in School at Ages 15–18 for NLTS (1987 Data), NLTS-2 (2003 Data), and NLTS 2012 (2012–2013 Data)

Source: Liu, A. Y., Lacoe, J., Lipscomb, S., Haimson, J., Johnson, D. R., & Thurlow, M. L. (2018). Preparing for life after high school: The characteristics and experiences of youth in special education. Findings from the National Longitudinal Transition Study 2012. Volume 3: Comparisons over time (Full report) (NCEE 2018–4007). Washington, D.C.: National Center for Education Evaluation and Regional Assistance, tables ES9, 16, 24, 26, 29, 31, 32, 34, and 35 and figures 4, 7, and 8. This report is in the public domain.

26% (28 percentage points behind the same-age general population), in 2005 four years postschool it was 46% (17 percentage points behind), and 60% eight years postschool (7 percentage points behind). As a result of postsecondary education gains, we would expect that as youth with disabilities enter the adult job market, they will be better able to obtain higher quality jobs at higher pay and with better benefits than previously.

One NLTS-2 finding in particular described by Newman et al. (2011) seems to stand as a challenge to the field of transition. Of youth with disabilities who had been out of high school up to eight years and had never enrolled in postsecondary education, 63% responded no to the question, "Do you consider yourself to have any kind of disability or special need?" and therefore did not request any disability accommodations or supports. Given that 87% also recalled having received such accommodations and supports in high school, there seems to be a disconnect between how special education and transition programming educates students with IEPs about their disabilities and how to live with them and the needs that students themselves are most concerned with, especially those related to being able to fill socially valued roles and gaining social acceptance as stressed by Wolfensberger (1983).

We can be sure that the transition initiative has been an important player in innumerable individual stories of successful transitions to adulthood, but it is an exceedingly complex task to determine its actual impact. This is due to the many other factors influencing youth with disabilities, their families, and education and other service systems. For example, over time the three NLTS samples became more culturally and linguistically diverse with an increasing proportion being socioeconomically disadvantaged (Newman et al., 2010; Liu et al., 2018). In addition, while we have outlined the history of relevant federal legislation, there is variation among the states, which have leeway in managing their education and other service systems as long as they meet the basic principles and requirements in federal legislation.

Observations and Conclusions

While NLTS findings indicate improvements over time in the provision of transition services as well as some postschool outcomes, progress has been slow and uneven, with much remaining to be done. Historical reviews of transition and program evaluations over the years have typically identified pressing needs for new policies, better trained personnel, closer interagency collaboration, more evidence-based programming, and so on. Unfortunately, as suggested by examples prior, efforts to improve the complex system of transition-related services almost always seem to fall short of their promise. Thus transition's history does not provide a great deal of hope that progress can be accelerated through the usual cycle of developing and advocating for add-on programs to address problems identified by yesterday's research. Most every proposal of value we can think of is also likely to bring new needs for funding, training, and monitoring that will be resisted by some proportion of service providers, administrators, and funders. However, one proposal that strongly emerges from our historical review and seems worth fighting for is to revive the NLTS series with a fourth iteration to provide reliable and valid data that can support in-depth assessment of how best to support youth with disabilities in the transition to adulthood and how they fare in that process.

In any case, perhaps transition needs to be viewed in the wider social context in which persons with disabilities still struggle for acceptance and full social inclusion, despite the advances promoted by the ADA and IDEA. Elementary and high school students with disabilities are more likely to experience bullying, social isolation, and suspension or expulsion than their peers without disabilities, impacting self-identity formation so that those with hidden disabilities are likely to refrain from the self-disclosure needed to gain important accommodations and services in postsecondary education and employment settings (Trammel, 2009).

Concerns about this situation have fueled the promotion of self-determination and self-advocacy as well as the school inclusion movement along with its enabling universal design of instruction, the success of which might do more to support youth with disabilities in achieving their postschool goals than incremental improvements that might be possible for transition practice in view of resource constraints.

In this regard we recall a time when there were calls for transition concepts, such as goal setting for adulthood, to be infused into the curriculum beginning as early as kindergarten, as well as visions of a time when all children would be educated and supported together without disability labeling. Many schools are heading in this direction through participation in initiatives to create positive school climates of safety and acceptance, establish inclusive classrooms, and infuse social–emotional learning into the curriculum, and this can be expected to influence the wider society over time.

The question remains whether we, in our roles as professionals and practitioners delivering transition services and supports to youth with disabilities, have learned the lessons of history? If so, have we acted upon those lessons, or do we continue to rebottle old wine under new labels? Or do we seek solutions to problems by applying the "add-on syndrome" where new or evidence-based practice is tacked on to the system rather than serving as a fundamental change needed to improve practice and outcomes for the targeted population? Over the 50-plus years these services have been provided, the focus has shifted toward legislated requirements that are often politically motivated, rather than evidence-based, and that are minimalistic by definition, rather than appropriate to the transition needs of youth with disabilities.

Reflecting back historically on the lead author's first encounter with a student with a disability in the 1970s, one has to ask the question, would this student today get an equal chance as all other students to explore the world of work as a participant in a typical industrial arts shop, or would this critical first opportunity be denied? For many of us this is still an open question as access and accommodation of students with disabilities in those shops, courses of study, and vocational programs all other students partake within remain restricted or marginally available to this population. So what have we learned, or more importantly, what has changed in our practice and attitude or thinking that has benefited youth with disabilities in their transition to postschool environments? This chapter has laid out the transition initiative's historical sequence of key events and has asked important questions related to this history. Whether we have acquired and applied lessons from this history is left for the reader to judge and apply to future generations.

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Policy and Adolescent Transition

David R. Johnson

For more than 30 years, federal legislation has played a major role in supporting the participation of youth with disabilities in secondary education and, upon completion of high school, actively engaging in postsecondary education programs, employment, and other aspects of community living. While an important policy framework has been advanced, and strides have been made in achieving the goals and intent of federal legislation, there remains much more to be accomplished on behalf of youth and young adults with disabilities as they transition from school to adult life. Over the years, the federal government has assumed a key role in stimulating state and local efforts to improve transition services through a variety of policy, interagency, systems-change, model-demonstration, and research efforts (Johnson, Stodden, Emanuel, Luecking, & Mack, 2002; U.S. Department of Education, 2017). A major impetus for investing in these initiatives has been the recognition that many young adults with disabilities exit school unprepared for adult life.

Postschool outcome studies conducted over the past three decades provide substantial documentation concerning the difficulties these young adults with disabilities experience upon leaving school (Blackorby & Wagner, 1996; Hasazi, Gordon, & Roe, 1985; Johnson, McGrew, Bloomberg, Bruininks, & Lin, 1997; Newman et al., 2011; Wagner, Newman, Cameto, Garza, & Levine, 2005). These and other studies uniformly report high levels of unemployment and underemployment, economic instability, dependence, and social isolation and low levels of participation in postsecondary education and training programs. Postschool outcome studies have played an important role in influencing and shaping public policies that have led to needed reforms and improvements in professional practices pertaining to the provision of transition and related services.

This chapter will examine transition policy from its historical roots to the present federal regulations of the Individuals with Disabilities Act (IDEA) Amendments of 2004. The chapter will also provide information on related federal legislation that is currently influencing school and postschool services for individuals with disabilities and a discussion of future directions in transition policy development.

Historical Background

As early as the late 1950s, cooperatively financed programs between special education and vocational rehabilitation were being established within several states. Much of the impetus for these cooperative programs stems from the availability of federal matching funds. The Vocational Rehabilitation

Amendments of 1954 increased the federal reimbursement level to states from 50% to 60% and was further raised to 75% in the Vocational Rehabilitation Amendments of 1965. This allowed states to match in-kind shares to receive a greater federal share. Consequently, third-party agreements were established with numerous local school districts, state correctional programs, state hospitals, and other state and local agencies. State funds from these programs, largely in the form of in-kind contributions, were then matched to the higher federal level available for financing state vocational rehabilitation programs. The programs were commonly referred to as Cooperative School Vocational Rehabilitation Programs and employed individuals identified as vocational adjustment coordinators (VACs). These personnel were typically funded jointly by the state vocational rehabilitation agency and local school district special education programs. The programs continued to flourish throughout the 1960s, and a significant number of school-age youth with disabilities were served through these collaborative programs. During the 1970s, these programs declined due to changes in the federal vocational rehabilitation matching fund formula and the influences of other federal legislation in vocational and special education.

In the Vocational Education Amendments of 1968, Congress took steps to provide students with disabilities access to vocational training programs. A 10% set-aside of vocational education funds earmarked for states was contained within this federal law. The Department of Health, Education, and Welfare (HEW) commissioned an evaluation of the 1968 Amendments and found that 70% of all students with disabilities receiving vocational training were, however, enrolled in segregated classes (Olympus Research Corporation, 1974). Through 1975, the actual enrollment of students with disabilities in vocational education programs remained at less than 2% (Lee, 1975). The intent of the 1968 legislation clearly envisioned a broad range of vocational education opportunities that would be extended to students with disabilities, but state and local response was minimal.

The Vocational Rehabilitation Act of 1973 provided funds to states to assess "the rehabilitation potential" of individuals with disabilities of an employable age (beginning by age 16), in an effort to prepare for and engage in gainful employment. Section 504 of the Vocational Rehabilitation Act of 1973, linked with earlier civil rights legislation of the 1960s, prohibited discrimination on the basis of disability in any private or public program or agency receiving federal financial assistance. Also within this mid-1970s timeframe, the Education for All Handicapped Children Act (EHA) of 1975 was enacted by Congress. EHA required that states provide all children with disabilities between ages 3 and 21 a free and appropriate public education, which included access to vocational education and career preparation. The law specifically identified industrial arts, consumer, and home-making programs as appropriate programs for students on individualized education programs (IEPs). EHA 1975 also required that parents, educators, and other specialists establish at least one career education objective in each IEP.

In the Vocational Education Amendments of 1976, Congress continued to strengthen the use of the 10% set-aside for students with disabilities and required that the programs be integrated and conducted in the least restrictive environment consistent with EHA 1975. As prescribed by law, plans for the vocational education involvement of students with disabilities must be coordinated with their IEP team and goals included within the students' IEPs. The individual rights of parents and students guaranteed under EHA 1975 were extended to students with disabilities served under programs funded through the Vocational Education Amendments of 1976.

Thus, the Vocational Education Act, like EHA 1975, required for each student with a disability served: inclusion in nondiscriminatory assessments; full parental involvement in developing the IEP; programming in the least restrictive environment; an IEP; and due process safeguards. Together, the Vocational Education Act of 1976, the Education for All Handicapped Children Act of 1975, and the Vocational Rehabilitation Act of 1973 and its Section 504 provisions formed the core of the legal mandates supporting the career development and vocational preparation of school-age children with disabilities from the mid-1970s through the early 1980s.

The first reference to transition services for students with disabilities was included in the Education for All Handicapped Children Act Amendments of 1983. Section 626 of the 1983 Amendments, entitled Secondary Education and Transitional Services for Handicapped Youth, authorized funding to support a series of discretionary grant programs intended to: (a) strengthen and coordinate education, training, and related services to assist youth with disabilities in the transition process from school to employment, independent adult living, and/or a postsecondary education; and (b) strengthen special education programs with the goal of eventual transition.

In 1986, the Education for All Handicapped Children Act was again amended. Language was added to Section 626 of the amendments to the act, including: (a) an additional purpose was included, "to stimulate the improvement of the vocational and life skills of students with handicaps to enable them to better prepare for transition to adult life and service" (Section 626(a)(3)); (b) discretionary grant projects were expanded to include "conducting studies which provide information on . . . why handicapped youths drop out of school, developing special education curriculum and instructional techniques that will improve handicapped students' acquisition of the skills necessary for transition to adult life and services, and specifically designed physical education and therapeutic recreation programs to increase the potential of handicapped youths for community participation" (Section 626(b)(8–10)); and (c) a requirement was added that parents and students with disabilities should be involved in the planning, development, and implementation of the aforementioned projects funded under the act and "a description of the procedures that will be used for coordinating services among agencies for which handicapped youths are or will be eligible" (Section 626(d)(2)).

In 1990, the Individuals with Disabilities Act was enacted by Congress. The title of the act changed from Education for All Handicapped Children Act to Individuals with Disabilities Act, and several important statutory provisions intended to guide state and local actions in addressing the transition needs of youth with disabilities and families were included. IDEA 1990 mandated the inclusion of transition services in students' IEPs for students 16 years of age and older. The intent of the federal legislation was to promote "effective" transition programming by: (a) providing a definition of transition services, (b) listing the coordinated set of activities that comprise transition services and detailing the basis for determining which activities are appropriate for an individual student, (c) specifying the process by which a statement of needed transition services is to be included in the student's IEP, and (d) determining agency responsibilities and monitoring the provision of transition services. The final regulations for IDEA 1990 were published in the fall of 1992. The most prescriptive aspects of the regulations pertained to four major transition service requirements and included: (1) parent notification, (2) student and agency participation in meetings, (3) content of the IEP, and (4) agency responsibility.

The reauthorization of IDEA in 1997 expanded the transition service requirements of the 1990 Act. In addition to transition services beginning at age 16, a statement of transition service needs was required at age 14. At age 14 and annually thereafter for updates, the IEP team looks at the child's courses of study (such as advanced placement courses or vocational education programs) and determines whether those courses are leading to where the student needs to be upon graduation. IDEA 1997 also required that students gain greater access to the general education curriculum and state and local assessment systems. IDEA was again reauthorized in 2004, with the intent of further strengthening and supporting students' transition from school to adult life. IDEA 2004 will be described in greater detail later in this chapter, in relation to specific provisions contained within the law and federal regulations.

What has emerged based on these federal legislative developments has been an important policy framework intended to guide state and local actions on behalf of young people with disabilities and their families as they prepare to leave public schools to enter adult life. The current challenge is to integrate and align the transition service requirements of IDEA 2004 with other major federal legislation, such as the Every Student Succeeds Act of 2015, No Child Left Behind Act of 2001, the

Americans with Disabilities Act Amendments of 2008, the Workforce Innovation Opportunity Act of 2014, the Vocational Rehabilitation Act of 1973 and subsequent amendments, and other federal legislation. Each of these, and other federal laws, has helped to create a results-based policy framework intended to support young people in the transition from school to adult life.

Supporting Federal Legislation and Transition

While IDEA 2004 conveys the major transition services requirements for school-age youth with disabilities, additional federal legislation has also played a major role in supporting these students in achieving adult life outcomes. The policy intent and legislative goals of these acts reflect the expressed national commitment that youth and young adults with disabilities will be supported to develop the skills and experience the opportunity to realize personal goals and choices about how to lead lives as productive, integrated, and empowered members of their communities and society. The following briefly summarizes these major legislative developments.

Rehabilitation Act of 1973 and Subsequent Amendments

The Rehabilitation Act of 1973 provided comprehensive services to all individuals with a disability, regardless of the severity of the disability, and outlawed discrimination against citizens with disabilities. Section 504 specifically prohibited discrimination against otherwise qualified persons with disabilities in any program or activity receiving federal funds. The act also focused on youth and adults transitioning into employment settings and ensured the development and implementation of a comprehensive and coordinated program of vocational assistance for individuals with disabilities, thereby supporting independent living and maximizing employability and inclusion within communities.

Several amendments have been made to the Rehabilitation Act since 1973. The amendments of 1978 created the Independent Living Program and established independent living centers within states; the amendments of 1986 established supported employment as a viable vocational rehabilitation outcome and was introduced within states through federally supported technical assistance and demonstration programs; the amendments of 1992 brought forward the important concept of "consumer choice" relative to career options and defined competitive employment as the primary outcome for vocational rehabilitation programs; and the amendments of 1998 established linkages between state vocational rehabilitation programs and Workforce Investment Act (WIA) programs and strengthened Section 508 of the Rehabilitation Act, which requires access to electronic and information technology provided by the federal government.

Americans with Disabilities Act of 1990 and 2008 Amendments

ADA of 1990 guaranteed the civil rights of people with disabilities by prohibiting discrimination against anyone who has a mental or physical disability in the area of employment, public services, transportation, public accommodations, and telecommunications. The 2008 Amendments to ADA was a response to a number of decisions by the Supreme Court that had interpreted the original text of ADA. The amendments broadened the definition of "disability" and expanded the list of major "life activities" covered by the law, including, but not limited to, caring for oneself, performing manual tasks, working, etc.

Workforce Innovation Opportunity Act of 2014

Passed by Congress in 2014, WIOA is intended to improve the coordination of referrals among the various youth programs; reduce the overlaps in workforce service programs; encourage certain

occupational pathways; and shift the emphasis of services from sheltered employment to competitive, integrated employment for youth and adults with disabilities. Although WIOA affects several federal youth programs within the Department of Labor, others are specifically directed to state vocational rehabilitation agency programs. There are several WIOA provisions that directly affect youth. WIOA requires increased interagency collaboration and integrated service delivery through the development of a combined state plan, which is intended to improve the coordination of education, workforce development, training, and other services at the state and local levels (29 U.S.C. §§ 3112 and 3113).

Title IV of WIOA directly requires vocational rehabilitation agencies to make two major changes (34 CFR §361.4[a][2]). First, vocational rehabilitation must reserve not less than 15% of their federal annual allocation to provide pre-employment transition services for students with disabilities transitioning from school to postsecondary education programs and employment in competitive, integrated settings. The required activities of pre-employment transition services include job exploration counseling; work-based learning experiences, which may include in-school, after-school, or community-based opportunities; counseling and opportunities for enrollment in comprehensive transition or postsecondary education programs at institutions of higher education (IHEs); workplace readiness training to develop social skills and independent living; and instruction in self-advocacy, including peer mentoring. In addition, WIOA allows vocational rehabilitation agencies to work with students who are potentially eligible for services. Previously, agencies could not serve students before they applied and were found eligible for services.

Social Security Act (SSA) Title XVI

The Supplemental Security Income (SSI) program of SSA, established in 1972 under Title XVI of the Social Security Act and administered through the Social Security Administration (SSA), most directly impacts students with disabilities. The program provides cash benefits to low-income individuals, including children and youth, who meet financial eligibility requirements and who are blind or have disabilities. Child SSI benefits continue up to age 18. A redetermination process using SSA adult rules occurs at that time to assess whether the young person's SSI benefits shall be continued beyond age 18.

SSA's primary approach for encouraging employment for transition-age youth with disabilities who receive SSI is work incentives that allow them to keep at least some of their SSI benefits and Medicaid coverage while they work. The work incentives targeted specifically to younger SSI recipients is the Student Earned Income Exclusion (SEIE), which allows income to be excluded from benefits calculation if a recipient is a student under age 22. SSI youth recipients are also eligible for other types of work incentives. The incentives include features to encourage savings (such as the Plan to Achieve Self-Support – PASS – and Ticket to Work Program).

A specific, and important, SSA work incentive for SSI youth, beginning as early as age 14, is the Work Incentive Planning and Assistance (WIPA) group of projects. The goal of WIPA is to enable SSI youth beneficiaries to receive accurate information and to use that information to make a successful transition to employment. Each WIPA project has community work incentives coordinators (CWICs) who: (a) provide in-depth benefits counseling and the effective work on those benefits and (b) conduct outreach to SSI beneficiaries (and their families) who are potentially eligible to participate in federal or state work incentive programs.

Every Student Succeeds Act of 2015

In 2015, the Every Student Succeeds Act (ESSA) was passed by Congress. ESSA reauthorized the Elementary and Secondary Education Act (ESEA), replacing the previous reauthorization, the No Child

Left Behind (NCLB) Act. In a departure from NCLB, ESSA returns considerable authority to states and school districts, but it maintains the core tenants of standards-based reform. ESSA requires states to have academic achievement standards (AAS) for all students and assessments that measure those standards in third through eighth grades and once in high school. Importantly, AAS must also align to ensure students are "on track to pursue" postsecondary education or competitive integrated employment.

ESSA also requires that a specific measure of graduation be included in states' accountability systems – the adjusted cohort graduation rate (ACGR). States are required to track and report graduation rates for students with and without disabilities (as well as for other student subgroups) (Johnson, Thurlow, Qian, & Anderson, 2019). For the first time, ESSA also recognized a state-defined alternate diploma as being appropriate for counting in states' graduation rates (Thurlow, Test, Lazarus, Klare, & Fowler, 2016). This diploma is intended only for students with the most significant cognitive disabilities who participate in an alternate assessment based on alternate achievement standards (AA–AAS). ESSA also limited participation in the AA–AAS in a subject area to 1% of the total number of all students tested in the subject area. States are currently in the process of formulating policies concerning the alternate diploma.

Strengthening Career and Technical Education for the 21st Century Act of 2018 (Perkins V)

The Carl D. Perkins Vocational and Technical Education Act was first authorized by the federal government in 1994 and reauthorized in 1998 and 2006. The Perkins Act, from its origin in 1984, has required states to ensure that special population students have equal access to career and technical education and that localities ensure the full participation of these students in programs that are approved using Perkins funds. One of the purposes of Perkins V is to more fully develop academic knowledge and technical employability skills by increasing the employment opportunities for populations who are chronically unemployed or underemployed, including individuals with disabilities, individuals from economically disadvantaged families, out-of-workforce individuals, youth who are in or have aged out of the foster care system, and homeless individuals. Perkins V also places an increased emphasis on work-based learning. This provision emphasizes greater opportunities to work with professionals in experiential learning opportunities, including on-the-job training, apprenticeships, job shadowing, internships, and other strategies.

Higher Education Opportunity Act of 2008

Congressional interest in strengthening colleges and universities and in providing financial assistance for students in postsecondary and higher education was originally included in the Higher Education Opportunity Act of 1965. The most recent reauthorization included several significant disability policy provisions, including: (a) a commission and model programs to increase access to instructional materials; (b) model programs for students with intellectual disabilities, including provisions for national technical assistance to support state and local programs; (c) access to federal financial aid for students with intellectual disabilities and veterans with disabilities; and (d) programs to train teachers and other personnel to teach students with disabilities.

IDEA of 2004: Key Provisions on Transition

The Individuals with Disabilities Act Amendments were signed into law on December 3, 2004, by President George W. Bush. The provisions of the act became effective on July 1, 2005, and the final regulations were first published on August 14, 2006. Congress has taken no further action since this time to reauthorize the law. When examining the transition requirements of IDEA 2004, the

simplest way to understand the statutory obligations is to separate the legal requirements into two distinct areas: (1) substantive obligations and (2) procedural obligations (Shorter, 2008). Substantive obligations are the statutory written law that governs the rights of those affected and the obligations of those who are subject to it. Statutory language conveys policy intent and goals and defines the legal relationship between individuals affected or served by the law and administrative entities responsible for ensuring that the conditions of the law are met. Substantive law defines who will be served and under what conditions.

Procedural obligations (requirements), in contrast, are the legal rules that govern the process for determining the rights of those affected and the means by which the substantive obligations of law are carried out and administered. Another way of summarizing the difference between substantive and procedural law and obligations is: substantive law defines, creates, or confers substantive legal rights or legal status while procedural law deals with the technical aspects (practices and procedures) and prescribes the steps for enforcing those rights and duties. Presented and discussed in this chapter are the major provisions and requirements concerning transition services. Table 3.1 presents the specific language contained within the law, with specific citations to and discussion of the IDEA 2004 federal regulations. The bold text indicates language changes added to the regulations from the IDEA 1997 federal regulations.

Table 3.1 Key Transition Provisions of IDEA 2004

300.1 Purposes. The purposes of this title are –

(a)   To ensure that all individuals with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them **for further education**, employment, and independent living.

300.43 Transition Services (Definitions)

(a)   The term "transition services" means a coordinated set of activities for a **child with a disability** that –

   (1)   is designed to be **within a results**-oriented process, **that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's** movement from school to postschool activities, including postsecondary education, vocational **education**, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation;

   (2)   is based on the individual child's needs, taking into account the **child's strengths**, preferences and interests; and includes instruction, related services, community experiences, the development of employment and other postschool adult living objectives, and, if appropriate, acquisition of daily-living skills and functional vocational evaluation.

300.102 Limitations–Exceptions to FAPE for certain ages

(a)   **General**. The obligation to make FAPE available to all children with disabilities does not apply with respect to the following:

   (1)   Children aged 3, 4, 5, 18, 19, 20, or 21, in a State to the extent that its application to those children would be inconsistent with State law or practice, or the order of any court, respecting the provision of public education to children of those ages.

   (2)

      (i)   Children aged 18 through 21, in a State to the extent that State law does not require that special education or related services under Part B of the Act be provided to students with

(*Continued*)

Table 3.1 (Continued)

disabilities who, in the last educational placement prior to their incarceration in an adult correctional facility –

(A)   Were not actually identified as being a child with a disability under §300.8; and

(B)   Did not have an IEP under Part B of the Act.

(ii)   The exception in paragraph (a)(2)(i) of this section does not apply to children with disabilities, aged 18 through 21, who –

(A)   Had been identified as a child with a disability under §300.8 and had received services in accordance with an IEP, but who left school prior to their incarceration; or

(B)   Did not have an IEP in their last educational setting, but who had actually been identified as a child with a disability under §300.8.

(3)   (i)   Children with disabilities who have graduated from high school with a regular high school diploma.

(ii)   The exception in paragraph (a)(3)(i) of this section does not apply to children who have graduated from high school but have not been awarded a regular high school diploma.

(iii)   Graduation from high school with a regular high school diploma constitutes a change in placement, requiring written prior notice in accordance with §300.503.

(iv)   As used in paragraphs (a)(3)(i) through (a)(3)(iii) of this section, the term regular high school diploma does not include an alternative degree that is not fully aligned with the State's academic standards, such as a certificate or a general educational development credential (GED).

(b)   **Documents relating to exceptions**. The State must assure that the information it has provided to the Secretary regarding the exceptions in paragraph (a) of this section, as required by §300.700 (for purposes of making grants to States under this part), is current and accurate. (Authority: 20 U.S.C. 1412(a)(1)(B)-(C))

300.321 Student Notification and Participation

(b)   Transition services participants.

(1)   In accordance with paragraph (a)(7) of this section, the public agency must invite a child with a disability to attend the child's IEP Team meeting if a purpose of the meeting will be the consideration of the postsecondary goals for the child and the transition services needed to assist the child in reaching those goals under Sec. 300.320(b).

(2)   If the child does not attend the IEP Team meeting, the public agency must take other steps to ensure that the child's preferences and interests are considered.

300.322 Parent Notification and Participation

(a)   Public agency responsibility – general. Each public agency must take steps to ensure that one or both of the parents of a child with a disability are present at each IEP Team meeting or are afforded the opportunity to participate, including –

(2)   For a child with a disability beginning not later than the first IEP to be in effect when the child turns 16, or younger if determined appropriate by the IEP Team, the notice also must –

(i)   Indicate –

(A)   That a purpose of the meeting will be the consideration of the postsecondary goals and transition services for the child, in accordance with §300.320(b); and

(B)   That the agency will invite the student; and

(ii)   Identify any other agency that will be invited to send a representative.

300.321 Agency Notification and Participation

(b) Transition services participants.

(3) To the extent appropriate, with the consent of the parents or a child who has reached the age of majority, in implementing the requirements of paragraph (b)(1) of this section, the public agency must invite a representative of any participating agency that is likely to be responsible for providing or paying for transition services.

300.305 Additional requirements for evaluations and re-evaluations

(e) Evaluations before change in eligibility.

(1) **Except as provided in paragraph (e)(2) of this section, a public agency must evaluate a child with a disability in accordance with §§300.303 through 300.311 before determining that the child is no longer a child with a disability.**

(2) **The evaluation described in paragraph (e)(1) of this section shall not be required before the termination of a child's eligibility under this part due to graduation from secondary school with a regular diploma, or due to exceeding the age eligibility for FAPE under State law.**

(3) **For a child whose eligibility under this part terminates under circumstances described in paragraph (e)(2) of this section, a local education agency shall provide the child with a summary of the child's academic achievement and functional performance, which shall include recommendations on how to assist a child in meeting the child's postsecondary goals. (Authority: 20 U.S.C. 1414(c))**

300.320 Definition of individualized education program

(b) Transition services. **Beginning not later than the first IEP to be in effect when the child is 16, or younger if determined appropriate by the IEP Team, and updated annually thereafter, the IEP must include –**

(1) **appropriate measurable postsecondary goals based upon age appropriate transition assessments related to training, education, employment, and, where appropriate, independent living skills;**

(2) **the transition services (including courses of study) needed to assist the child in reaching those goals.**

(c) Transfer of rights at the age of majority. Beginning **not later than** 1 year before the child reaches the age of majority under State law, a statement that the child has been informed of the child's rights under this title, if any, that will transfer to the child on reaching the age of majority under section 615(m),

300.324 Development of the IEP

(a) **Development of IEP.**

(1) General. In developing each child's IEP, the IEP Team must consider –

(i) The strengths of the child;
(ii) The concerns of the parents for enhancing the education of their child;
(iii) The results of the initial or most recent evaluation of the child; and
(iv) **The academic, developmental, and functional needs of the child**.

(c) **Failure to meet transition objectives.**

(1) Participating agency failure. If a participating agency, other the public agency, fails to provide the transition services described in the IEP in accordance with §300.320(b), the public agency must reconvene the IEP Team to identify alternative strategies to meet the transition objectives for the child set out in the IEP.

(2) Construction. Nothing in this part relieves any participating agency, including a State vocational rehabilitation agency, of the responsibility to provide or pay for any transition services that the agency would otherwise provide to children with disabilities who meet the eligibility criteria of that agency.

Purposes – Section 300.1

Congress added "further education" to IDEA's Purposes Section. This essentially represents a new outcome for special education programs. It acknowledges the importance of postsecondary education, the value of which has increased significantly over the last decade. We recognize that, in order to be successful in achieving economic self-sufficiency and stable employment, a person must receive some form of postsecondary education. Today, increasing numbers of students with disabilities, including students with intellectual and other developmental disabilities, are enrolling and participating in two-year and four-year postsecondary education programs (Hart, Grigal, & Weir, 2010; Newman, Wagner, Cameto, & Knokey, 2009; Newman et al., 2011; Qian, Johnson, Cleary, & Echternacht, 2018). The findings of the National Longitudinal Transition Study-2 indicated that 45% of youth with disabilities reported having continued on to postsecondary education within four years of leaving high school (Newman, Wagner, Cameto, Knokey & Shaver, 2010). This has increased dramatically, climbing from 2.6% in 1978, to 9.2% in 1994, to 19% in 1996 (Blackorby & Wagner, 1996; Gajar, 1992).

The addition of *"further education"* to IDEA 2004 underscores the importance that some form of postsecondary education and training plays in the postschool life adjustment of young adults with disabilities. This added emphasis on postsecondary education will continue to increase in transition planning and decision-making discussions within states and local school districts nationwide in the coming years.

Definitions – Section 300.43(a)

Several changes were introduced in IDEA 2004 from IDEA 1997 regarding the definition of transition services. The definition of transition services was first introduced in the IDEA Amendments of 1990. The definition of transition services in IDEA 2004 now refers to a "child" instead of a "student." The law has always been child focused, and the change in language makes the definition of transition services more consistent with language that appears elsewhere in the law. Several other changes that were made in IDEA 2004 are more substantial, however.

IDEA 2004 changes the language that transition services for a child with a disability must be "designed to be within a results-oriented process." Since 1990, the definition of transition services has made reference to "an outcome-oriented process." Again, this language was changed to be consistent with other sections of the law and regulations where the term "results" has been used in lieu of "outcomes." Additionally, however, "results" and "outcomes" have different meanings. While not defined within the statute, the term is likely used to imply additional accountability for IEP planning terms to determine whether an outcome has succeeded in or has the potential to yield positive results for the transition-age student.

IDEA 2004 also requires, within the definition of transition services, that the process be "focused on improving the academic and functional achievement of a child with a disability." The emphasis on academic achievement was strengthened in IDEA 1997, with its intent to achieve greater access to the general education curriculum and for students with disabilities to be included and counted in statewide assessment and accountability systems. The No Child Left Behind Act of 2001 required further consideration of students' academic development and achievement and specifically identified that this was to include students with disabilities. ESSA further strengthened this emphasis by requiring states to add college and career-readiness academic standards for all students (Johnson et al., 2019). IDEA 2004 fully aligns with this emphasis on academic achievement standards addressed within the No Child Left Behind Act and, now, ESSA. Clearly, students' academic development and achievement have fast become the cornerstone of transition planning for transition-age youth with disabilities. The importance of this is also emphasized by the increased attention IEP transition

planning teams are placing on students' access to postsecondary education and employment opportunities that are requiring increasingly higher levels of academic skills.

The term "functional achievement" is not specifically defined in IDEA 2004. In general terms, it implies skills other than academic skills that are identified as part of an overall transition planning process to facilitate transition. The U.S. Department of Education's response to comments regarding the term "functional achievement" when the final regulations for IDEA 2004 were published make an important point that the development of functional skills pertains to any child with a disability, and not just to those with significant cognitive disabilities (Federal Register, October 14, 2006, p. 46579). Functional skills are, however, typically defined as skills that can be used in everyday life situations across different environments, such as home, community living, recreation, postsecondary education, employment, and the like.

IDEA 2004 did not make changes in the IEP requirement that transition planning be based on the individual child's needs. IDEA 1997 included language requiring that, when transition goals are established by IEP teams, full consideration be given to a child's preferences and interests. IDEA 2004 broadens this emphasis to include "taking into account the child's strengths," as well. This now requires that IEP teams, in addition to considering students' preferences and interests, should also review information concerning academic, functional, and other areas in which the child has performed well during his or her school experience. This is not intended to mean that consideration of a student's strengths or performance should outweigh the student's preferences and interests but suggests that such information is important in IEP team discussions in making decisions and setting goals.

IDEA 2004 also requires that the IEP team, at a minimum, consider each of the areas, including "instruction; related services; community experiences; development of employment and other post-school adult living objectives and, if appropriate, acquisition of daily-living skills; and, if appropriate, a functional vocational evaluation." In many cases, each of these areas, and possibly others, will be included in students' IEPs. There is no statutory limit on the types of services that may be provided to a child with a disability, so long as the IEP team makes this determination. The acquisition of daily-living skills and functional vocational evaluation are important considerations that need to be discussed by the IEP team. Transition services may be provided by the education agency or, as outlined in Section 300.324(c)(2) of the regulations, by agencies outside the school. In either case, they must be written into the IEP and the responsible agency noted.

Exceptions to FAPE for Certain Ages

IDEA has always made it clear that there are some possible exceptions to the requirement of providing a free and appropriate public education (FAPE) for some students with disabilities of transition age. For example, as illustrated in Table 3.1, FAPE does not apply with respect to children aged 3, 4, 5, 18, 19, 20, or 21, unless there is state law or practice to do so or the order of a court requiring, for any reason, that these age groups be served. Parents must be aware of the state laws regarding the age at which the right to public education terminates.

IDEA 2004, like previous amendments of this act, has extended special education services to children aged 18–21 (with some state variations). Extended special education services, however, are not automatically provided, but rather must be based on the IEP team's determination regarding the need for additional years of schooling. It is important for the IEP team to assess as early as possible the actual age at which termination of special education services will occur, either 18 or sometime up to or through age 21. This certainly has a significant bearing on the types of academic and functional skills the student will need to develop prior to graduation and the extent to which outside agency participation may be required to support the student in achieving postschool goals.

Section 300.102 notes that some students with disabilities who are incarcerated are not entitled to FAPE. Table 3.1 identifies conditions under which incarcerated youth may not be eligible for

FAPE. According to these regulations, if prior to incarceration a student had been receiving special education services, but had dropped out of school or had been formally identified as a "child with a disability," that individual is still entitled to FAPE and to the transition services it entails. In fact, transition planning is particularly important for this group of students in setting goals and developing plans that support their re-entry back to school, community, and family from juvenile justice facilities (Johnson, Mathur, Unruh, Griller-Clark & Qian, 2017).

It is also important for parents and educators to know that, if a child graduates from high school with a regular high school diploma, the child is no longer entitled to FAPE and special education, and the child's special education services end at that point. According to Section 300.102(a)(3)(ii–iii), the exception does not apply to students who have graduated but have not been awarded regular high school diplomas or in situations where graduation from high school with a regular high school diploma constitutes a change in placement, requiring prior written notice. Given this language, it is critical that the receipt of a regular high school diploma be carefully considered by the parents, student, and IEP team members. What has been problematic in situations when graduation has been challenged is that specific academic and functional goals included on the student's IEP have not, as yet, been fully met. In some cases, it may be advisable to delay formal receipt of regular high school diplomas until all transition service requirements have been achieved or until students have been connected with adult services necessary to support their postschool education, employment, and independent living needs. Also noted in Table 3.1 is the requirement that states must have on file adequate documentation relating to any exemptions. This is identified in Section 300.102(b), Documents Relating to Exemptions.

Student Notification and Participation

The IDEA 2004 final regulations require that "a child with a disability, beginning not later than the first IEP to be in effect when the child turns 16, or younger, if determined appropriate by the IEP team, be invited to attend the IEP meeting if one of the purposes of the annual meeting will be the discussion of transition service needs." The requirement to involve students in the discussions of their future goals and plans reflects the values of self-determination and shared responsibility. Creating these opportunities, however, may pose challenges to parents and professionals to change procedures and develop strategies, to ensure that students are given an active and meaningful role and voice in the planning of their future. Teachers and other professionals must play an important role in working with students on the knowledge and skills they will need to become active and effective decision makers on their own behalf in IEP meetings. Several self-determination curricula and related strategies have been developed and are readily available to support students in the development of the skills necessary to participate in their IEP meetings focused on transition outcomes (see Field, Martin, Miller, Ward, & Wehmeyer, 1998; Martin & Marshall, 1995; Martin et al., 2006; Wehmeyer, Agran, & Hughes, 1998; Woods, Sylvester, & Martin, 2010).

It is difficult to envision any situation where students with disabilities, irrespective of the level or significance of the disability, should not be invited to their IEP meetings with the expectation that they assume an active role in planning and decision making. One exception may be the withdrawal of a child's participation by the parent if the child is below the age of majority and not in a legal decision-making capacity. In conditions under which a student would not attend his or her IEP meeting, the public agency must take other steps to make sure that the child's preferences and interests are considered. One example might be to collect information from the student prior to the meeting and request that informed family members, friends, and/or professionals present information at the meeting on behalf of the child. Whatever strategy is decided upon, it is important to make sure that someone at the meeting has knowledge regarding the student's strengths, preferences, and

interests; the student's ideas about his or her future postschool goals; and the student's expectations regarding needed transition services.

Parent Notification and Participation

The federal requirements are clear – parents must be notified when the purpose of the IEP meeting is the consideration of transition services. These specific provisions are noted in Table 3.1, Section 300.322(a)(2). Research findings suggest that parent expectations regarding their child's abilities, skills, and future educational and employment choices have a powerful influence on the outcomes their child will achieve as an adult (Doren, Gau, & Lindstrom, 2012). Parent expectations have been linked to their adolescent's academic achievement (Zhang, Haddad, Torres, & Chen, 2010); school engagement (Simons-Morton & Chen, 2009); and college attendance, adjustment, and achievement (Agliata & Renk, 2008; Kim & Schneider, 2005). Ensuring that parents are informed in advance that transition goals will be discussed at the IEP meeting provides them the opportunity to prepare for the discussion. Encouraging parents to discuss future transition goals with their son or daughter prior to the meeting is also desirable. The first step, however, is providing appropriate notice to parents of the IEP meeting and its intent. In addition, with an understanding of the outside agencies to be invited, parents can request that additional or alternate agencies be included. This also provides an opportunity for parents to request information about the services and policies of invited agencies. If parents are unable to attend, alternative strategies can be used to obtain their input regarding possible transition goals for their son or daughter. In these cases, strategies that have been reported to be used most often range from holding an individual meeting with parents outside the formal IEP meeting, conducting an informational conference over the phone, mailing a draft of the student's transition goals home for review and feedback by the parent, or inviting the parent to submit comments regarding the plan in writing (Johnson & Sharpe, 2000).

Agency Notification and Participation

The requirement to involve agencies responsible for providing or paying for services reflects the values of long-term, child-centered planning, service collaboration, and shared responsibility. It places responsibility on school personnel to become knowledgeable about the services and policies of community agencies that may be involved in a child's IEP when transition goals are discussed. Some possible agencies may include: vocational rehabilitation, employment and training, postsecondary education programs, health, mental health, developmental disabilities, social security, housing, and others relevant to the individual's needs and preferences.

One of the notable changes to IDEA 2004 was the incorporation of the concept of parent and adult child consent concerning the decision of an IEP team to involve outside agency participation in the IEP meeting. This requirement is noted in Section 300.321(b)(3) and in Section 300.9 of the federal regulations. IDEA 2004 does not give school districts the authority to compel another agency to participate in planning of transition for a child with a disability (Shorter, 2008). The IDEA 2004 regulations removed the language from IDEA 1997 regulations that required a school district to ensure outside agency participation. Further, the IDEA 2004 regulations no longer include the requirement found in the IDEA 1997 regulations that "if an agency invited to send a representative to a meeting does not do so, the public agency shall take other steps to obtain the participation of the other agency in the planning of any transition services" (Section 300.344(b)(3)(ii)). This means that if a participating agency that has been invited does not attend the meeting, the school district is no longer required to take other steps to obtain participation of an agency in the planning of transition services.

While achieving outside agency participation in IEP meetings is not required, this does not mean that steps cannot be taken to involve an outside agency, even if agency representatives are not in attendance at the meeting. Steps that may be taken, with the consent of the parents or a child who has reached the age of majority, include: forwarding a copy of the IEP to the agency for review, arranging for a subsequent meeting to discuss transition-specific issues with parents or the child, maintaining contact with the agency to promote involvement, and encouraging parents and the child to initiate contact and request information about services and policies and their involvement in future in IEP meetings when transition goals are discussed.

Additional Requirements for Evaluations and Re-evaluations

Section 300.305(e)(3) of the IDEA 2004 regulations requires that all special education students who leave secondary education through graduation or exceeding state eligibility are to be provided with a Summary of Performance (SOP) to use as they pursue their transition goals. The SOP is to be developed in lieu of an exit IEP and is intended to assist the student in transition from high school to postsecondary education, training, and/or employment. More specifically, the information contained in the SOP should provide information that is helpful under Section 504 of the Rehabilitation Act and the Americans with Disabilities Act when a student is attempting to establish eligibility for reasonable accommodations and supports in postsecondary education and other settings. Because of the implications of the SOP in establishing eligibility, as well as identifying accommodations and supports needed, the student should actively participate in the development of this document. Implementation of the SOP has been highly varied across and within states; however, numerous resources are available that detail the steps necessary to develop the SOP (see Madaus, Bigaj, Chafouleas, & Simonsen, 2006; Cortiella, 2007; Dukes, Shaw, & Madaus, 2007; Madaus & Shaw, 2007).

Definition of the Individualized Education Program

A major change occurred in IDEA 2004 that removed the requirement that IEP teams begin considering appropriate coursework at age 14. Section 300.320(b) shifts the transition planning to "not later than the first IEP to be in effect when the child is 16." Many professionals and advocates have commented that age 16 is too late to start transition planning. Numerous comments were received regarding this age change as the federal regulations were being reviewed and approved, following the enactment of IDEA's 2004 statutory language. However, the final regulations in Section 300.320(b) include the phrase, "or younger, if determined appropriate by the IEP Team." Central to both the statutory language and final regulations is the understanding that IEP team decisions must always be individualized. Several states, however, have chosen to retain the IDEA 1997 younger age of 14 as the point at which the state requires transition services be considered by the IEP team.

IDEA 2004 requires, as part of the IEP process for a child who is entitled to transition services, that appropriate, measurable postsecondary goals be developed. The notion that "appropriate" goals be developed means that such goals are based on the individual student's strengths, needs, interests, and preferences and on age-appropriate transition assessments relating to training, education, employment, and, where appropriate, independent living skills. To be "measurable" means that there must be objective criteria that are observable and countable, which can determine if a student with a disability has achieved goals in his or her IEP. The term "postsecondary" means goals for the student to work toward while in high school in preparation for life after high school.

IDEA 2004 also requires that appropriate transition assessments be used by the IEP team. The final regulations remain silent on what constitutes an appropriate transition assessment, and this decision is left up to individual states. IDEA 2004 is clear, however, that appropriate transition goals must include training, education, employment, and, where appropriate, independent living skills.

Appropriate transition assessment information is critical in making such determinations. The Division on Career Development and Transition of the Council for Exceptional Children defines transition assessment as "an ongoing process of collecting data on the individual's needs, preferences, and interests as they relate to the demands of current and future working, educational, living, and personal and social environments" (Sitlington, Neubert, & Leconte, 1997). Transition assessments can be formal or informal, and the determination of what specific strategies states and local school districts shall use has been left up to individual states (Walker, Kortering, Fowler, & Rowe, 2010; Sitlington, Neubert, Begun, Lombard, & Leconte, 2007). Also noted in the federal regulations is the requirement that the transition services needed to assist the child in reaching these goals also include the student's courses of study.

The regulation that allows for the transfer of parental rights to students at the age of majority under state law is a further recognition of the importance of schools' responsibilities in assisting students to move from school to the adult world. In a state that transfers rights at the age of majority, beginning at least one year before a student reaches the age of majority, under state law, the student's IEP must include a statement that the student has been informed of his or her rights under Part B of the act, if any, that will transfer to the student on reaching the age of majority. In addition, when the student reaches the age of majority, if rights are transferred, the school must provide any notice required by Part B regulations to both the student and the parents. Exceptions to this are rare. However, if, under state law, a state has a mechanism to determine that a student with a disability, who has reached the age of majority under state law that applies to all children and has not been determined incompetent under state law, does not have the ability to provide informed consent with respect to his or her educational program, the state shall establish procedures for appointing the parent or, if a parent is not available, another appropriate individual to represent the educational interests of the student throughout the student's eligibility under Part B of the act.

This provision to transfer the rights at the age of majority was initiated in IDEA 1997 and was carried forward in the IDEA 2004 final regulations. This underscores the importance of empowering students with disabilities to become more knowledgeable and skilled in expressing their needs, preferences, and aspirations. This provision should also encourage educators and parents to ensure that appropriate opportunities and supports are available to students who promote self-determined behavior and attitudes well before the transition process and transfer of rights occur.

Development of the Individualized Education Program (Section 300.324)

Outside agencies that are identified by the IEP team as responsible for providing or paying for services to a child with a disability are not excused from those obligations as a result of IDEA 2004. The final regulations of IDEA 2004 parallel those of the IDEA 1997 regulations. As noted in Table 3.1, if a participating agency fails to provide the transition services described in the IEP, the public agency shall reconvene the IEP team to identify alternative strategies to meet the transition objectives for the student. Clearly, the ultimate responsibility for the provision of transition services under IDEA rests with the school district.

The IEP team may be able to identify alternative strategies without changing the student's IEP. In other instances, the IEP team may decide to revise the IEP, changing goals, short-term objectives, timelines, or statements about agency responsibility. For example, a student's IEP specifies that a community residential placement is needed within the next three months. If a community residence is not accessed by that time, the team would meet again to discuss the delay and to ascertain the status of access to the service. It may be that waiting lists indicate a six-month wait, but the likelihood of accessing services is high. In that case, the IEP team may decide to lengthen the timeline and meet in another three months to discuss progress. If the indication is that a community residence is not likely possible for this student, due to lack of availability, eligibility, or other reasons, the team may try to

come up with other strategies to achieve the same goal. These strategies may include creative use of Social Security and other funds to purchase or rent housing, pooling resources of young adults with similar needs (both with and without disabilities), or obtaining other forms of support from parents and/or advocacy groups.

Section 300.324(c)(2) does not imply that the burden of services, programs, or financial responsibility falls solely on the educational agency when things do not turn out as planned. By giving parents and students an opportunity to re-engage with the planning team, when things go wrong, the provision seeks to prevent students from "falling through the cracks," with no place to go for assistance and advocacy. The strength of this provision relies on the existence of state or local interagency agreements that delineate the financial and legal responsibilities of agencies involved in transition services. Without such agreements, the reconvention process may be ineffectual. Specific language within these interagency agreements to address the questions of "What services are available to meet individual student needs?" and "Who pays for these services?" is fundamental to ensuring that service needs are met for the student.

A Foundation for Future Transition Policy

Achieving more effective and coordinated transition services must begin with a coherent policy framework that incorporates greater consistency across public programs in philosophical values, goals, standards, and practices. Future policies that are intended to support students in making a successful transition from school to adult life can only be accomplished by: (a) developing consistent policy goals at all levels; (b) viewing the transition period as a shared responsibility among and between schools and community service agencies; (c) investing in research that leads to tested and valid practices and engaging in continuous and sustained evaluation of programs to guide and inform the policy-making process; and (d) creating broad-based and comprehensive professional development opportunities.

Importance of Shared Beliefs, Values, and Guiding Principles

The first and perhaps most essential step in achieving improved service planning and coordination, and effectiveness in transition service programs, is through renewed and explicit articulation of clearly stated and consistent values, beliefs, and principles to guide public policies. Currently, as noted throughout this chapter, there is no clearly articulated or widely accepted overarching public policy that addresses the transition of youth with disabilities. Instead, transition services are engulfed by a myriad of federal and state laws and procedural requirements that typically must be patched together to meet the school and postschool needs of youth and young adults with disabilities. Given this complex array of public policies influencing the provision of transition services, guiding principles provide an important mechanism for adding a sense of coherence on what is "most" essential to achieve through federal and state policy development. More specifically, the principles are intended to: (a) guide and inform policy makers as to what is of central importance in advancing policies and practices, (b) stimulate discussion about best practice in the provision of transition services, and (c) guide the actions and behaviors of professionals in everyday practice to ensure that students with disabilities achieve positive school and postschool results.

Over the years, several national organizations and professional associations, such as National Council on Disability, National Organization on Disability, Council for Exceptional Children, Consortium for Citizens with Disabilities, and others, have set forth various position statements that express the shared values, beliefs, and principles of these organizations and their members concerning youth with disabilities and their transition from school to adult life. The Council for Exceptional Children's Division on Career Development and Transition (DCDT) has published a list of transition principles

and beliefs on career development and transition. DCDT emphasizes the following policy principles for transition:

1. Career development and transition are the cornerstones for successful transition and positive postschool outcomes.
2. Career development and transition activities promote self-sufficiency at a critical time in the growth and development of individuals with exceptionalities.
3. Career development and transition processes are developmental and should have a life-planning perspective.
4. Career development and transition processes should address the culturally relevant preferences, strengths, and needs of youth, maximizing equity in postschool outcomes across disability, racial/ethnicity, socioeconomic, linguistic, and other home/school community characteristics.
5. Career development and transition interventions should focus on the individuals and promote self-determination.
6. Career development and transition processes assume and require interdisciplinary and interagency collaboration and new connections among parents and professionals in education, community services, and employment sectors.

There is an undeniable interdependence among each of these guiding principles and beliefs for transition. Current public policies, however, within federal and state laws governing education, postsecondary education, employment, health care, community living, transportation, and the like, treat these principles in a piecemeal manner, operationalizing them as separate, independent programs and sets of services levering through multiples agencies. Substantial and prolonged policy advocacy will be necessary for the integration of these guiding principles, as common elements of statutory law and procedural requirements, to achieve positive results for young people with disabilities and their families.

Importance of Shared Responsibility

As noted earlier in this chapter, federal legislation in special education and similarly in vocational rehabilitation, career and technical education, health and human services, labor, and other service-delivery systems cannot compel another agency to participate in the development of transition plans or commit another agency to pay for services unless that agency agrees to do so. It is unlikely that Congress will dramatically change this situation on behalf of transition-age youth with disabilities, thus directing professionals and policy makers to establish other mechanisms to improve the coordination and delivery of services.

Efforts to achieve greater coordination of services to address the lifelong needs of individuals with disabilities have been a longstanding preoccupation of public policy in education and human services. The policy intent to increase interagency collaboration has already been established at the federal level through written joint policy statements among the Offices of Special Education Programs, Vocational Rehabilitation, Vocational Education, Labor, Health and Human Services, Social Security, and other federal agencies. In addition, since the mid-1970s, this emphasis on the need for improved coordination of services has been urged upon states in the form of federal legislative mandates to establish interagency agreements at both the state and local levels.

Because of conflicting policy goals, eligibility criteria, funding patterns, and other factors that differ across agencies and states, however, many of these interagency agreements carry little force or are difficult to implement with the flexibility needed to provide appropriate services for youth and young adults with disabilities. Title I of the Rehabilitation Act, for example, requires the development of state interagency agreements between special education and vocational rehabilitation,

focused on the transition of youth with disabilities. A national study on state vocational rehabilitation agency policies and practices concerning transition-age youth with disabilities found that while 90% of states have interagency agreements between state vocational rehabilitation and education agencies, far fewer agreements are in place at the local level (Norman, Johnson, Timmons, Cobb, & Albright, 2007). State vocational rehabilitation officials, however, report that local interagency agreements are critical in establishing the level of service coordination needed to support students during the period of transition from school to adult life.

In reviewing state vocational rehabilitation interagency agreements, Norman et al. (2007) found that, while these state-level agreements were important, agency officials deemed them not specific enough concerning the roles and responsibilities that special education and vocational rehabilitation agencies should assume in addressing the transition needs of youth with disabilities. WIOA has placed an even greater importance on coordinating state and local special education and vocational rehabilitation services for transition-aged youth with disabilities. This has included an increased attention on the development of local interagency agreements between special education and vocational rehabilitation for the purposes of: (a) identifying specific sets of pre-employment services actions in which special education and vocational rehabilitation should engage; (b) determining the role of vocational rehabilitation in providing services for students who have not yet met agency eligibility requirements; and (c) clarifying agency responsibilities in terms of providing and paying for specific types of services.

Importance of Investing in Research and Evaluation

At all levels of the service-delivery system, there is a critical need to engage in comprehensive research on effective interventions and strategies and systematic evaluations of policies, programs, and services. For the past four decades, the U.S. Department of Education's Office of Special Education Programs and, more recently, the Institute of Education Sciences have sponsored transition research and related initiatives that have resulted in a knowledge base of promising interventions, approaches, and strategies for the delivery of transition services for students with disabilities (see Cobb & Alwell, 2009; Test et al., 2009). Advances and innovations in functional skill development, vocational training, job acquisition, access to postsecondary education, transition planning, student and parent involvement in school and postschool decision making, development of adult living skills, and self-determination and self-advocacy are all valued examples of previous and current efforts. These and other varied approaches supported through the discretionary grant programs of other federal and state agencies have served as a foundation upon which transition services are provided to youth with disabilities and their families. Federal policies must continue to maintain and expand research on these and other interventions and strategies that will go a long way toward ensuring that youth with disabilities achieve the positive school and postschool results essential for successful transition.

Schools and community service agencies also need evaluation data to provide decision makers with reliable information to modify programs and improve transition services. Post- school outcome studies have been the primary evaluation strategy to assess the status of youth and young adults with disabilities following high school completion. States have developed and are collecting postschool follow-up data on former special education students. IDEA 2004 specifically required states to gather information on a minimum set of postschool outcomes focused on employment and access to postsecondary education. This requirement has and will continue to help in establishing a minimum baseline of knowledge regarding the postschool experiences of these young people.

A particular need persists, however, to go beyond present approaches. We need improved information on: (a) the longitudinal nature of postschool adjustment that examines the community status of older-aged cohorts, now in their thirties, who may have remained in the care of their families, without access to independent living, employment services, and other opportunities; (b) postschool

evaluations on students with disabilities who drop out and fail to complete their public education programs and are trying to "make it" in our communities; (c) studies that document not only access to postsecondary education but also the rates of successful completion and entry into integrated, competitive employment; and (d) studies on the financial and emotional impact of the critical transition years on families. Findings in such studies could provide a sound, empirical foundation for improving secondary education programs, developing critical transition service programs for students leaving school, structuring more complex research and evaluation efforts, and establishing more effective educational and community services.

There are at least two additional evaluation considerations that have been neglected and require policy advocacy. First, there is a general lack of information on the benefits and costs of special education and other community services as they prepare students for the transition to adulthood. Given the current economic climate of our country, policy makers and agency administrators must base decisions regarding current and future program investments on both the costs and benefits or outcomes that such services can achieve. Advances have been made in benefit-cost methodology that allow for the evaluation of important quality-of-life dimensions in statistical analyses and that make the methodology feasible within the constraints that exist in school systems and community service agencies.

Second, while interagency collaboration has, for more than 40 years, been touted as the primary means through which many students with disabilities achieve success in their postschool, adult–life experiences, discussions in published literature during this time have repeatedly revealed numerous barriers and challenges to achieving improved service coordination (Benz, Johnson, Mikkelsen, & Lindstrom, 1995; Cobb & Alwell, 2009; Flowers et al., 2018; Hasazi, Furney, & DeStefano, 1999; Johnson et al., 2002; Landmark & Zhang, 2010). Despite the importance of interagency collaboration in achieving positive school and postschool results for youth with disabilities, the approaches, processes, and outcomes of collaboration have not been subjected to systematic evaluations or rigorous research. In the absence of such evaluations or research, we are left with few models that clearly delineate the critical process steps needed by key administrative personnel to carry out interagency planning and service coordination effectively. Limitations or failures in achieving improved levels of interagency coordination result not only from inadequate understanding of the functioning of other agencies (goals, regulations, eligibility criteria, funding, etc.) but also from limited understanding of the process skills necessary to manage a comprehensive planning process composed of parents and multiple agency members. There are arenas, however, where, for many years, collaborative processes have been investigated in the public and private sectors successfully (Bennis, Benne, Chin, & Corey, 1976; Bryson, 2004; DelBecq, Van de Ven, & Gustafson, 1975). Without systematic efforts to investigate the usefulness of these effective management tools, interagency collaboration will remain an illusory goal. If Congress and state legislatures continue to embed language with increasing requirements for cross-agency collaboration, commitments and investments must be made to research the efficacy of collaboration in achieving positive results.

Importance of Comprehensive Professional Development

Nowhere is the need for professional development more pronounced than in efforts to ensure that education and community service professionals have the knowledge, skills, and tools necessary to support students during the critical transition period. Currently, few institutions of higher education offer formal pre-service training programs that provide a specialized emphasis on secondary education and transition services. The challenging nature of state licensing and certification standards and requirements has presented limited opportunities to embed sufficient content into pre-service training programs to prepare future teachers and other professionals to address the transition needs of youth with disabilities. Consequently, many new professionals enter the field without the specific

knowledge and skills needed to support transition. Further, most university-based training programs provide instruction along disciplinary lines; however, transition, by its very premise, is multidisciplinary in its practice. Today, there is increased attention to the transition not only of youth with disabilities but of all students. The rapidly emerging interest in ensuring that a greater number of students exiting high school access postsecondary education has fueled this discussion. College and career readiness programs, individual graduation plans focused on all students, and other developments have all focused on a need to better prepare and support all students in the transition from school to postsecondary education, employment, and other aspects of community living. Future policy development must acknowledge these emerging trends and developments and examine current licensing and certification practices and the investments that must be made in university and college training programs to prepare future professionals.

Beyond pre-service training, high-quality continuing professional development is needed to ensure that current educators and other professionals are up-to-date and fully able to support students in the transition from school to adulthood. Here, too, there are many challenges in making available continuing education programs for professionals. Limited state and local school district and community service agency budgets have made it difficult to make available in-service training related to transition services. Cost-effective training models and approaches, using online instruction, webinars, podcasts, and other strategies, offer promising opportunities to support professionals in the development of skills needed to support students during their transition (Brock & Carter, 2013; Kim & Morningstar, 2007; Morningstar, Kim, & Clark, 2008).

Conclusion

Achieving improvements in transition services nationally must begin with a coherent policy framework that incorporates greater consistency across public programs in philosophical values, goals, standards, and practices to guide the ongoing management of education and community services to youth and young adults with disabilities. Federal and state legislation has served as the primary impetus for addressing the critical transition period and will continue to do so into the future. How we move forward, with what sense of priority concerning the needs that must be met for individuals and their families, is the critical question. As E. F. Schumacher (1973) argued many years ago, our policies are mirrored in their implementation, reforming current operating practices is essential to the economic, personal, and social integration of youth and adults with disabilities.

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Evidence- and Research-Based Transition Predictors and Practices
Identification and Implications

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History of Evidence-Based Practices

In 2001, the reauthorized No Child Left Behind Act (NCLB; previously the Elementary and Secondary Education Act) mandated teachers and schools use "scientifically based research practices" when providing instruction to all students, including students from typically underrepresented racial/ethnic groups, students with disabilities, English language learners, and students living in poverty (Smith, 2003). The purpose behind the NCLB (2001) mandate was to ensure all students were provided the most effective instructional practices, based on research, to improve academic, behavioral, and social outcomes. Aligned with the NCLB mandate, the Individuals with Disabilities Education Improvement Act of 2004 (IDEA, 2004) required teachers of students with disabilities to use scientifically based instructional programs and practices to ensure students with disabilities experienced improved outcomes (Wrightslaw, 2019). Since NCLB (2001) and IDEA (2004), scientifically based research programs and practices have been called evidence-based practices (EBPs; Odom, Brantlinger, Gersten, Thompson, & Harris, 2005). Most recently, the reauthorized Every Student Succeeds Act (ESSA, 2015) included EBP terminology. ESSA (2015) defined an EBP as:

> An activity, strategy, or intervention that (a) demonstrates a statistically significant effect on improving student outcomes or other relevant outcomes based on – strong evidence from at least one well-designed and well-implemented experimental study; moderate evidence from at least one well-designed and well-implemented experimental study; or promising evidence from at least one well-designed and well-implemented correlational study with statistical controls for selection bias; or (b) demonstrates a rationale based on high-quality research findings or position evaluation that such activity, strategy, or intervention is likely to improve student outcomes or other relevant outcomes; and includes ongoing efforts to examine the effects of such activity, strategy, or intervention.
>
> *(from Section 8101[21][A])*

ESSA requires that schools and teachers use evidence-based practices to ensure all students experience positive academic, behavior, and social outcomes. This growing emphasis on EBPs is focused on ensuring all students across ages receive the most effective instructional programs and practices.

Related to secondary students with disabilities, the National Technical Assistance Center on Transition has focused efforts on identifying EBPs and research-based practices (RBPs) for secondary students with disabilities. The difference between an EBP and an RBP is based on the quantity of methodologically sound studies that demonstrate effectiveness. For example, two methodologically sound group experimental studies with random assignment, including at least 60 participants with effect size calculations, would classify as an EBP. For an RBP, one methodologically sound group experimental study with random assignment, including at least 60 participants with effect size calculations, would be classified as an RBP (see following "Categorizing Levels of Evidence" section for full description of how EBPs and RBPs are classified).

Identifying EBPs, RBPs, and Predictors for Secondary Transition

Since 2006, first the National Secondary Transition Technical Assistance Center (NSTTAC, 2006–2015), and now the National Technical Assistance Center on Transition (NTACT, 2015–2019), were charged with identifying and disseminating secondary transition EBPs, RBPs, and predictors that promote positive postschool outcomes for all students with disabilities. EBPs and RBPs are classroom and community-based instructional practices (e.g., Self-Determined Learning Model of Instruction, video modeling, response prompting) derived from group and single-case experimental research studies. EBPs and RBPs occur at the student-level, or micro-level, and include specific interventions, strategies, and/or curriculum. Predictors are experiences that occur while a student is in school that lead to improved postschool outcomes derived from correlational research studies. Predictors tend to be program level, or macro-level, factors (i.e., school level, district level) related to engaging youth with disabilities in academic and career education, services, and supports. EBPs, RBPs, and predictors have been identified in the areas of special education secondary transition, vocational rehabilitation, and school completion for audiences that included state education agencies, local education agencies, state vocational rehabilitation (VR) agencies, and local VR service providers (see section on Categorizing Levels of Evidence for full description of how EBPs, RBPs, and predictors are classified).

EBPs and RBPs for Secondary Transition

An original set of 32 EBPs and RBPs for secondary students with disabilities were identified through a comprehensive literature review of group and single-case experimental research studies (Test, Fowler, et al., 2009). To be included in the review search, articles had to be: (a) published in peer-reviewed journals between 1984–2008; (b) include students with disabilities ages 11 to 22 years participating in secondary education; (c) describe a transition service as the independent variable; (d) include a dependent variable aligned with one of the five areas of the *Taxonomy for Transition Programming* (*Taxonomy*; Kohler, 1996); and (e) report results of in-school or postschool outcomes. The five areas of the *Taxonomy* included (1) student-focused planning, (2) student development, (3) interagency collaboration, (4) family involvement, and (5) program structures (Kohler, 1996). The *Taxonomy* was used because it was widely accepted as a framework for comprehensive secondary transition education and services. Articles that met inclusion criteria were then reviewed to determine the quality of research using a quality indicator checklist. To identify the quality of group and experimental research articles used to establish EBPs and RBPs, NTACT developed quality indicator criteria based on the 2005 special issue in *Exceptional Children* for including experimental research designs as part of the evidence base. The quality indicator checklist for group experimental design studies was developed based on criteria from Gersten et al. (2005), and the quality indicator checklist for single-case designs was developed based on Horner et al. (2005).

Finally, articles that met the quality indicator criteria were then used to develop the evidence base for secondary transition practices. Test, Fowler, et al. (2009) provide more detail on the process and

criteria used to establish the secondary transition EBPs for students with disabilities. Since then, the number of EBPs has grown to 80, with a total of 20 EBPs and 60 RBPs (NTACT, 2018a). NTACT's systematic literature reviews are updated on an annual basis.

Predictors of Postschool Success for Secondary Transition

One of the limitations of experimental research from which the secondary transition EBPs and RBPs were identified was that studies did not investigate the effects of interventions (practices) on postschool outcomes for students with disabilities. As a result, Test, Mazzotti, et al. (2009) conducted a review of correlational research in secondary transition. The purpose of this review was to identify in-school predictors (e.g., programs, services, instruction, policies) positively correlated with improved postschool outcomes in education, employment, and independent living for students with disabilities. To be included in the review, articles had to: (a) be published in peer-reviewed journals between 1984–2008; (b) be focused on outcomes for students with disabilities between the ages of 11 to 22 years served under IDEA participating in secondary education; (c) include a predictor variable related to a secondary transition program or practice; and (d) include an outcome variable related to postschool education, employment, and independent living.

Based on results of this review, 16 in-school predictors of postschool success were identified. As a follow-up to the Test, Mazzotti, et al. (2009) study, Mazzotti et al. (2016) conducted a second systematic literature review to identify additional predictors studied since the 2009 study. As a result, four new predictors of postschool success were identified, bringing the total to 20. Currently, these predictors include in-school experiences that demonstrated a significant relationship to improved postschool outcomes (i.e., postschool employment, education, independent living) for youth with disabilities. Originally, predictors could only rise to the "research-based" level because correlational research did not permit the causal inference required to become "evidence-based." However, with the recent introduction of propensity score matching/modeling (Gemici, Rojewski, & Lee, 2012; IES-WWC, 2015), correlational research can now be used to identify "evidence-based" predictors.

To identify the quality of correlational research articles, NSTTAC developed quality indicator criteria based on the 2005 special issue in *Exceptional Children* for including correlational research designs as part of the evidence base (Thompson et al., 2005). Additionally, in 2015, NTACT identified the quality indicators for correlational studies that used propensity score matching/modeling based on recommendations by Gemici et al. (2012) and IES-WWC (2015).

Categorizing Levels of Evidence

Over time, the labels used by NSTTAC and NTACT to categorize the level of evidence of a practice have changed. Originally, Test, Mazzotti, et al. (2009) classified all practices as "evidence-based," with either a strong, moderate, or potential level of evidence following the U.S. Department of Education, Institute for Education Sciences (IES) guidelines at that time. Today, NTACT uses three levels that correspond to the levels of evidence established by the Council for Exceptional Children (CEC, 2014). NTACT's categories are EBPs (i.e., corresponds with CEC's "evidence-based practice" category), RBPs (i.e., corresponds with CEC's "potentially evidence-based practice" category), and promising practice (i.e., corresponds with CEC's "mixed evidence" and insufficient evidence" categories). This chapter focuses only on the secondary transition EBPs, RBPs, and predictors of postschool success.

For experimental research to meet the level of evidence criteria to be an EBP, there must be: (a) two methodologically sound group experimental studies with random assignment, including at least 60 participants with effect size calculations; (b) four methodologically sound group experimental

studies with non-random assignment, including at least 60 participants with effect size calculations; and/or (c) five methodologically sound single-case studies, including at least 20 participants (NTACT, 2018a). For RBPs, there must be: (a) one methodologically sound group experimental study with random assignment, including at least 60 participants with effect size calculations; (b) two methodologically sound group experimental studies with non-random assignment, including at least 60 participants with effect size calculations; and/or (c) two to four methodologically sound single case studies, including at least 20 participants (NTACT, 2018a). To meet the level of evidence to be an evidence-based predictor from correlational research, two methodologically sound a priori studies using propensity score matching/modeling demonstrating positive effects are required. For a research-based predictor, a combination of two methodologically sound a priori studies demonstrating consistent positive effects are required (NTACT, 2018a).

Secondary Transition EBPs and RBPs Aligned With Predictors

Using the specifications outlined by NTACT, 80 EBPs and RBPs (i.e., 20 EBPs, 60 RBPs) have been identified. These practices support the 20 in-school predictors of improved postschool outcomes identified by NTACT. Table 4.1 provides definitions of the 20 predictors with correlated outcome area (i.e., education, employment, independent living) organized into four clusters (i.e., career development, student skills, collaborative systems, policy). Tables 4.2 through 4.5 list the specific EBPs and RBPs

Table 4.1 Predictors Correlated with Outcomes by Cluster

Career Development Cluster

Predictors	Education	Employment	Independent Living
Career Awareness: Learning about opportunities, education, and skills needed in various jobs to choose a career that matches one's strengths and interests	X	X	
Occupational Courses: Courses that support career awareness, enable students to explore various career pathways, develop occupational skills through instruction, and experiences focused on their desired employment goals	X	X	
Paid Employment: Includes existing standard jobs in a company/organization with customized work assignments negotiated with the employer that always feature competitive pay	X	X	X
Work Experience: Includes an activity in an authentic workplace (e.g., work sampling, job shadowing, internships, apprenticeships, and paid employment)			
Career Technical Education (previously Vocation Education): A sequence of courses that prepare students for careers at various levels (e.g., trade, craft, technical, business)	X	X	
Work Study: Specified sequence of work skills instruction/experiences to develop students' work attitudes and general work behaviors by providing students with mutually supportive/integrated academic/vocational instruction		X	

Career Development Cluster

Predictors	Education	Employment	Independent Living
Student Skills Cluster			
Community Experiences: Activities occurring outside the school setting, supported with in-class instruction where students apply academic, social, and/or general work behaviors and skills		X	
Goal Setting: A component of self-determination; determining how you are going to accomplish what you want (e.g., self-set goals, determining plan for action, self-monitoring/measuring success)	X	X	
Self-Care/Independent Living: Skills necessary to manage one's personal self-care and daily independent living (e.g., financial management skills, daily living skills)	X	X	X
Self-Determination/Self-Advocacy: The ability to make choices, solve problems, set goals, evaluate options, take initiative to reach one's goals, and accept consequences of one's actions	X	X	
Social Skills: Behaviors and attitudes that facilitate communication and cooperation (e.g., social conventions, social problem solving)	X	X	
Travel Skills: Traveling independently outside the home (e.g., school, local store)		X	
Youth Autonomy/Decision Making: (e.g., planning weekend activities, volunteering)	X	X	
Collaborative Systems Cluster			
Interagency Collaboration: A clear, purposeful, and carefully designed process that promotes cross-agency, cross-program, and cross-disciplinary collaborative efforts leading to tangible transition outcomes for youth	X	X	
Parent Expectations: May include expecting their child will attend postsecondary education, get a paid job, and be self-supporting	X	X	X
Parental Involvement: Families are active and knowledgeable participants in all aspects of transition planning (e.g., decision making, providing support, advocating for their child)		X	
Student Support: A network of people (e.g., family, friends, educators, adult service providers) provide services and resources in multiple environments to prepare students to obtain their transition goals aligned with their preferences, interests, and needs.	X	X	X
Transition Program: Comprehensive program preparing students to move from secondary settings (e.g., middle school/high school) to adult life, utilizing transition planning	X	X	

(*Continued*)

Table 4.1 (Continued)

Career Development Cluster			
Predictors	Education	Employment	Independent Living
Policy Cluster			
Exit Exam Requirements: Standardized state tests, assessing a single content area or multiple skill areas, with specified levels of proficiency students must pass to get a high school diploma		X	
High School Diploma Status: Achieved by completing the all necessary requirements of the state awarding the diploma (e.g., core content)			
Inclusion in General Education: Requires students with disabilities to have access to general education curriculum and be engaged in regular education classes with peers without disabilities	X	X	X
Program of Study: An individualized set of courses, experiences, and curriculum designed to develop students' academic and functional achievement to support the attainment of desired postschool goals		X	

Table 4.2 Research-Based Practices by Predictors in the Career Development Cluster

Predictor	Practices
Career Awareness	*No practices identified*
Career and Technical Education	*No practices identified*
Occupational Courses	*No practices identified*
Paid Employment/Work Experiences	• Supported employment **(RBP)** • Computer-assisted instruction to teach job-specific skills **(RBP)** • Constant time delay to teach job-specific skills **(RBP)** • Response prompting to teach employment skills **(RBP)** • System of least-to-most prompts to teach job-specific skills **(RBP)**
Work Study	*No practices identified*

Note: RBP = research-based practice.

Table 4.3 Evidence- and Research-Based Practices by Predictors in the Student Skills Cluster

Predictor	Practices
Community Experiences	• Community-based instruction to teach communication skills **(RBP)** • Community-based instruction to teach banking **(RBP)** • Community-based instruction to teach community integration skills **(RBP)** • Community-based instruction to teach purchasing skills **(RBP)** • Community-based instruction to teach safety skills **(RBP)**
Self-Care/ Independent Living	• Constant time delay to teach food preparation skills **(EBP)** • Response prompting to teach food preparation skills **(EBP)** • Response prompting to teach home maintenance skills **(EBP)** • Simulations to teach purchasing skills **(EBP)**

Predictor	Practices
	• Video modeling to teach home maintenance skills **(EBP)**
	• Backward chaining to teach functional life skills **(RBP)**
	• Computer-assisted instruction to teach food preparation skills **(RBP)**
	• Computer-assisted instruction to teach grocery shopping skills **(RBP)**
	• Constant time delay to teach banking **(RBP)**
	• Constant time delay to teach functional skills **(RBP)**
	• Constant time delay to teach leisure skills **(RBP)**
	• Forward chaining to teach functional skills **(RBP)**
	• One-more-than strategy to teach purchasing skills **(RBP)**
	• Progressive time delay to teach functional life skills **(RBP)**
	• Progressive time delay to teach purchasing skills **(RBP)**
	• Progressive time delay to teach safety skills **(RBP)**
	• Response prompting to teach food preparation skills **(RBP)**
	• Response prompting to teach grocery shopping skills **(RBP)**
	• Response prompting to teach laundry tasks **(RBP)**
	• Response prompting to teach leisure skills **(RBP)**
	• Response prompting to teach purchasing skills **(RBP)**
	• Response prompting to teach social skills **(RBP)**
	• Simulations to teach banking skills **(RBP)**
	• Simultaneous prompting to teach functional life skills **(RBP)**
	• System of least-to-most prompts to teach communication skills **(RBP)**
	• System of least-to-most prompts to teach grocery shopping skills **(RBP)**
	• System of least-to-most prompts to teach food preparation and cooking skills **(RBP)**
	• System of least-to-most prompts to teach functional life skills **(RBP)**
	• System of least-to-most prompts to teach purchasing skills **(RBP)**
	• System of least-to-most prompts to teach safety skills **(RBP)**
	• System of most-to-least prompts to teach functional life skills **(RBP)**
	• Total task chaining to teach functional life skills **(RBP)**
	• Video modeling to teach food preparation **(RBP)**
	• Video modeling to teach home maintenance skills **(RBP)**
Self-Determination/ Self-Advocacy	• Published curricula to teach student involvement in the individualized education program, or IEP **(EBP)**
Goal Setting	• Self-Directed IEP to teach student involvement in the IEP meeting **(EBP)**
Youth Autonomy/ Decision Making	• Self-Determined Learning Model of Instruction to teach goal attainment **(EBP)**
	• Whose Future Is It Anyway? to teach self-determination **(EBP)**
	• Check and Connect to promote student participation in the IEP meeting **(RBP)**
	• Published curricula to teach student involvement in the IEP **(RBP)**
	• Self-Advocacy Strategy to teach student involvement in the IEP meeting **(RBP)**
	• Self-Directed IEP to teach student involvement in the IEP meeting **(RBP)**
	• Self-Determined Learning Model of Instruction to teach goal attainment **(RBP)**
	• Self-management to teach math **(RBP)**
	• Self-monitoring to teach reading **(RBP)**
	• Self-management to teach job-specific skills **(RBP)**
	• Self-management to teach social skills **(RBP)**
	• Self-monitoring to teach functional life skills **(RBP)**
Social Skills	• Simulation to teach social skills **(RBP)**
Travel Skills	*No practices identified*

Note: EBP = evidence-based practice; RBP = research-based practice.

Table 4.4 Research-Based Practices by Predictors in the Collaborative Systems Cluster

Predictor	Practices
Interagency Collaboration	• Counseling and the working alliance between counselor and consumer **(RBP)** • Interagency collaboration **(RBP)** • Counselor education **(RBP)** • Services to a targeted group **(RBP)**
Parent Expectations	*No practices identified*
Parent Involvement	*No practices identified*
Student Support	• Academic support and enrichment for dropout prevention **(RBP)** • Accelerated middle schools for staying and progressing in school **(RBP)** • Adult advocate for dropout prevention **(RBP)** • Check and Connect for staying and progressing in school **(RBP)** • High school redirection for school completion **(RBP)**
Transition Program	*No practices identified*

Note: RBP = research-based practice.

Table 4.5 Evidence- and Research-Based Practices by Predictors in the Policy Cluster

Predictor	Practices
Exit Exam Requirements/High School Diploma Status	*No practices identified*
Inclusion in General Education	• Anchored instruction to teach math **(EBP)** • Graphic organizers to teach science **(EBP)** • Mnemonics to teach math **(EBP)** • Mnemonics to teach science **(EBP)** • Peer tutoring to teach science **(EBP)** • REWARDS Program to teach decoding, vocabulary, and reading comprehension **(EBP)** • Schema-based instruction to teach math **(EBP)** • Strategy instruction to teach math **(EBP)** • Strategy instruction to teach reading comprehension **(EBP)** • Technology to teach mathematical problem solving **(EBP)** • Time delay to teach science **(EBP)** • Computerized concept mapping to teach social studies **(RBP)** • Corrective reading to teach reading **(RBP)** • Direct Instruction of Main Idea to teach reading comprehension **(RBP)** • Embedded story structure to teach reading comprehension **(RBP)** • Expressive Writing Level 1 to teach writing fluency **(RBP)** • Graduated sequence of instruction to teach math **(RBP)** • Graphic organizers to teach reading comprehension **(RBP)** • Graphic organizers to teach social studies content **(RBP)** • Graphic organizers to teach writing fluency/syntactic maturity **(RBP)** • Go 4 IT Now to teach expository writing/goal setting **(RBP)** • Mnemonics to teach social studies content **(RBP)** • One-more-than strategy to teach money counting **(RBP)** • Peer-assisted instruction to teach math **(RBP)** • Peer tutoring to teach reading **(RBP)** • Peer tutoring to teach science **(RBP)** • Peer tutoring to teach social studies content **(RBP)**

Predictor	Practices
	• Reading Comprehension Strategy to teach reading comprehension **(RBP)**
	• Reading Comprehension Strategy plus Attribution Retraining Concepts and Strategies to teach reading comprehension **(RBP)**
	• Schema-based instruction to teach math **(RBP)**
	• Self-management to teach mathematical problem solving **(RBP)**
	• Self-monitoring to teach reading comprehension, productivity, accuracy **(RBP)**
	• Self-Regulated Strategy Development + Graphic Organizers + Mnemonics to teach quality of writing and fluency **(RBP)**
	• Self-Regulated Strategy Development + POW Tree to teach self-advocacy and self-efficacy through persuasive and argumentative essay writing **(RBP)**
	• Self-Regulated Strategy Development + SOLVE-IT to teach mathematical problem solving of equations and word problem **(RBP)**
	• Strategic note-taking to teach productivity in note-taking **(RBP)**
	• Structured inquiry to teach science **(RBP)**
	• TouchMath to teach math **(RBP)**
	• TRAVEL mnemonic to teach reading comprehension **(RBP)**
	• Visual displays to teach information recall/comprehension **(RBP)**
	• Word mapping strategy to teach vocabulary **(RBP)**
Program of Study	*No practices identified*

Note: EBP = evidence-based practice; RBP = research-based practice.

organized by predictors across the four predictor clusters. The following sections summarize the information found in Tables 4.2 through 4.5 and describe the practices associated with each predictor by cluster.

Career Development

The career development cluster represents five predictors including career awareness, career technical education, occupational courses, paid employment/work experience, and work study. Only one predictor, paid employment/work experience, has five RBPs that align with the predictor and address teaching employment-related skills to students with disabilities. No practices have been identified for career awareness, career and technical education, occupational courses, and work study. Examples of RBPs to teach employment-related skills include supported employment and using computer-assisted instruction to teach job-specific skills (see Table 4.2).

Student Skills

The student skills cluster represents seven predictors including community experiences, self-care/independent living, self-determination/self-advocacy, goal setting, youth autonomy/decision making, social skills, and travel skills. In total, 54 practices (i.e., 9 EBPs, 45 RBPs) were identified within this cluster, including (a) 5 RBPs related to community experiences, (b) 5 EBPs and 29 RBPs related to self-care/independent living, (c) 2 EBPs related to self-determination/self-advocacy, (d) 2 EBPs related to goal setting, (e) 10 RBPs related to youth autonomy/decision making, and (f) 1 RBP related to social skills. No EBPs and RBPs have been identified for travel skills. Examples of EBPs include using constant time delay to teach food preparation and simulations to teach purchasing skills. Examples of RBPs include using backward chaining to teach functional life skills and using computer-assisted instruction to teach grocery shopping skills (see Table 4.3).

Collaborative Systems

The collaborative systems cluster represents five predictors, including interagency collaboration, parent expectations, parent involvement, student support, and transition program. A total of nine RBPs have been identified within this cluster, including four interagency collaboration and five student support practices. No practices have been identified for parent expectations, parent involvement, and transition program. Examples of RBPs (NTACT, 2019a) include promoting counselor education and using Check and Connect to reduce dropout (see Table 4.4).

Policy

The policy cluster represents three predictors including exit exam requirements/high school diploma status, inclusion in general education, and program of study. A total of 41 practices, including 11 EBPs and 30 RBPs, have been identified within this cluster under the inclusion in general education predictor. Practices have yet to be identified for exit exam requirements/high school diploma status and program of study. Examples of EBPs include using mnemonics to teach math and using peer tutoring to teach science. Examples of RBPs include using schema-based instruction to teach math and using structured inquiry to teach science (see Table 4.5).

What's Next for Research?

As mentioned previously, the mandates that school personnel use EBPs to ensure all students experience positive academic, behavioral, and social outcomes have been in the law for almost 20 years (ESSA, 2015; IDEA, 2004; NCLB, 2001). Related to secondary transition, NSTTAC and NTACT have identified a total of 80 EBPs and RBPs since 2006. While this is a contribution to the field, the number clearly does not provide enough EBPs and RBPs for teachers to provide a fully evidence-based transition-focused education to students throughout the secondary years. Therefore, recommendations for research should be considered. First, it is recommended researchers design studies that meet the quality indicators to ensure studies have the potential to be included in the evidence base (Mazzotti, Rowe, Cameto, Test & Morningstar, 2013). This must be done if research on a practice is to contribute to the evidence base. Next, researchers should be cognizant of gaps in the research and make efforts to fill those gaps. For example, under the career development cluster, no EBPs or RBPs have been identified under career awareness, career technical education, or occupational courses. Under the collaborative systems predictor cluster, no EBPs or RBPs have been identified under parent expectations, parent involvement, and transition programs. Therefore, future research should focus on identifying interventions in these areas and other areas for which gaps in research exist. Finally, there is limited research on EBPs and RBPs to conclusively say what works for which populations of students with disabilities; therefore, researchers should focus efforts on evaluating interventions that work for specific student populations including type of disabilities, gender, and ethnicity (Cook & Cook, 2013).

What Should Teachers Consider?

Because there are a limited number of EBPs and RBPs available to secondary teachers of students with disabilities, school personnel should consider using existing resources available to ensure they implement secondary transition EBPs and RBPs. At the classroom level, teachers have a number of resources to support implementation of these practices. First, NTACT has practice descriptions and research-to-practice lesson plan starters that provide information for school personnel to implement secondary transition EBPs and RBPs with fidelity for students with disabilities. NTACT's practice

descriptions provide the evidence base, best place to find the practice, who the practice was implemented with, description of the practice, where the practice was implemented, how the practice relates to both the Common Core State Standards and Career Technical Education Standards, and references. Also, NTACT has research-to-practice lesson plan starters that school personnel can use both in the classroom and within the community. Lesson plan starters include the objective(s), setting and materials, content taught, teaching procedures (e.g., task analysis, instructional steps), and evaluation methods. Figure 4.1 provides an example of an NTACT research-to-practice lesson plan starter (NTACT, 2018b).

Research-to-Practice Lesson Plan Starter

NTACT
National Technical Assistance Center on Transition

Progressive Time Delay to Teach Science Skills
Objective: To teach students how to recognize key words and their corresponding definitions from product warning labels.

Setting and Materials:
Settings: Secondary self-contained special education class in a public high school
Materials: • black marker
  • 5 x 7 inch white index cards
  • household product warning labels

Content Taught
Target Word, Definitions, and Contextual Examples

Word	Definition	Contextual Examples
Avoid	Avoid means to try not to do something.	"*Avoid* touching eyes and food" means to try not to get the product in your eyes or on your food.
Caution	Caution means a product can hurt you if you are not careful.	"*Caution*: First Aid" means to read what to do if you are hurt by a product.
Contact	Contact means that something touches you.	"Keep from *contact*" means to try to keep the product from touching your eyes or skin.
Contamination	Contamination means it is dangerous for a product to touch something.	"Contamination of food" means it is dangerous for the product to touch food that someone will eat.
Flush	Flush means to rinse with water.	"Flush eyes with water" means to rinse your eyes with water if you get the product in your eyes.
Harmful	Harmful means a product could hurt you if you are not careful.	"May be harmful or fatal" means a product could hurt you very badly.
Ingestion	Ingestion means you swallowed a product.	"In case of ingestion, seek help" means, if you swallowed this, you need to get help because the product may hurt you.

Figure 4.1 Research-to-Practice Lesson Plan Starter Focused on the EBP of Using Progressive Time Delay to Teach Science Skills

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Teaching Procedures

1. Present a flash card to a student containing the target word by giving an attentional cue ("[Name], look").
2. Give the student general praise for attending to the cue along with a task direction to read the word within five seconds.
3. If the student does not initiate a response, verbally model the targeted word and definition and give a contextual example.
4. Give praise if the student provides a correct response for the targeted word, definition, and/or contextual example. Ignore incorrect responses or non-responses from the student.

Evaluation

Student responses can be scored using five categories: (1) unprompted correct answers, (2) prompted correct, (3) unprompted incorrect, (4) prompted incorrect, and (5) failure to respond.

Lesson Plan Based on:

Collins, B. C., & Stinson, D. M. (1994–1995). Teaching generalized reading of product warning labels to adolescents with mental disabilities through the use of key words. *Exceptionality*, *5*, 163–181

This Lesson Plan Starter was developed by The National Technical Assistance Center on Transition (NTACT), Charlotte, NC, funded by Cooperative Agreement Number H326E140004 with the U.S. Department of Education, Office of Special Education and Rehabilitative Services (OSERS). This document has been reviewed and approved by the OSERS. Opinions expressed herein do not necessarily reflect the position or policy of the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Department of Education. OSEP Project Officer: Dr. Selete Avoke. RSA Project Officer: Kristen Rhinehart-Fernandez. This product is public domain. Authorization to reproduce it in whole or in part is granted. While permission to reprint this publication is not necessary, the citation should be: National Technical Assistance Center on Transition (2018). *Progressive Time Delay to Teach Science Skills*.

IDEAs that Work
U.S. Office of Special Education Programs

Finally, in considering the in–school predictors of postschool success for students with disabilities, schools and districts can use the Predictor Implementation School/District Self–Assessment (PISA; NTACT, 2019b) to evaluate, review, and improve secondary transition programs at the school and district levels. The PISA provides schools, districts, or other stakeholders in secondary transition a method for examining the degree to which a transition program implements practices likely to lead to more positive postschool outcomes for students with disabilities (NTACT, 2019b). In addition, the PISA School/District Action Planning Guide is a useful tool to facilitate the process for using the PISA and developing an action plan to outline steps to support systems change (NTACT, 2019c).

Conclusion

Since 2001, the use of "scientifically based research" practices, or what has become known as EBPs, by teachers and schools have been federally mandated. To address the need for secondary transition EBPs and RBPs, both NSTTAC and NTACT have worked for over a decade to provide the field

with knowledge of secondary transition EBPs, RBPs, and predictors of postschool success. The 80 practices identified begin to fill the research gap. However, there is still work to do to ensure teachers and schools have the necessary instructional tools to provide a fully evidence-based, transition-focused education to students throughout the secondary years. Fortunately, the secondary transition EBPs and RBPs provide schools, districts, and other transition personnel with the best available evidence and a starting place for providing instruction to secondary students with disabilities, which may ultimately improve students' postschool outcomes.

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5

Career Design

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Evan E. Dean, Karrie A. Shogren, and Michael L. Wehmeyer

As the first four chapters in this handbook illustrate, the field of adolescent transition for students with disabilities has a rich history that spans more than half a century. And it should go without saying that much has changed in the world of work (and in the world in general!) in that half century. Just consider how things have changed since the introduction of Section 626 of the Education for All Handicapped Children Amendments Act of 1983 (Secondary Education and Transition Services for Youth Programs) discussed in Chapter 2. For one, the world itself was simply not as accessible as it is today. Air travel was very expensive and largely unavailable to most people. The precursor to the Internet, ARPANET, adopted the TCP/IP protocol in January of 1983 that laid the foundation for the World Wide Web, but only a few computer scientists knew about this. The first commercially available "mobile" phone was introduced in 1983, weighing in at almost two and a half pounds, costing $3,000 (in 1983 dollars), and with a capacity for 30 minutes of talk time. Further, women, people with disabilities, people of color, and other marginalized people had far fewer opportunities for meaningful work.

The world in 2020 is a very different world than existed when Madeline Will brought transition to the forefront in 1983. And yet many transition programs and services today look much like they did in the late 1980s. In Chapter 2, we introduced the ideas of life designing and career construction as providing a frame for adolescent transition education for students with disabilities in the 21st century. In this chapter, we provide more information about this framework and consider ways in which career designing can be implemented in transition services.

Career Designing Versus Career Development

Recently, Wehmeyer and colleagues (2019), echoing calls from the career guidance, vocational counseling, and vocational psychology fields (Nota & Rossier, 2015; Savickas et al., 2009), argued that transition for students with disabilities needs to move from a *career development* framework to a *career design* framework. There are several reasons for such a shift, perhaps none more compelling than the significant changes in the world of work. When transition services were first being conceptualized, it was assumed that the work world was relatively stable and that the goal was a long-term career that "developed" over a lifetime. The Partnership for 21st Century Learning (P21) states the issue like this:

> America's system of education was built for an economy and a society that no longer exists. In the manufacturing and agrarian economies that existed 50 years ago, it was enough to master

the "Three Rs" (reading, writing, and arithmetic). In the modern "flat world," the "Three Rs" simply aren't enough. If today's students want to compete in this global society . . . they must also be proficient communicators, creators, critical thinkers, and collaborators (the "Four Cs").

(National Education Association, 2016, p. 5)

The World Economic Forum (2018) identified three factors that are influencing the world of work: technological change, learning evolution, and talent mobility. The former (technological change) reflects the fact that areas like artificial intelligence and robotics have "displaced whole occupations, shifted the tasks and needed skills within some occupations, and created wholly new tasks and occupations" (p. 2). Learning evolution refers to what and how people learn what they need to know to be successful in the world of work. And talent mobility refers to the fact that workers may work from anywhere at about any time. What implications do these factors have for work in 2020 and beyond? Estimates of the number of jobs lost to technology range from 35% to 45%. But technology also allows workers to work from anywhere and to obtain just-in-time information on a work task. Jobs that will be popular in just a few years do not even currently exist. Workers will have multiple jobs that are project oriented, rather than only a few jobs. And work and life will begin to merge in ways that have not been true until recently.

So what are the implications for transition education? The career guidance and vocational counseling field has addressed these issues in ways that seem pertinent to transition, proposing career construction and life design approaches. Both of these will be discussed in more detail subsequently, but an overview of each is provided next.

Savickas (2005) identified the central thesis of career construction theory as recognizing that:

Careers do not unfold; they are constructed as individuals make choices that express their self-concepts and substantiate their goals in the social reality of a work role.

(Savickas, 2005, p. 43)

An important feature of career construction theory is the idea of career adaptability, defined as "the attitudes, competencies, and behaviors that individuals use in fitting themselves to work that suits them" (Savickas, 2005, p. 45). The theme that underlies career construction is that people "construct" or build their careers and that we need to teach young people how to identify and "fit" themselves into work that matches their interests and talents.

Life design theory was introduced to address an additional aspect of the changing world: that the distinction between one's work life and one's personal or non-work life will blur. As work becomes rooted in interests and talents, as technology makes the workplace wherever one happens to be, and as "jobs" become more frequent, time-limited projects, work and life merge in ways that are not true today (Wehmeyer, 2019). Thus, the career construction idea that people need to learn to "construct" their careers was expanded to one's life. In discussing life designing in transition, Wehmeyer and colleagues (2019) noted that it can be thought of as preparing young people

to design a work-life that is satisfying to the individual, and that can be redesigned as needs, interests, life experiences, and opportunities change . . . accumulated knowledge, skills, and experiences can be invested to create or respond to new opportunities as they arise.

(p. 182)

One other point that is important to bring up with regard to changes in the work-life world pertains to the issue that advances in artificial intelligence and robotics will eliminate potentially up to half of all jobs currently performed by humans. But as these jobs disappear and as a global economy moves the work world to a series of projects and assignments, there will be more room

for entrepreneurship and individuality based upon unique talents. According to Zhao (2012), while traditional jobs may be lost in a global, technological economy, jobs will be gained in other largely unidentified domains, and, as a result, more and more talents and abilities will have economic importance. Zhao (2018) noted:

> Today, in the new age, a majority of traditional routine tasks that required a homogenous set of skills and knowledge are now performed by machines, and human needs have shifted from basic needs to more psychological, aesthetic and intellectual needs. Thus, the full spectrum of human talents has become economically valuable.
>
> *(p. 57)*

So, while we acknowledge the important contribution that career development theory made to the field of adolescent transition, we argue that, as we move forward into the 21st century, a "designing" perspective is better suited for supporting the transition of students with disabilities to satisfying work and lives. We have opted to use the term "career design" in this chapter to align with work on career construction and life design. Integral to this process is that people continually look for opportunities that meet their interests, explore possibilities related to those interests, and set goals that seek to improve the fit between their capacities and the demands of the job. Using a career or life design approach, people are supported to become problem solvers who can handle transitions in employment environments, adapt to unexpected needs, and develop a positive sense of the future (Savickas et al., 2009; Wehmeyer et al., 2019). In the next sections, we want to explore how theories in multiple disciplines have and will continue to influence transition in the 21st century.

Interests and Strengths

We have discussed theory in career and vocational counseling already, but it is worth elaborating that theories in career counseling are focused on understanding how people navigate the uncertainty of the working world and develop a career identity (see Brown and Lent, 2005 for a thorough discussion of current theory). Trait-oriented theories in career counseling, such as Holland's theory of vocational personalities (Spokane & Cruza-Guet, 2005), focus on person-environment fit and have influenced disability employment research. A key element in trait-oriented theories is to find what people like to do and do well (i.e., interests and strengths) and find employment opportunities where those traits can be used. These elements of person-environment fit are hallmarks of theory in education and rehabilitation as well and are important considerations in career design (Dean, Wallisch, & Dunn, 2018; Law et al., 1996; World Health Organization, 2001). Arguably, building a career based on interests and strengths is the foundation of career design. However, there is more to the story.

Interaction Between Person and Context

Another career counseling theory, social cognitive career theory, incorporates trait-oriented and developmental theories with Bandura's social cognitive theory (Bandura, 2001) to describe how a person develops vocational interests, makes career-related choices, and achieves career stability. In this model, interests are developed through repeated participation in activities at home, at school, and in the community. Through participation, self-reflection, and feedback from others, people develop beliefs about their self-efficacy. This relates to action-control beliefs in self-determination (described in detail in Chapter 14) in that people with high action-control beliefs may be more inclined to believe that their goal-directed actions will lead them closer to achieving their goals. For young adults with disabilities, developing interests also have implications for inclusion and the application of supports. That is, to develop career interests, youth with disabilities need to be repeatedly involved

in a broad range of activities they choose. Additionally, over- or under-supporting participation of youth with disabilities can affect their self-determination. If youth are over-supported, they may learn that they do not need to try hard because someone will finish the job for them, or if they are under-supported, they may give up because a task is too difficult.

Career choice and performance, then, are shaped by the interests developed through participation and the subsequent experiences in work and life. The choice made and the evaluation of performance further contribute to development of self-determination and action-control beliefs. Consideration of the person-environment interaction is consistent with social-ecological models of disability (as described in Chapter 1). These interactions and their impact on career identity development are important to consider when considering work environments and are also considered in a career design approach.

Career Design

Savickas's career construction theory describes how meaning is made through many job and life experiences. In this theory, "individuals construct their careers by imposing meaning on their vocational behavior and occupational experiences" (Savickas, 2005, p. 43). Career, in this usage, is based on "personal meaning on past memories, present experiences, and future aspirations by weaving them into a life theme that patterns the individual's work life" (Savickas, 2005, p. 43). Person-environment fit is a key component of this model as well, as are life themes (developing identity based on work and life experiences – which also considers times of disappointment and encounters of social barriers) and career adaptability (a person's capacity to adjust to unexpected situations, plan for the future, make informed decisions, and understand the self and the environment) (Savickas & Porfeli, 2012; Wehmeyer et al., 2019). Table 5.1 describes key constructs in career design.

In essence, a career design approach highlights the importance of an intentional, iterative "doing, reflecting and revising" process, where a person continually seeks out opportunities based on his or her interests, reflects on the experiences, and revises his or her plan or narrative based on perception of the outcome. That is, the participation and reflection help shape the person's identity and inform subsequent decisions and activity. Additionally, through the doing-reflecting-revising process, the person develops the capacity to anticipate change and be flexible with future decisions.

For example, Tammy is a young adult who will graduate from high school in two years. She has identified being a nail technician as a job she wants to pursue, which would involve graduating from cosmetology school. Her transition specialist knows that there is a lot of scientific knowledge needed

Table 5.1 Key Constructs in Career Design

Person-Environment Interaction	Match between person's interests and strengths and environment's supports and opportunities.
Doing, Reflecting, Revising (Self-Reflection)	A person continually seeks out opportunities based on their interests, reflects on and evaluates the experiences, and revises their plan or narrative based on their perception of the outcome.
Integrating Job and Life Experiences	Self-evaluation of diverse employment and life experiences that allow the person to construct a career narrative (e.g., what they have done, what they have learned from those experiences, where they want to go).
Career Adaptability	A person's capacity to adjust to unexpected situations, plan for the future, make informed decisions, and understand the self and the environment.
Self-Determination	A "dispositional characteristic manifested as acting as the causal agent in one's life" (Shogren et al., 2015, p. 258).

to pass the entrance exam for cosmetology school and that while Tammy has been included in general education classrooms, she has not had sufficient instruction on the science content needed to be successful on the exam. Here, the transition specialist has a decision to make: to support Tammy to pursue her chosen career as a nail technician, knowing the path is unclear, or to steer Tammy toward an entry-level position where she would be successful – but possibly not satisfied. Using a career design perspective, the transition specialist may seek to understand Tammy's past experiences and future goals. If Tammy sees herself as a student or lifelong learner, encouraging her to gain the scientific knowledge needed, even if it may take years, could excite Tammy and move her toward her career choice of interest. On the other hand, if learning the scientific content does not fit into Tammy's plans or interests, the transition specialist may seek to understand why being a nail technician is important to Tammy. Understanding the "why" could help the transition specialist support Tammy to construct a new narrative and find new possibilities that do not require extensive scientific knowledge. Perhaps Tammy is mostly interested in the one-on-one connection established between nail technicians and their clients. If so, many job possibilities exist where Tammy could cultivate a one-on-one connection.

A career design approach places emphasis on self-evaluation and on the meaning a person creates out of diverse employment and life experiences. Understanding people's narratives (e.g., what they have done, what they have learned from those experiences, where they want to go) is central and aids in the development and continual refinement of a career identity. According to Meijers (1998), we understand our career identity by answering the question: "What does work mean in and for my life?" That is, a career identity is "one's perception of self that relates to work and working" (p. 193). This identity is shaped both through individual reflection on work experiences and also on the value society places on the work (Guichard, 2009; Savickas, 2012). Here again is the balance between the person's perception of their work and the value placed by society.

Career identity in this respect is continually revised based on interpretations of experiences throughout life. However, the transition time period is critical to identity formation because experiences from this time set a foundation upon which people will continue to construct their identity. Therefore, the role of people supporting transitions for young people with disabilities is central in shaping the formation of career identity in two ways. First, how much choice and agency are youth with disabilities supported to have in selecting their experiences during transition? That is, do our actions as supporters communicate that the youth is an active participant in the selection of work opportunities? Second, what is the narrative about the role of career design in the lives of people with disabilities in communities and society? If we define work based on a few available opportunities, do we communicate that these are the only jobs that people with disabilities can or should access? What does it look like to support the career trajectory of people with disabilities, even if we have concerns about the chosen career pathways? To address these issues, in the next section we will differentiate career designing from traditional career development and emphasize how career design can promote self-determination and agency in young people with disabilities.

Finally, career adaptability, which describes a person's capacity to adjust to unexpected situations, plan for the future, make informed decisions, and understand the self and the environment, is central to career design (Savickas & Porfeli, 2012; Wehmeyer et al., 2019). Career adaptability involves abilities such as future planning, goal setting, goal attainment, and problem solving, all abilities associated with self-determination. For people with disabilities, higher levels of career adaptability are associated with agency (setting and progressing toward goals), pathways thinking (planning for goal achievement), and life satisfaction (Santilli, Nota, Ginevra, & Soresi, 2014). Further, career adaptability can lead to successful job transitions, shorter periods of unemployment, and higher employment quality (Germeijs & Verschueren, 2007; Hirschi, 2010; Koen, Klehe, Van Vianen, Zikic, & Nauta, 2010).

Parallels Between Career Design and Best Practices in Transition Supports

Career design represents an approach that transition specialists can use to support students both to find employment and, more importantly, to begin to design a career identity based on their strengths and interests. Identity development begins early in life, and therefore school experiences play a key role in development. As such, it is important to evaluate existing evidence-based practices in transition education to understand their applicability within a career design approach. The National Technical Assistance Center on Transition (NTACT) has been a leader in evaluating and disseminating evidence-based practices (EBPs) related to transition. Table 5.2 lists student development practices identified by NTACT as evidence-based (highest level of evidence) or research-based (lower level of evidence) and compares them to key constructs in career design.

We categorized NTACT practices based on the focus of the intervention and identified three main foci, each with a varying amount of applicability to the career design process: goal attainment, communication and social skill training, and job-specific skills. The most applicable practice for career design was supporting goal attainment through the use of a comprehensive intervention package. For example, the Self-Determined Learning Model of Instruction (SDLMI; Shogren, Raley, Burke, & Wehmeyer, 2018) has been demonstrated to impact employment outcomes and has explicit components that focus on career adaptability (in terms of goal setting and problem solving), self-evaluation, job or life experiences, and other self-determination abilities. A companion intervention, the Self-Determined Career Design Model, is described in detail in later sections.

The other areas, communication and social skill development and job-specific skills, can also have relevance to a career design approach, but much of the relevance will depend on if the practices listed in Table 5.2 are implemented within a career design approach. The context of instruction and the degree to which it is aligned with the young person's developing career identity and the considerations related to person–environment fit that relate to that identity should drive the selection of instruction and supports. As part of a career design approach, the following questions should be considered:

• Is the person encouraged to reflect and evaluate on what works for them and what does not work for them?

Table 5.2 Mapping of NTACT Evidence- and Research-Based Practices to Key Constructs in Career Design

NTACT Focus of Practices	NTACT Practices	Career Design Constructs				
		Career Adaptability	Person-Environment Interaction	Self-Reflection	Job or Life Experiences	Self-Determination
Goal Attainment	SDLMI*	X		X	X	X
Communication and Social Skills	CBI Simulation		X		X	
Job-Specific Skills	CAI	X	X	X	X	
	Constant Time Delay Response Prompting				X	
	Self-Management System of Least-to-Most Prompts	X		X	X	

Notes: SDLMI = Self-Determined Learning Model of Instruction; CBI = community-based instruction; CAI = computer-assisted instruction.
* Evidence-based practice.

- Are they involved in selecting the interventions that are most meaningful for them in the contexts they want to design their life and career within?
- Are the interventions delivered in a location that allows the person to gain real-world experiences in areas related to their burgeoning career identity?
- Is the person encouraged to self-reflect on the workplace interactions and the social and communication skills that are needed in that specific environment?

Evidence-Based Strategies for Intervention in Career Design

Intervention in career design, as in life design, supports students to understand their previous life and employment experiences, construct those experiences into a career narrative, and set goals and create action plans to move them closer to realizing their career goals. In this section, we highlight three research-based interventions that transition counselors can use in a career design approach.

Possible Selves

Possible Selves (Hock, Schumaker, & Deshler, 2003) is an intervention that supports students to imagine their ideal future and set goals that lead them closer to that future. The intervention is designed to increase motivation by supporting students to set goals related to their desired career and life outcomes. Possible Selves is divided into seven components designed to support students to reflect on their past experiences, set goals, and self-reflect on their progress toward achieving their goals. The components begin with discovering your strengths and interests and culminate with working to achieve goals (Table 5.3 describes each component). A key component of this intervention – and potentially the constructing of a career narrative – is the sketching of a tree. A tree is used as a symbol of possible selves, where the roots represent characteristics of the person (e.g., strengths and support needs), the limbs represent the roles that a student identifies with (e.g., student, worker, athlete), and the branches represent "hoped for and expected possible selves" (Hock et al., 2003, p 7).

Research on Possible Selves has been done separately on middle school students and university students. With middle school students, a group participating in the Possible Selves intervention identified more roles in academic and life domains than students who received traditional career orientation (Hock et al., 2012). Similarly, college students who engaged with Possible Selves identified more life goals than students who received traditional tutoring and career counseling services (Hock, Schumaker, & Deshler, 2002). Further, six years later, students who received Possible Selves had higher GPAs and higher graduation rates. These results show the promise of using Possible Selves to support the development of a career identity.

Table 5.3 Possible Selves Components

Component	Key Questions Addressed
Discovering	What are my strengths and interests?
Thinking	Who am I?
	What are my hopes, expectations, and fears?
Sketching	What am I like?
	What are my hoped-for, expected, and feared possible selves?
Reflecting	What can I be?
Planning	How can I reach my goals?
Working	How am I doing?

My Career Story

My Career Story is a career construction intervention that uses a narrative approach to support students to (a) reflect on their life and career experiences, (b) set a career direction, and (c) enact an action plan to move toward the career direction (Hartung & Santilli, 2018). The process mirrors best practice in career construction counseling that focuses on developing a career identity around a life narrative. My Career Story was recently developed, and therefore research on its effectiveness is limited. However, one study found that adolescents who received the intervention demonstrated greater gains on measures of career adaptability and future orientation than the group who received traditional career guidance (Santilli, Nota, & Hartung, 2019).

Self-Determined Career Design Model

The Self-Determined Career Design Model (SDCDM) was designed to enable facilitators to support a person to learn to self-regulate problem solving, leading to goal setting and attainment focused on career design. The SDCDM is implemented by a trained facilitator (e.g., transition specialist or other professional) who supports transition-age students (or adults with disabilities) to learn self-regulated problem-solving skills in service to the person's career-related goals (Dean, Shogren, Wehmeyer, Almire, & Mellenbruch, 2019; Wehmeyer et al., 2003). The SDCDM is a modification of the previously mentioned evidence-based practice, the Self-Determined Learning Model of Instruction (Shogren et al., 2018). The SDLMI focuses on goals across domains while the SDCDM specifically targets goals related to career design. The SDCDM intervention process can be used at any stage in career design, including job exploration as well as on-the-job support.

Implementation of the SDCDM consists of a three-phase problem-solving process. Each problem-solving phase presents a problem to be solved by the job seeker: "What is my goal?" "What is my plan?" and "What have I learned?" Figure 5.1 depicts the three stages. The student solves each problem by working through a four-question problem-solving sequence (called Employment Questions) where the student must: (a) identify the problem, (b) identify potential solutions to the problem, (c) identify barriers to solving the problem, and (d) identify consequences of each solution. The four questions differ by phase but represent identical steps in the problem-solving sequence. Each question is linked to a set of Facilitator Objectives, which are objectives a facilitator seeks to accomplish by implementing the model. Using the model, students are the primary decision makers, but
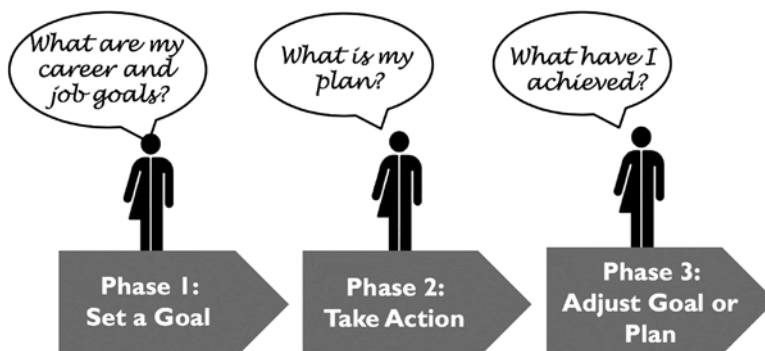
Figure 5.1   The Self-Determined Career Design Model

Source: Shogren, Dean, Hagiwara, and Wehmeyer (2019). © 2019 Kansas University Center on Developmental Disabilities. Used with permission.

they also learn to recruit support (e.g., family members, friends, professionals) from various sources to enable them to take steps toward solving problems and moving toward their employment goals.

The SDCDM has been used in research with adults with intellectual disability and has been shown to be effective in promoting self-determination and employment outcomes (Dean, Burke, Shogren, & Wehmeyer, 2017; Dean et al., 2019; Shogren et al., 2016; Shogren et al., 2017). The model has also been integrated into job development activities to ensure the person with a disability is the primary decision maker (Dean et al., 2019; Shogren et al., 2016).

Conclusion

A career design approach represents a new framework within which to conceptualize the transition from school to work for young people with disabilities. This approach addresses issues raised by changing work and work-life contexts. Using this approach, transition specialists can use existing evidence-based practices to promote development of a career identity and career adaptability. This focus will support students to effectively manage transitions in their life and continually refine their identity in adult life. The ultimate goal of the career design approach is to support people to live meaningful and productive lives, consistent with and advancing the goals of transition services.

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Adolescent Transition Planning Strategies

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In this chapter, many of the strategies available for use to support best practices in transition planning are presented. Strategies identified are considered informal, with most being available at a very low cost while others can be obtained at no cost. In most cases, transition planning strategies can be categorized as person centered and/or self-determined. Therefore, this chapter will describe the broader category of person–centered planning and then more specifically address those that emphasize student-led strategies that focus on the development of self-determination (Lindstrom et al., 2007).

Evidence of a "results-oriented process" is best reflected by the involvement of students with disabilities in transition programs that incorporate instructional planning materials and procedures that help them and/or their parents successfully participate in the transition planning process. Although person–centered strategies are often considered time-consuming and reserved for students who have more complex support needs, understanding the underlying spirit and use of person–centered approaches is aligned with the intent of the Individual with Disabilities Education Act (IDEA, 2004). The application of these person–centered approaches can lead to building quality transition plans for each student with disabilities who receives special education services (Robertson et al., 2007).

Person-Centered Approaches

A person–centered approach to transition planning involves a systematic process that focuses on understanding the needs of the person with disability and not the system that serves them. Person-centered approaches help generate an action plan in which the primary focus is to empower people with disabilities, with a team of professionals and interested others to ultimately build capacity for people with disabilities to be included in society as valued members (Pearpoint, O'Brien, & Forest, 1998; O'Brien & O'Brien, 2000). Person-centered approaches allow individuals, family members, and friends an opportunity to share information to develop a personal profile and a future vision for an individual with disabilities (Wells & Sheehey, 2012). For students with disabilities, person-centered approaches strengthen opportunities for the development of postschool roles to be well defined and activated during high school (Hagner, Kurtz, May, & Cloutier, 2014; Menchetti & Garcia, 2003; Obisike, Wallace, Alexander, & Brouwer, 2012).

Each person-centered planning approach begins with a team-assessment process that uses a set of tools, often referred to as "maps," to build a profile of the focus person with disabilities (Wells, Sheehey, 2012). The maps vary based on the goals, wants, and needs of the individual (O'Brien & O'Brien, 2000;

Pearpoint et al., 1998; Wehman, 2001). Three basic features common to each person-centered planning approach are: (1) examination of everyday events and activities in which the individual participates; (2) exploration of family and connections within the community; and (3) planning with the individual with the disability and a team of people who know the person well and are committed to help him/her achieve identified personal goals (Falvey, Forest, Pearpoint & Rosenberg, 1994). Additionally, each approach is led by a facilitator who uses group graphics (e.g., color, photographs, symbols, words, texture) to capture the team's thoughts on chart paper to provide a comprehensive picture of the individual and the action plan (Mount & Zwernik, 1990; Pearpoint et al., 1998; Vandercook, York, & Forest, 1989; Wells & Sheehey, 2012; Westgate & Blessing, 2005). Person-centered approaches are user-friendly for everyone involved in the problem-solving process. The heavy reliance on visual representation of text helps eliminate the burden of reading professional or complex language (Claes, Hove, Vandevelde, Loon, & Schalock, 2010).

Although many person-centered approaches have been developed primarily for people with developmental disabilities as the target audience (Test et al., 2004), only those that are most often cited and used in school and community settings will be discussed here. The approaches discussed in this chapter include: Personal Futures Planning (PFP), Making Action Plans (MAPS), Planning Alternative Tomorrows with Hope (PATH), Group Action Planning (GAP), Choosing Options and Accommodations for Children (COACH), and Essential Lifestyles Planning.

Personal Futures Planning (PFP)

PFP is a creative process designed to help a team develop a blueprint of meaningful opportunities to postschool living (Davis, 2003). A team may use this process when a student's participation options in high school seem limited due to various factors (e.g., health, cognitive ability, family resources, behavior). Using this process can enhance the team's ability to identify appropriate resources and opportunities in school and community environments that generate a results-oriented process aligned with IDEA transition planning mandates (Nelson, 2005).

The facilitator of the PFP process is a person who is committed to ongoing problem solving. This person plays a critical role in assuring that the plan and process are implemented and embraces the challenge of people working together to build a better future for the youth with a disability during and after high school (Mount & Zwernik, 1990). The facilitator organizes a team of committed individuals to listen to the dreams and desires of the person with a disability and takes action over time to accomplish these dreams (Mount & Zwernik, 1990).

Five basic components of PFP are included in the process that provide impetus for the greatest quality change in a person's life. They include:

1. People begin with a clear appreciation of the gifts and capacities of the focus person.
2. Committed people develop a common understanding of a specific positive future – a common dream.
3. Committed people agree to meet regularly to brainstorm and make commitments to act. These people are often those who spend a lot of time with the person or have known the person for a long time.
4. The team includes at least one person – a family member, advocate, community member, staff person, or the person who is the focus of the planning – who is a champion of the dream. This person makes extraordinary efforts to bring the dream into reality.
5. At least one agency or community organization is committed to supporting the implementation of the plan (Mount & Zwernik, 1990, p. 11).

The facilitator helps the team collect information through the use of frameworks, often called maps. The most common frameworks explore the following areas: relationships, places, background, preferences, dreams, and hopes and fears.

Making Action Plans (MAPS)

This form of person-centered planning was initially developed to focus on the integration and inclusion of elementary children with disabilities in general education, foster peer relationships, and improve the quality of life of children with disabilities with significant needs of support (Vandercook et al., 1989). However, the MAPS process has expanded to include broader areas relevant to a range of support needs for individuals with disabilities. In fact, it has become a familiar and preferred process used for addressing transition issues for students with disabilities whose planning requires alternative perspectives for enhancing postschool options (Haines, Francis, Shepherd, Ziegler, & Mabika, 2018).

Similar to PFP, MAPS primarily brings family members, friends of the family, regular and special educators, other school professionals (e.g., counselor, paraprofessional, principal), the student, and the student's friends together to look at what the student with disabilities can do instead of working from the perspective of what he/she cannot do (Kansas State Board of Education, 1990).

There are seven driving questions to be answered in the MAPS process:

* What is the child's history?
* What is your dream for the child?
* What is your worst nightmare?
* Who is the student?
* What are the student's gifts?
* What are the student's needs?
* What would an ideal day at school be like for the student? (Haines et al., 2018; Kansas Board of Education; Vandercook et al., 1989).

Wells and Sheehey (2012) suggest the following transition-specific questions be answered during the MAPS process relevant to postschool options: "(a) At age 21, where will the student live and work? (b) What will those places be like? (c) What will the student do there? (d) What community places will the student use? (e) Who will the student spend time with? and (f) What would an ideal day look like?" (p. 34). One should be mindful that MAPS is also an ongoing problem-solving process. Although the driving questions seem clear and easy to address, each may take a committed amount of time to explore the depths it entails to portray the best picture of what is occurring and what needs to occur in a student's life for successful transition planning.

The team of professionals, family members, peers, and interested others work with a facilitator to ensure that the voice of most importance in the MAPS action planning process is that of the student with a disability. An appealing attribute of this process is that if the student has difficulty expressing himself/herself, a family member or someone close to the student is acknowledged as the spokesperson for the student, and the process can continue.

Planning Alternative Tomorrows With Hope (PATH)

PATH addresses both long- and short-term planning. Through an eight-step process, a dream is defined, and then a positive goal is set and targeted for the next six months to a year (Wood, O'Farrell, Bjerk-Andersen, Mullen, & Kovshoff, 2019). Once the dream and goals are agreed upon, action plans are developed, and people are asked to volunteer their support. In this process a graphic

depiction of a person's dream is displayed and referred to as the path, with the North Star being the dream (Armstrong & Dorsett, 2015). The focus of the PATH planning process is to think backward from the dream all the way to committing to the first step in helping the individual accomplish the dream (Pearpoint et al., 1998). The focus person is known as the pathfinder. A brief description of the steps in PATH includes:

- **Touching the dream** provides a graphic depiction of the pathfinder's dream (the North Star).
- **Sensing the goal** focuses on what needs to happen within the next year in reaching the dream.
- **Grounding in the now** involves taking a look at where the pathfinder is currently in relation to the dream.
- **Identifying people to enroll** focuses on identifying those who are willing to share a commitment to accomplish the steps toward the dream.
- **Recognizing ways to build strength** focuses on helping the pathfinder acknowledge current strengths and ways to become stronger.
- **Charting action for the next few months** focuses on prioritizing actions that need to take place in the next three months toward the dream.
- **Planning the next month's work** focuses on specifying who will do what, when.
- **Committing to the first step** focuses on identifying the biggest hurdle of what needs to happen first to make movement toward the dream.

Group Action Planning (GAP)

GAP provides the opportunity for persons with difficult behaviors to be supported by a unified, reliable alliance that includes the focus person, family members, friends, and professionals. GAP helps individuals and their families envision the best possible outcomes for the focus person and helps bring their vision to fruition. GAP's team members commit to accomplishing, monitoring, and adjusting goals to provide continuous, ongoing support to focus individuals and their families.

The GAP process involves: (a) inviting people from the individual's natural network who can be helpful to participate in the planning process; (b) choosing a facilitator who connects well with others, makes people feel valued, sets a positive tone, helps keep comments relevant, and is willing to assign tasks; (c) including the focus person and family as much as possible; (d) emphasizing information based on personal knowledge versus professional knowledge; (e) fostering dynamic dreams for the future, directed and controlled by the focus person and family; (f) brainstorming solutions to problems that encourage everyone's input and that are fueled by high expectations; and (g) continuously celebrating progress made by the team. The purpose of the GAP process is to support the individual with a disability to create a vision of how he or she wants to live life and then to make a long-term commitment to the individual to transform that vision into reality (Turnbull et al., 1996).

Choosing Options and Accommodations for Children (COACH)

Although a family- versus student-centered approach, COACH is included here because it embraces the same problem-solving process as the other approaches included in this chapter, except the family is the focal point. COACH was designed to include the family's values and dreams in the individualized educational program planning for students with moderate to severe disabilities (Giangreco, Cloninger, & Iverson, 1993). It has three major parts: (1) family prioritization interview; (2) defining the educational program components; and (3) addressing the educational program components in inclusive settings. In this process, the family's values are of utmost importance. COACH may prove to be a particularly useful transition planning strategy for culturally and linguistically diverse families who have children with disabilities.

Essential Lifestyles Planning

Essential Lifestyles Planning is a different and unique process among the person–centered approaches. It aims to build agreements among a variety of service providers to address important issues for each focus person. The intent is to address power struggles that can lead to mistrust and unhappiness with little resolve for the individual in which everyone claims commitment. O'Brien and O'Brien (2000) emphasized that this process:

> has generated an array of tools for discovering what matters to people, building a very finely grained understanding of the rituals and routines that allow people to express their uniqueness, reviewing the quality of plans, incorporating the perspective of skilled service providers, dealing with conflicts, supporting necessary organizational changes, and bridging to other person-centered approaches as a person's dreams grow bigger and stronger and a person's relationships with potential allies grow wider and deeper.
>
> *(pp. 23–24)*

Because some youth require a combination of unique strategies to effectively compose a "results-oriented" transition plan from high school to postschool settings, the Essential Lifestyles Planning process is a strategy that can be used to coordinate all the efforts into a compilation of coordinated activities.

Self-Determination Approaches

Later chapters in this volume will focus more extensively on both self-determination and on student-directed planning, but because planning without the student is a futile exercise, we think it is worth touching on these issues in our summary of the transition planning process. Teaching students with disabilities to be self-determined can lead to more positive transition and adult outcomes (Seong, Wehmeyer, Palmer, & Little, 2015; Shogren, Wehmeyer, Palmer, Rifenbark, & Little, 2015; Wehmeyer, Shogren, & Thompson, 2018). Youth who are self-determined are causal agents in their lives (Wehmeyer et al., 2019). As casual agents, individuals act based on their own will to make or cause things to happen in their lives, instead of others making them act a certain way (Raley, Shogren, Mumbarbo'-Adam, Simo'-Pinatella, & Gine', 2018; Shogren et al., 2015; Wehmeyer et al., 2018; Wehmeyer et al., 2019). A self-determined person is better equipped to control his or her own destiny. The concept of self-determination includes both attitudes and abilities that lead to goal setting as well as the initiative needed to reach these goals (Ward, 1994). Activities that lead to student self-determination include increasing self-awareness; improving decision making, goal setting, goal attainment, self-management skills, self-advocacy, choice making, and self-knowledge (Raley et al., 2018; Wehmeyer, Argan, & Hughes, 1998; Woods, Sylvester, & Martin, 2010); enhancing communication and relationship skills (Field, Hoffman, & Spezia, 1998); and developing the ability to celebrate success and learn from reflecting on experiences. Self-determination instructional programs help students learn how to participate more actively in educational decision making by (a) helping students become familiar with the educational planning process, (b) assisting students to identify information they would like to share at educational planning meetings, and (c) supporting students to develop skills to effectively communicate their needs and wants (Woods et al., 2010).

Examples of activities used in self-determination instructional programs include (a) reflecting on daydreams to help students decide what is important to them and (b) teaching students how to set goals that are important to them and then, with the support of peers, family members, and teachers, taking steps to achieve those goals. Contextual supports and opportunities for students, such as coaching for problem solving and offering opportunities for choice, are critical elements that lead to social competence, autonomy, and relatedness and, as a result, increased self-determination.

Self-determination is a lifelong process. Self-advocacy training and coaching services help improve self-determination skills and encourage students to ask for and utilize services and support systems to achieve academic success (Carter, Trainor, Owens, Sweden, & Sun, 2010). Both school and home environments can provide rich opportunities for developing the skills, attitudes, and support for self-determination. Self-determination skills increase the likelihood of students with disabilities attaining positive inclusive experiences in school and at home that may lead to inclusion in society (Mazzotti, Rowe, Wall, & Bradley, 2018). It is critical that students begin developing these skills by the time they begin participating in their transition planning process. Self-advocacy and self-determination skill instruction should begin before students reach the mandated age of 16 as required by IDEA 2004. Ideally, students should prepare to participate in their transition planning process by completing a self-determination skill curriculum before reaching secondary school. The primary skills taught by self-determination curricula include:

1. **Student self-awareness:** This includes their strengths, needs, interests, and preferences. Students should understand their disability, learning styles, and accommodations as well as their legal rights and responsibilities. This self-awareness must lead to increased positive self-esteem and confidence.
2. **Problem solving and decision making**: Students should be able to define the problem faced, gather information and resources, identify pros and cons, make informed decisions, and communicate preferences.
3. **Goal setting:** Students should learn to identify their vision and long-range goals, identify possible resources, develop an action plan to reach these goals, and evaluate likely outcomes. Goal setting also includes the ability to take informed risks and to take responsibility for the consequences of their actions.
4. **Communication skills:** These skills include body image and posture, clearly expressing ideas and feelings, listening to what others have to say, asking questions, planning and organizing thoughts, and accepting comments and criticism. In addition, most self-determination curricula provide opportunities and support for students to use their new skills. Typically, these opportunities have focused on student-directed individualized education programs (IEPs) in which the student takes primary responsibility for developing the IEP goals and actually directs the IEP meetings. Several of the curricula offer strategies for increasing student involvement in making decisions regarding their employment, future living options, social relationships, and community participation. The following planning strategies may be used to foster self-determination.

Self-Advocacy Strategy for Education and Transition Planning

The Self-Advocacy Strategy for Education and Transition Planning (Van Reusen, Bos, Schumaker, & Deshler, 1994; Van Reusen, 1996) is a motivational strategy that students use to prepare for and participate in their transition IEP meeting. This strategy teaches students how to get organized prior to the meeting and how to communicate during the meeting. Students use the acronym "I-Plan" to remember the five steps in the planning strategy. This planning strategy is part of the Strategic Instruction Model from the University of Kansas. It is most appropriate for students with disabilities who take part in the general education curriculum with accommodations. It may also be used by students in more segregated settings who function at independent levels. The Self-Advocacy Strategy for Education and Transition Planning may be used with students of all ages (Van Reusen, 1996).

The purpose of the Self-Advocacy Strategy for Education and Transition Planning is fivefold. First, as a motivation strategy, it is designed to enable students to systematically gain a sense of control and influence over their own learning and development. Second, the strategy focuses students' attention on their learning and transition-skill strengths and provides them with a systematic process

for identifying or determining specific skills they want to learn or improve. Third, mastery of the strategy enables students to take an active role in making decisions related to their learning and development experiences. Fourth, the strategy provides students with a way of getting organized before any type of conference or meeting. Finally, the steps of the strategy remind students about behaviors and techniques needed for effectively communicating and advocating their education and transition goals.

The acronym "I PLAN" is used to help students remember the five steps of the strategy, which are described here. "I PLAN" represents:

I: *Inventory* examines your strengths and weaknesses needed to improve goals, interests, and choices for learning. This step will prepare students for their upcoming IEP conference.
P: *Provide* your inventory information involves identifying an appropriate time for individuals to share information during the conference, speaking clearly and completely, and referring to the inventory as needed.
L: *Listen and respond* addresses being an active listener and responding to statements made by others in a positive manner.
A: *Ask questions* focuses on asking appropriate questions to gather needed information.
N: *Name your goals* focuses on communicating goals and ideas on actions to be taken.

Next Student Transition and Educational Planning (S.T.E.P) Curriculum

The Next S.T.E.P. Curriculum and instructional program is designed to be presented to students, with or without disabilities, in a classroom setting. The curriculum includes 19 lessons and requires a minimum of three months to complete but preferably continues for a least one year. It is recommended that instruction occur two times per week. The scope and sequence of the instructional program involves the following main units: (a) overview of transition planning, (b) self-evaluation, (c) goal development, (d) goal implementation, and (e) student direction of his/her transition planning meeting. Lesson formats vary from large-group instruction to one-on-one instruction, depending on the nature of the tasks being addressed. As one outcome of the program, each student creates and begins implementation of a unique transition plan addressing four areas: (1) education and training, (2) jobs, (3) personal life, and (4) living on your own. Each student, to the extent of his/her capabilities, also directs the transition planning IEP meeting (Halpern, Herr, Doren, & Wolf, 2000).

Opportunities in Postsecondary Education through Networking (OPEN)

The Opportunities in Postsecondary Education through Networking (OPEN) model is designed to assist students, parents, and school personnel in decision-making, planning, and preparation processes that result in college enrollment for students with disabilities. The OPEN model's first step is *Deciding*, or making the decision to attend a college. The next step in the OPEN model is *Planning* and is subdivided into three domains: academic planning, career planning, and personal-social planning. The *Preparing* process is the third step in the OPEN model. Students explore, practice, and master strategies needed for participation in a postsecondary education setting. *Exploring* is the fourth step of the model and assists students in exploring college options. During this step, students investigate and evaluate their final college choices with support from their IEP team members who have created an individualized transition plan. Following that step, students select the final college that aligns with their interests, abilities, and needs. Once students select their college of best fit, the next step in the OPEN model is to assist students in completing the admissions process to the college of their choice (Webb, 2000).

The Model for Self-Determination

The Model for Self-Determination focuses on and delineates variables related to self-determination that are within the individual's control and are potential targets for instructional intervention. The model contains five components: (1) know yourself, (2) value yourself, (3) plan, (4) act, and (5) experience outcomes and learn. Each of these components is further divided into sub-components. Students develop an awareness of strengths, interests, and needs, as well as rights and responsibilities.

The curriculum also covers assertive communication, conflict resolution, and problem solving. The package includes an instructor's guide, student activity book, and pre-/post-assessments. The Model for Self-Determination may be used with middle and secondary school students. It has been used with students with disabilities participating in the general education curriculum with accommodations as well as with students who function on a more independent level (Field et al., 1998).

Whose Future Is It Anyway?

Whose Future Is It Anyway? (Wehmeyer & Kelchner, 1995) is designed for persons with mild cognitive and developmental disabilities. This curriculum consists of 36 lessons that address (a) having self-awareness, (b) making decisions, (c) obtaining supports and transition services, (d) writing and evaluating transition objectives, and (e) learning leadership skills. Each section in the curriculum includes an action plan goal, introductory material, sample problems or examples from the lives of people with disabilities, and exercises to practice.

Dare to Dream Revised

Dare to Dream Revised (Webb et al., 1999) is designed for secondary students with mild-to-moderate disabilities. The guide stresses student involvement in transition planning. It is an excellent pre-planning tool for students to identify their strengths, preferences, and needs in postschool adult living, employment, social, and community areas. Students complete exercises that promote their involvement in transition planning and help them start thinking about decisions for the future. Consideration is given to: (a) the student's dreams for the future; (b) supports for the student; (c) the individualized transition plan and who might be involved; (d) where the student might live in the future; (e) skills and education needed for employment, free time, helping others in the community; (f) transportation within the community; (g) desired postschool outcomes; (h) learning styles; (i) requirements for graduation; and (j) making one's dreams come true. Types of housing options are identified, including geographic choices, types of housing, and alternative living arrangements.

Questions are provided to help the student clarify what type of work would be appealing, and the level/type of training required for various job categories is specified. Skills for independent living, work, leisure, and community participation are also identified.

Dare to Dream for Adults

Dare to Dream for Adults (Webb & Peller, 2004) assists adults with disabilities in identifying interests, accomplishments, and needs; setting goals; and obtaining the necessary supports and resources to reach their dreams. It is an ideal resource for secondary students with disabilities who have previously used Dare to Dream Revised and are ready to move to another level of transition planning. A free download of this publication in English is available at www.fldoe.org/core/fileparse.php/7690/urlt/0070077-dream_adults.pdf and in Spanish at www.fldoe.org/core/fileparse.php/7690/urlt/0070078-dream_span.pdf.

TAKE CHARGE for the Future

TAKE CHARGE for the Future is a student–directed, collaborative model that includes (a) coaching adolescents in the application of self-determination skills to achieve personal goals, (b) mentorship experiences for adolescents, and (c) information and support to assist parents to promote the achievement and positive self-attributions of their sons and daughters (Powers et al., 1996). The model is designed to be collaboratively implemented by schools and community organizations, independent living centers, and family support programs. TAKE CHARGE for the Future's centerpiece is adolescent-directed participation in personally relevant activities in school, community, and home settings. Students learn through coaching strategies that they are responsible for promoting their own independence, self-confidence, and personal goals.

Summary

Research and best practice suggest that students with disabilities participate in the development of their own transition plans. The transition planning strategies presented in this chapter portray several processes that can be used to assist students with disabilities in developing skills for making decisions about their future. These processes are not completed *for* the student but *with* the student. Students attend all meetings related to transition and the development of their IEPs. They work, on an ongoing basis, during their school programs to learn to advocate for their vision of the future. Self-advocacy and self-determination skills are essential for full participation in the transition planning process (Rodriguez, 2016).

The transition planning strategies presented in this chapter represent only a small number of the strategies available to support student participation in the development of their transition plans. They are, for the most part, informal, non-expensive, person centered, and self-determined. Many transition planning strategies consist of the following components: (a) student-focused planning, (b) family involvement, (c) interagency collaboration, and (d) a commitment from the team to support the student to prepare for postschool options across a variety of settings. The strategies presented are designed to be person centered and student led and to focus on the development of self-determination.

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IEP Development That Supports the Transition to Adult Life for Youth with Disabilities

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Significant attention has been paid to the transition from school to adulthood for youth with disabilities (Bouck, 2012; Ju, Zhang, & Landmark, 2018), both in terms of research and educational policies that impact practice. Recent longitudinal data (Lipscomb et al., 2017) report that young people with disabilities are less likely to plan or take steps to obtain employment or postsecondary education than their peers without disabilities. The unemployment rates of individuals with disabilities 16 years and older are two times higher than people without disabilities (U.S. Department of Labor, 2015). Particularly discouraging is that over the past decade, the prevalence of negative events for youth with disabilities – such as poor grades, retention, suspensions, and expulsions – showed little change (Lipscomb et al., 2017).

Many descriptive studies have been performed utilizing the NLTS-2 database (e.g., Newman et al., 2011) across multiple disabilities and in numerous domains, as well as countless other surveys, case studies, and retrospective reviews. Most of these studies have provided the field with essentially two major outcomes. The first outcome provides a set of valuable predictors to help determine the likelihood of employability for youth with disabilities, many of whom are unemployed or underemployed at graduation (e.g., Mazzotti et al., 2016). The second outcome is the repeated documentation of high levels of unemployment of students with disabilities exiting secondary education (Lipscomb et al., 2017). Unfortunately, the existence of experimental research on what exactly is effective is rare (Haber et al., 2016). This calls for increased evidence-based research to provide stakeholders with information on interventions, practices, and services that can impact the employment outcomes of transition-age youth.

This chapter will provide information about the development of individualized education programs, or IEPs, for transition-age youth with disabilities that address academic and transition-related needs, sometimes referred to as transition IEPs. The transition IEP was designed to be the cornerstone for planning and implementing activities to prepare young people with disabilities for their futures (Getzel, 2014). This chapter will outline the transition-related components of an IEP, discuss the research related to the transition needs of youth with disabilities (both in general, as well as for some specific groups of students), and provide examples from sample transition IEPs.

Transition Needs of Youth with Disabilities

Lack of Transition Preparation

As noted, recent longitudinal data (Lipscomb et al., 2017) report that young people with disabilities are less likely to plan or take steps to obtain postsecondary education than their peers without disabilities. Yet, Lombardi and colleagues (2017) found that career-related activities are not fully integrated into the IEP. In addition, among students with disabilities, there is a discrepancy in the degree to which transition-related goals are included as part of their IEPs. Those students who are more likely to be expected to earn regular education diplomas are less likely to have IEP goals listed that address employment, community living, postsecondary education, and/or self-determination compared to those students who are expected to earn an alternative to a general education diploma (Landmark & Zhang, 2012).

In addition to a failure to provide sufficient career planning, supports, and services, transition planning for youth with disabilities also fails to address other transition domains. For example, transition IEPs often omit goals related to self-determination, independent living, financial independence, use of transportation, recreation and leisure, and social skills/interactions with others (Landmark & Zhang, 2012). These goals are important to include for a number of reasons, including the impact they can have on employment and postsecondary education goals (Raskind, Goldberg, Higgins, & Herman, 1999; Getzel & Thoma, 2008; Wehmeyer & Palmer, 2005; Wehmeyer & Schwartz, 1997), as well quality of life indicators (Wehmeyer & Schalock, 2001).

Lack of Participation in Postsecondary Education

Participation in postsecondary education (PSE) has been associated with improved employment outcomes and improved quality of life outcomes, including higher wages and lower unemployment (Baum & Ma, 2007), improved health, increased lifespan, and higher reported happiness (McMahon, 2009). Yet youth with disabilities are less likely than their peers without disabilities to go on to enroll in postsecondary programs. Approximately 11% of college students have disabilities (Madaus et al., 2016). This proportion has steadily increased since the 1980s, reflecting successful policy initiatives such as the Individuals with Disabilities Education Act (IDEA) of 2004, the Higher Education Opportunity Act (HEOA, 2008), and a U.S. Department of Education focus on the college and career readiness of all students. While more youth are transitioning to these settings, they are still less likely (46% vs 63%) to enroll in PSE than the general youth population (Newman, Wagner, Cameto, Knokey, & Shaver, 2010).

Lack of Participation in Employment

Recent evidence shows high unemployment among youth with disabilities compared to their peers without disabilities, despite efforts from state vocational rehabilitation (VR) agencies and school-to-work transition programs to provide enhanced employment opportunities (Wehman, Chan, Ditchman, & Kang, 2014). In addition, people with disabilities often lack the soft skills needed to succeed in the workforce, and are not taught those skills as part of their transition education (Agran, Hughes, Thoma & Scott, 2014), and research has shown that this is the primary reason that employees with disabilities are fired from their jobs (e.g., Brickey, Campbell, & Browning, 1985; Butterworth & Strauch, 1994; Chadsey, 2007; Greenspan & Shoultz, 1981; Kochany & Keller, 1981; Wehman, Hill, Goodall, Cleveland, & Pentecost, 1982).

A good job enables youth to connect to their community, assume valued roles, contribute to local needs, develop friendships, find purpose, experience personal satisfaction, and, of course, earn a paycheck. Not surprisingly, IDEA (2004) describes the overarching purpose of special education as preparing students "for further education, employment, and independent living." Moreover, the extent to which youth obtain jobs in the first year after graduation has become a primary metric for gauging the effectiveness of special education and transition services.

Adolescence is a critical period for employment preparation. Indeed, paid employment at some time during high school is a typical experience for adolescents, but the opposite is true for students with severe disabilities (Carter, Ditchman, Sun, Trainor, Swedeen, & Owens, 2010). For example, Butterworth and Migliore (2015) reported that just one-fifth (20%) of young people ages 16–21 with a cognitive disability were employed. National Core Indicators (2016) data indicate that just 15% of individuals with intellectual and developmental disabilities (ages 18–21) had paid community jobs. Finally, according to the NLTS 2012, only 23%–30% of high school students with intellectual disability or autism had paid work experience in the prior year (Lipscomb et al., 2017). However, most students receiving services in these special education categories do not have extensive support needs. Despite the promise of early work experience, most high school programs stop short of paid work experiences and provide only school-based instruction or short-term career exposure (e.g., job site visits, short-term job sampling, unpaid training).

Paid work experience during high school is now strongly advocated as a recommended practice (e.g., Carter, Austin, Trainor, 2012; Mazzotti et al., 2016). Although the value of such early work experiences is clear, it is important to emphasize that research addressing the link between early work experiences and postschool outcomes is entirely correlational rather than causal (Southward & Kyzar, 2017).

Lack of Access to Technology

Data from NLTS-2 show that only 7.8% of transition-age youth reported receiving assistive technology (AT) while in high school (Bouck et al., 2012). Technology plays an important role in the transition of youth with disabilities to PSE (Getzel, 2008; Mull & Sitlington, 2003). Of course, access to AT is not the only type of modifications and supports to consider to help youth with disabilities achieve their postschool goals. Most adults, and particularly young adults, use a range of technology in their daily adult lives for things such as checking bus schedules, watching movies, purchasing concert tickets, communicating with friends, playing games, accessing coursework, and, sometimes, working remotely. Certainly, providing a way that students with disabilities can access these widely available technologies will greatly enhance their ability to achieve their postschool goals and provide an avenue to fully participate in an increasingly large part of social communities online. Despite the fact that the majority of youth use a range of technologies at work, in postsecondary education, and for social/recreation reasons, youth with disabilities are not accessing these ubiquitous technologies at the same levels, which can further isolate them from their peers without disabilities (Anderson & Perrin, 2017).

Importance of Self-Determination

For students to achieve independence in life after graduation in any domain, they must have agency to self-direct their own lives, or self-determination. Recent studies have shown that students who have higher levels of self-determination achieve better employment outcomes and have greater access within their communities (Shogren, Wehmeyer, Palmer, Rifenbark, & Little, 2013). Furthermore, self-determination is also correlated with improved postschool outcomes in employment (Wehmeyer & Palmer, 2005; Wehmeyer & Schwartz, 1997), postsecondary education (Getzel &

Thoma, 2008), and quality of life (Wehmeyer & Schalock, 2001). Since it is a malleable trait that can be increased by specific activities and experiences, self-determination instruction should be a primary focus of transition planning and IEP development (Shogren & Ward, 2018). Self-determination should be both a priority area of instruction and also embedded in other aspects of students' transition plans through person-centered approaches and student participation and leadership in the planning process. Other chapters in this book provide more details about enhancing student self-determination, including through the use of student-directed IEP meetings. However, its role in the larger scheme of creating effective transition IEPs is important to note here.

Lack of Family Member Participation

Over the past decade, there has been a marked decline in family members meeting with school staff to discuss transition and in students working for pay while in high school (Lipscomb et al., 2017). Parental expectations are linked to academic achievement, goal persistence in college, and employment outcomes (Wehman et al., 2015). In addition, family participation has been identified by youth with disabilities as an important factor that improves their self-determination, particularly related to their participation in transition IEP meetings (Morningstar et.al., 2010). This decline of family participation in transition IEP meetings is disturbing when considered in light of the fact that their participation leads to improved postschool outcomes (Henderson, 2009). Several factors have contributed to this lack of participation: a lack of positive communication between home and school (Cavendish et al., 2016), lack of understanding of school and community resources, parental frustration with the process (Zeitlin & Curcic, 2014), and culture-related barriers (Ju et al., 2018).

Need for Academic Rigor

While much of this chapter and textbook focus on specific transition activities and interventions to improve adult outcomes, practitioners should not overlook the importance of academic rigor in preparing students for success (Test, Smith, & Carter, 2014; see related chapters in this volume). Promoting an educational plan that emphasizes individualized, functional skill instruction need not come at the expense of academic instruction. In fact, not only does including students with disabilities in standards-based academic curriculum provide a well-rounded education, but it provides access to a range of postschool outcomes such as enrollment in postsecondary education, including some apprenticeship programs, and has been linked to improved employment outcomes. In addition, it can improve student, parent, and teacher expectations, themselves a significant predictor of postsecondary success (Courtade, Spooner, Browder, & Jimenez, 2012). There are a number of promising practices for linking transition and academic instruction so that educators are not faced with making decisions about which is most important. For example, Kochhar-Bryant and Bassett (2002) provide guidance for aligning transition goals within a standards-based educational framework, and Thoma, Bartholomew, and Scott (2009) provide an instructional design and delivery approach for expanding a universal design for learning framework (CAST, 2018) with key evidence-based practices for transition (Test et al., 2014).

Transition Education and Planning

What Is Transition Education?

Preparing students with disabilities for their lives after high school is the goal of transition education. While most people, including people with disabilities, go through a number of transitions throughout their lives, "transition" in this chapter refers to supporting the transition from school to adult

life. This support includes helping students with disabilities identify the goals for their adult life-style (transition assessment), which can cover a range of transition domains including employment, postsecondary education, community living, civic engagement, social relationships, recreation and leisure activities, health care/self-care, self-determination, and access to transportation (Thoma, Bartholomew, & Scott, 2009). Once these goals are identified, specific individualized goals are identified through the transition IEP process to help the student achieve those preferred outcomes, including linking the student and his/her family with community agencies that might provide supports and services for the student, followed by implementation of the plan (Wehmeyer & Webb, 2012).

This section provides guidance about the development of these transition IEP plans, focusing first on the policy and legislation that relates to the development and implementation of those plans and then focusing on the evidence-based and promising practices that guide the work of transition IEP stakeholders. Finally, we examine some of the critical issues that impact this process, with suggestions for transition IEP development and subsequent transition services.

Policy and Legislation

Nationwide, a legal and cultural shift has occurred during the past few decades concerning what postsecondary outcomes to target for students with disabilities. While segregated employment placements in sheltered workshops were once the norm, transition service initiatives are now exclusively focused on helping students secure employment and postsecondary education in integrated settings. States across the United States are adopting an "employment first" philosophy for individuals with disabilities (Association of People Supporting Employment First, 2019). Changes in federal legislation have also increasingly worked to provide more opportunities for transition students with disabilities to successfully obtain jobs and attend college (Darrow, 2016; Grigal & Papay, 2018; WIOA, 2014). A broad range of legislative and policy aims have been undertaken, with mandates addressing the need to begin transition planning well before the student leaves high school (U.S. Department of Education, 2019), to promote greater opportunities for college and career readiness (U.S. Department of Education, 2017), to increase the allocation of funding toward transition initiatives (WIOA, 2014), and to open up a greater range of opportunities for students to choose from once leaving high school (Grigal & Papay, 2018). In the following section, several legislative acts pertinent to transition-age students will be briefly reviewed (see also Chapter 3 on policy in this volume).

Individuals with Disabilities Education Act (IDEA)

IDEA (2004) mandates the development of an annual individualized education program for all students with a disability that outlines the supports, services, modifications, and adaptations the students need to access the general education curriculum and addresses their individual needs based on the impact their disability has on their ability to make adequate academic progress. By the age of 16, the IEP process is required to also include a focus on supporting a successful transition to adult life and should be based on the "student's preferences and interests" for a preferred adult lifestyle. Transition goals must be updated annually, and the child with a disability must be offered an invitation to attend his or her own IEP meeting (U.S. Department of Education, 2019; Wei et al., 2016). Attendance at and participation in the IEP meeting are important because this enables the student to be an active voice in educational decisions that directly affect his or her future. Transition goals should be comprehensive, addressing future plans for employment, independent living, and college or other forms of higher education training. In addition to inviting the student and the typical members of the IEP team, representatives of any agency that may provide supports and services to the youth must also be invited to attend the transition IEP meeting (U.S. Department of Education, 2019).

Higher Education Opportunity Act (HEOA)

IDEA (2004) is not the only national policy that has had an impact on transition planning for youth with disabilities. The reauthorization of the Higher Education Act in 2008 as HEOA was seminal because it enabled greater access to postsecondary training in colleges and universities for students with disabilities, particularly intellectual disability (ID) (Grigal & Papay, 2018; Madaus, Kowitt, & Lalor, 2012). HEOA increased specific access for students with ID in the following ways. First, the term "postsecondary education" was expanded to include a broader range of programs including non-degree, certificate, and apprenticeship opportunities, which directly affect students with ID who often pursue these training options over a traditional four-year degree (Newman, Wagner, Cameto, & Knokey, 2009), Second, for the first time, students with ID were eligible for funding assistance via participation in federal work-study programs, Supplement Educational Opportunity grants, and Pell Grants (Newman et al., 2009). Finally, HEOA prioritized the establishment of college programs designed to meet the specific needs of students with ID. Through HEOA, funding was provided to colleges and universities to establish and evaluate programs that used a universal design for learning (UDL) framework accessible for students with ID (Grigal & Papay, 2018).

Workforce Innovation and Opportunity Act (WIOA)

The continued challenge in improving postschool outcomes for youth with disabilities resulted in the passage of the Workforce Innovation and Opportunity Act (WIOA), which is having a significant impact on transition services for youth with disabilities. WIOA significantly impacted Vocational Rehabilitation Services, a program administered by the U.S. Department of Education's Rehabilitation Services Administration. The primary goal of state VR agencies is to promote competitive employment for eligible recipients through varied services such as vocational assessment, job counseling, job-site training, college or university training, augmentative skills training, and transportation (Kaya et al., 2016).

WIOA (2014) included several key provisions requiring state VR agencies to use 15% of their budget on pre-employment transition services (Pre-ETS) specifically for school-age youth with disabilities. Required Pre-ETS categories include job exploration counseling, work-based learning, counseling for opportunities to enroll in comprehensive training and postsecondary education, workplace readiness training including social skills and independent living, and instruction in self-advocacy. Pre-ETS components of WIOA offer great promise for increasing interagency collaboration and transition programming between school districts and VR agencies. These changes offer new opportunities for enhancing collaboration, but coordination between these groups is also important to minimize overlap and redundancy in service efforts.

Purpose of the Individualized Education Program

Although the legislative policies discussed in the previous section provide an important framework for improving pathways to positive postsecondary outcomes, individual students must still navigate these services and opportunities to benefit from them. The IEP is a roadmap for the educational supports, services, and modifications designed to provide the opportunity to have access to and make progress in the general education curriculum and set the student on a path to success. In addition, by the age of 16, or earlier if necessary or required by the state plan, the IEP must identify the long-range goals of the student with a disability and identify the supports and services the student needs to achieve those goals for his or her adult life. Together, this is referred to as the transition IEP. This section will highlight effective transition IEP development, focusing on the components of the plan, transition IEP stakeholders, and ways to address both educational and transition goals and services.

Development and Implementation of a Transition IEP

An effective transition IEP should balance both academic and transition-related services and activities. However, since each student's journey into adulthood is unique, it is imperative that transition planning be highly individualized based on the student. Thus, it makes sense that the transition planning process begins with assessment. Information collected during the transition assessment is used to inform each stage of the process, beginning with assessment, which identifies student preferences and interests as well as their strengths and needs. This information is used to create measurable postsecondary outcomes that set a target for the transition IEP goals, modifications, and connections to relevant agency service providers. Only then can the transition IEP be implemented and progress monitored as the process repeats throughout a student's secondary career until they graduate or age out of services. At that point, a summary of performance orients the student for the path into adulthood. These steps will be described in more detail in the following sections.

Transition Assessment

IDEA (2004) requires that transition IEPs be based on a student's strengths, preferences, interests, and needs. These areas of focus place importance on two components of transition assessment: the determination of an individual student's postschool goals for adult life, as well as an assessment of the skills he or she will need to obtain to help the student achieve those goals, and the community agencies that might be involved in providing supports to the youth with disabilities both during the transition years and after completing his or her transition (Thoma & Tamura, 2013).

Since transition assessment forms the foundation of the transition IEP process (see Chapter 8 on transition assessment in this volume), it also the first step in a student's initial pathway to adulthood. Most importantly, assessment must maintain a person-centered focus at all times, empowering the student as the ultimate decision maker throughout this process. However, students undergo tremendous changes during secondary grades in terms of their interests and vision for the future and as they build new skills. For that reason, assessment must be ongoing throughout the transition process and always incorporating new information. These assessments can and should include both formal and informal measurements. Formal transition assessments are those whose validity and reliability have been empirically tested through research and may include scales and other instruments that provide a standardized measure of a specific areas such as academic or intellectual ability, adaptive behaviors, vocational aptitude, social skills, and self-determination (Morningstar & Clavenna-Deane, 2017). Conversely, informal assessments can also provide valuable information about students but often incorporate data from reviewing records; interviewing students, parents, or employers; surveys; and situational assessments (Morningstar & Clavenna-Deane, 2017).

Situational assessments involve observing students within a particular situation and environment to discover how they use their strengths and preferences to interact with the particular situational environment. Situational assessments can be especially useful for uncovering students' strengths and preferences outside of traditional learning environments. For example, a situational assessment might take place in a student's work environment or a preferred location in the community to get a better sense of how he or she interacts with others in that space to plan long-term postsecondary outcomes. This information can be particularly helpful when completing ecological inventories, which are tools used to prioritize skills that students need within different current and future environments (Collins, Karl, Riggs, Galloway, & Hager, 2010). Ecological inventories are primarily focused on the performance of skills within specific environments, so assessments should take place in those natural environments, including the community. These natural environment assessments can also be helpful at uncovering student strengths and interests that may not be immediately apparent to school staff.

Person-centered planning approaches can also be used in assessment to put a student at the center of the transition planning process. Person-centered planning helps students articulate a positive view for the future with participation and support from a team of family, friends, and other members of their support network. This approach begins with having the student present a vision for what his or her future looks like and work backward to plan next steps for reaching that goal. While this may be different than other types of transition assessment, person-centered planning provides perhaps the most important piece of information to inform students' transition planning – their vision for the future.

Student Strengths, Preferences, Interests, and Needs

To achieve that vision for the future, transition planning will need to build on a student's preferences and interests for an adult lifestyle, as well as the strengths to achieve those goals and needs that should be supported.

While IEP planning should always build on students' strengths, transition planning adds even greater prominence to these areas at which students excel since their adult success in work, postsecondary education, and community engagement will be built upon these strengths. Students should be involved in identifying these areas and planning for them in the transition process. Self-awareness is a key component of self-determination, which is discussed in greater depth in other chapters of this book as a strong predictor of adult independence and success. Furthermore, self-awareness of strengths and needs will be needed in many future environments such as workplaces and college classrooms where adults with disabilities are responsible for advocating for needed accommodations – a significant change from the K–12 model of special education case management.

Measurable Postsecondary Outcomes

The information collected from a comprehensive, holistic transition assessment process should be used to identify measurable postschool outcomes the student and his or her transition team will be working to achieve.

As with previous sections of the transition IEP development process, these measurable outcomes should be student centered and in many cases may come directly from the student's vision of the future produced through a person-centered planning process. These measurable postsecondary outcomes or goals describe in clear, observable terms what the student will do in the areas of employment, postsecondary education and training, and independent living. While these goals or outcomes will differ greatly between individuals, each student should have a goal for each of these three key domains. Like annual IEP goals, measurable postsecondary outcomes should be written by stating what the student will do in the future and should be specific enough that it is clear whether it has been accomplished or not. As a student progresses through the transition process during secondary grades, these outcomes will change from year to year as more assessment information is gathered and the student's vision shifts (Morningstar & Clavenna-Deane, 2017). Likewise, a postsecondary outcome may be more general in the first year of a student's transition planning, but in the final years it should be highly detailed with linkages to specific agencies and organizations for employment, postsecondary education, and independent living.

Goals, Modifications, and Connections

Once measurable postsecondary outcomes are decided, those become the overall long-term aims of the IEP process from there. To make progress toward those postsecondary outcomes, the IEP must then align goals and services, modifications and accommodations, and connections with supports and service

providers needed to make yearly progress toward achieving those outcomes. In a sense, during the transition process, annual IEP goals should serve as a benchmark for what should be achieved in that particular area in the following year to make sufficient progress toward achieving one or more of the postsecondary objectives set by the team. As mentioned previously, these goals should include both academic and non-academic areas in alignment with the student vision set forth in postsecondary outcomes.

Accommodations are another part of the IEP that assume an added importance as students prepare for transition to adulthood. As mentioned previously, after students graduate or exit the K–12 school system, they are required to self-disclose their disability and advocate for any accommodations needed in a workplace or on campus (Getzel & Thoma, 2008; Wehman et al., 2018). However, only 28% of students with disabilities who received accommodations in high school went through the process of accessing those accommodations in college, setting them up at a severe disadvantage from the moment of enrollment (Newman et al., 2010). Thus, ensuring that students have knowledge and familiarity with their strengths and needed accommodations and services is not only a best practice, it is critical to giving students a chance to succeed in adulthood.

In planning for a student's future, it may also be necessary for the team to consider modifications to, or activities that extend beyond, the typical academic curriculum. In many cases, these are areas directly related to developing skills and experiences needed for employment, postsecondary education, and independent living. Pre-ETS (as discussed previously) offered through state VR agencies following the passage of WIOA (2004) have introduced new opportunities for paid work experience, internships, and counseling and instruction in other transition-related areas. Many transition-related instruction and experiences require collaboration with outside agencies to coordinate activities or to provide linkages between students/families and service providers.

As transition planning develops and a student's outcome goals begin to come into focus, connections become an increasingly important part of the process. As specific programs administered by community agencies are identified as part of a student's transition plan, agency representatives should be included as participants in meetings to develop transition plans. In other cases, it may be necessary to initiate eligibility and case management processes for funding and services. Identifying those services early and connecting students and families with appropriate contacts to start those processes can be critical at getting the resources necessary to set individuals on a course to success. As a result, transition practitioners should be knowledgeable about opportunities in their communities that may exist for students and form partnerships not only with community service providers but also local businesses, universities, and other organizations. These relationships could lead to opportunities like part-time jobs, paid and unpaid internship opportunities, college exploration and outreach programs, and other community living resources, like those offered by local centers for independent living. Relationships with others are important to not only our quality of life throughout adulthood but also our success at overcoming adversity. We all rely on our support network as we navigate different challenges of our lives, so it can be beneficial to structure opportunities for students to identify family, friends, and other members of support network who can assist in the future. In some cases, these groups of individuals around a student can operate as a formal circle of support or circle of friends and attend meetings as designated supports (Wehman, 2012).

Implementation

The next step in the transition process is the implementation of the transition IEP. In many ways, this phase is similar to the implementation of any other part of the IEP. However, the key difference is that since many aspects of a transition IEP require outside agency participation, it is crucial that any needed collaborative agreements be made prior to implementation so that all stakeholders are clear on the goals and activities for which they may be responsible (Wehman, 2012). For true interagency collaboration to occur within this stage, schools and outside agencies must engage in programming

jointly by sharing resources, information, and responsibility for problem solving (Morningstar & Clavenna-Deane, 2017).

Assessment of Progress/Outcomes

As mentioned previously, students will change their preference or interest in a specific goal several times from their first to last transition plan. Once students begin engaging in more hands-on experiences to explore areas of interest in work and study related to their transition goals, preferences will shift further as they decide what they prefer. This can lead to refinement of transition goals for the coming year or a need to revisit the transition plan to revise. This incorporation of new assessment data based on progress as well as student response to transition activities creates a feedback loop to further refine the transition planning process that improves future iterations of each stage of the transition process. Additionally, as students progress, they should increasingly take on greater roles in monitoring and reporting their growth in skill and knowledge benchmarks as well as more general information about their strengths, preferences, interests, and needs. This is not only an important way to maintain a person-centered approach to transition planning, it also increases student self-awareness specific to advocating for needed accommodations.

Up until this point, the transition process repeats the steps listed here on at least an annual basis, incorporating new information about the student to continue to refine the profile of the student, postsecondary objectives, and each of the pieces of the transition plan that fall under it. The feedback loop of this process continues iteratively until the student's final year of K–12 school, whether through graduation or a student entering his or her final year of eligibility based on age (i.e., 22 years old in most states). At this point, a new document is required as described in the next section.

Summary of Performance

The Summary of Performance (SOP) is a required component of the transition IEP for students who are graduating with a regular diploma or entering their last year of eligibility according to state law (IDEA, 2004). The SOP contains important information about a student, including postsecondary goals; evaluation reports; background information; a description of their academic, cognitive, and functional skills at the time of writing; and student input (Dukes, Shaw, & Madaus, 2007; Richter & Mazzotti, 2011). This document provides a valuable link between a student's high school and postschool experiences by outlining information about the student that can be used in securing adult services (Shaw, Dukes, & Madaus, 2012) and accessing on-campus supports and accommodations (Furth, 2007). Effective SOPs should involve significant student participation throughout the process (Field & Hoffman, 2007). In fact, Mazzotti, Kelley, and Coco (2015) found that students who directed their own SOP participated more in person-centered planning meetings and were able to generalize this to work settings. Additionally, for an SOP to provide relevant information for potential eligibility in adult services, it is also important that formal psychometric evaluation data be up-to-date prior to a student exiting school (Shaw et al., 2012).

Critical Issues in Transition

Preparing students with disabilities for life after high school requires that the development of goals be based on student preferences and interests but also grounded in the communities in which the youth will live. Common wisdom is that schools must prepare students for jobs that have yet to be imagined, using technology that will impact their day-to-day lives in ways that are not yet known. This section of the chapter will highlight some of these contextual challenges and opportunities that transition stakeholders must consider in the development of transition IEPs.

Technology is a critical component of transition IEP planning as students prepare to become digital citizens in "connected" communities. Many aspects of adult life now require proficiency in technology, from using social media to engage and network within communities to using computers and other digital devices at a job site. This can also impact students' ability to succeed in postsecondary education settings that are increasingly online and require extensive use of technology to access course materials, interact with classmates and professors, and produce assignments (Getzel & Thoma, 2008). Technology proficiency is expected of young adults entering the workforce today (Wehman et al., 2016). However, youth and adults with disabilities have less access and familiarity with technology, from Internet use and email to using mobile devices and computer interfaces, than their nondisabled peers (Anderson & Perrin, 2017). As a result, transition practitioners should address this gap by considering technology skills that may be necessary in employment, postsecondary education, and community integration.

In addition to teaching requisite digital skills in the workplace, campus, and community, technology can also be used as a tool to support student independence. Previous research has shown that technology can be used as a means of increasing student success in many areas of community living (McMahon, Cihak, & Wright, 2015), on-the-job independence (Gentry, Kriner, Sima, McDonough, & Wehman, 2015), and job interviewing (Smith et al., 2014). Many widely owned consumer technologies like smartphones and other mobile devices now come with a range of built-in applications that can be highly effective tools to promote independence. Teaching students to use basic programs like calendar alerts to self-monitor, organizational apps to sort documents, and navigation tools to get around their communities can have a dramatic impact on independence. For youth who may need more specialized tools, assistive technology can be highly effective at supporting a specific individual need (Davis, Barnard-Brak, & Arredondo, 2013). Any assistive technology used by a student in school should be discussed in transition planning to ensure that those needed supports will be available to students into adulthood. However, given the range of its potential uses in adult life, technology should be considered in transition IEP planning for all students.

Guardianship Alternatives and Supported Decision Making (SDM)

As adolescents with disabilities leave high school, they will need to start making adult decisions about their finances, medical care, housing, and employment. Nearly all young adults encounter challenges when first faced with how to handle complex life choices on their own. The opportunity to exercise independence and learn from mistakes is a very normal part of life that allows for individuals to build the skills they need to succeed. While adults without disabilities assume legal responsibility for themselves around the age of 18, individuals with disabilities often end up with a guardian to oversee their affairs (Werner & Chabany, 2016). It is important for families and individuals with disabilities to know that different levels of guardianship and guardianship alternatives exist in order to make an educated decision about which is most appropriate.

Selecting the least restrictive amount of guardianship or choosing a guardianship alternative will allow for a minimum amount of oversight necessary to help the individual with a disability make happy and healthy life choices. Instead of pursuing full guardianship, which gives a third party complete control over the student's affairs, parents or caregivers can opt for limited guardianship, which enables legal authority only over selected life areas deemed appropriate given the young adult's strengths and needs (Jameson et al., 2015) All other decisions are still legally owned and exercised by the individual with a disability. Guardianship should never be instituted where it is not needed. Having the ability to be self-determined about life decisions and goals enhances personal quality of life (Jameson et al., 2015). With time and experience, the young adult is likely to develop and refine skills, so it is important to continually revisit the level of guardianship and input from others needed overtime.

Supported decision making (SDM) is an alternative to guardianship that emphasizes a mentor approach to decision making. In the SDM model, a circle of advisors is assembled from trusted family, friends, teachers, etc. and serves as a consult team for the individual with a disability when faced with serious decisions. The process of SDM includes establishing agreed-upon practices and arrangements to facilitate the process (Werner & Chabany, 2016). The individual with a disability remains an active participant among team members, can decide to terminate consultation relationships at any time, and maintains a legal right to make decisions that impact his or her own life (Jameson et al., 2015). The student also has the right to communicate the type of help sought from the team, such as assistance gathering information, understanding options, communicating decision choices to others, or making the actual decision. Importantly, the objective is always to provide the least amount of support necessary in order to promote autonomy and independence.

Diversity and Disproportionality

According to a National Center for Education Statistics report (McFarland et al., 2018), the population of racially and ethnically diverse children ages 3 to 21 served under IDEA of 2004 has steadily increased over the past decade. The growing diversity and disproportionate representation of Black (11.4%), American Indian (13.3%), male (65%), and English Learner (9%) students represented in special education, for example, has resulted in emphases on varied and thoughtful methods for identification, instructional practices, and special education services, including transition planning to meet their different educational needs (Coutinho & Oswald, 2005; Trainor, Murray, & Kim, 2016). An equitable aim at identifying and providing special education and transition services for culturally and linguistically diverse (CLD) students with disabilities is partially a result of attempting to reverse poor and pervasive outcomes that have disparately impacted these groups as seen in school discipline reports (e.g., school-to-prison pipeline; Okilwa, Khalifa, & Briscoe, 2017) and discrepancies in postschool outcomes (Wagner, Newman, Cameto, Garza, & Levine, 2005). For example, equitable and nondiscriminatory evaluation and assessment to decide eligibility for CLD students referred for special education services continues to be a focus for researchers (Hoover & Erickson, 2015; Hoover, Erickson, Herron, & Smith, 2018; Ortiz et al., 2011). However, efforts to bridge the research-to-practice gap to facilitate the design and implementation of culturally and linguistically relevant IEPs and transition plans by teachers continues to be problematic in special education.

Culturally responsive IEPs, as discussed by Hoover and Patton (2017), address the critical need to develop meaningful IEPs that are responsive to the cultural and linguistic needs of students. According to the authors, creating high-quality culturally and linguistically responsive (CLR) IEPs means valuing and integrating language and cultural (e.g., race, culture, sexual orientation, socioeconomic status) considerations into the IEP planning process. Similarly, Tran, Patton, and Brohammer (2018) examined issues related to what constitutes CLR IEPs and critical features for preparing teachers to develop effective CLR IEPs and provided recommendations for cultural and linguistic features in developing IEPs for diverse students. According to IDEA policy, the required components for developing a compliant IEP includes information about the (a) current performance, (b) annual performance, (c) special education and related services, (d) participation with nondisabled children, (e) participation in standardized tests, (f) transition services, and (g) measuring progress. This policy does not specifically call for or require teachers and IEP teams to have a good understanding of CLR practices to inform these IEP components. For that reason, Tran, Patton, and Brohammer provided a brief overview of CLR considerations in each of these required IEP components. The authors noted multiple considerations for developing CLR IEPs that include bearing in mind English proficiency measures, home culture influences, and culturally responsive teaching when evaluating a child's current performance. For transition planning, cultural and family values, family and community participation, and personal preferences, interests, and strengths should be considered.

Noting how imperative language and culture are in developing IEPs, Barrio et al. (2017) developed the Culturally Responsive and Relevant IEP Builder (CRRIB) as a tool and guide for IEP teams interested in putting cultural considerations at the forefront of the IEP planning process. The tool combines required components of the IEP and components of culturally responsive research and pedagogy (e.g., Banks, 2014; Gay, 2010; Ladson-Billings, 1995) for teams to consider during the IEP planning process. For example, using the CRRIB, teams are guided through a series of culturally contextual questions (e.g., Are the student's and family's voices being considered in the IEP process?) to guide the development of the legal components of the IEP document. Although various considerations have been conducted into developing CLR IEPs, we still need to know more about developing evidence-based CLR transition IEPs as a corrective and long-term strategy for improving adult outcomes for CLD students.

Other researchers have focused their work on CLR transition IEP development. Greene (2011) identified obstacles for CLD students and families in the development and achievement of their transition goals. He makes suggestions for developing CLR transition IEPs to overcome those challenges that include having transition school personnel work closely with CLD families to minimize conflict and strengthen communication, conducting holistic and culturally reflective transition assessments, and training school personnel to be culturally competent and responsive to the needs of CLD students and families.

Trainor et al. (2016) examined the transition program characteristics and postschool outcomes for English learners with disabilities and found that employment and postsecondary outcomes remain poor for this population. Consistent with considerations discussed earlier, they found that many English learners in the study experienced poverty, which intensified the need to prioritize CLR practices, and, specifically, that transition IEP teams must consider the student and family background and their strengths and needs when addressing transition IEP needs.

While what comprises a CLR transition IEP is still difficult to define, particularly when paired with evidence for the long-term success of these practices, considerations from the transition research have helped overall in describing how CLR transition IEPs should be developed. Another example of this can be drawn from the person-family interdependent transition framework by researchers Achola and Green (2016), who base their thinking of adaptations to the transition IEP planning process on the dependence on the cultural and linguistic experiences of CLD families and students throughout the transition IEP development process. Based on a person-family interdependent transition framework, they proposed that transition professionals engage in a series of very specific practices. For example, the transition IEP team will discuss with the student his or her current and future role in supporting his or her family and community within a cultural context. Transition-related goals are then aligned with this discussion. Similarly, the transition IEP team will discuss with the family their choices and preferences, and these desires are considered in developing transition IEP goals and deciding transition-related activities. Several additional and purposeful considerations are described within this framework (e.g., culturally sensitive strength-based family empowerment, student-led IEPs, culturally appropriate transition assessments, and cultural and family sensitive goal setting) so to create a CLR transition planning process, including transition IEPs. As more research in the area of CLR transition IEPs is created, the need to develop practical guides and tools to design and determine the long-term outcomes of CLR transition IEPs is required. Although some researchers have hypothesized and provided evidence of ways to develop CLR transition IEPs (e.g., Achola & Green, 2016; Trainor et al., 2016), research about the long-term outcomes is scant.

Trauma-Informed Care

The impact of trauma on students and how to address the effect is a growing field of research (Wiest-Stevenson & Lee, 2016). These events, both natural and human-made, are defined as "incidents that

are perceived as terrifying, shocking, sudden, or that potentially pose a threat to one's life, safety, or personal integrity" (Black, Woodsworth, Tremblay, & Carpernter, 2012, p. 192). If a person indirectly experiences the trauma by witnessing it or hearing about it, he or she can also experience some of the same symptoms (Wiest-Stevenson & Lee, 2016). Research shows trauma dramatically influences the development of a child. Children who have experienced more than four instances of trauma are 33 times more times likely to be identified as having a learning disability (Wiest-Stevenson & Lee, 2016). Furthermore, over 25% of adolescents have experienced at least one traumatic event before they turn 16 (Wong, 2007). Schools often mislabel these students with attention deficit disorder or oppositional defiant disorder (Wiest-Stevenson & Lee, 2016). School avoidance, acting out behavior, suspensions, and failure are outcomes associated with traumatized students (Wong, 2007).

Trauma-informed care has been an emerging approach in communities and schools to address the needs of children and adolescents who have faced trauma. Bath (2008) defined trauma-informed care as having three pillars: safety, connections, and managing emotions. Safety encompasses many aspects including consistency, reliability, honesty, and credibility on the part of the school but also allows the student to make decisions and have a choice. Youth also need to have positive connections with adults in the school. Traumatized children have feelings of mistrust, avoidance, and anger toward adults. By having more positive experiences with adults, students learn to trust and feel safe in their environment. The final pillar, managing emotions, involves teaching youth effective strategies to address their social-emotional needs. Several approaches exist, including co-regulation, collaborative problem solving, and self-reflection.

According to Rossen (2018), school teams should consider the trauma-informed approach when they are developing IEPs. The priority is to ensure family engagement by providing clear expectations to the family throughout the entire process, encouraging participation in IEP development, and maintaining constant communication following implementation. Reports should be written to be understood by family, focusing more on the child, not the test results. When assessing the student's present level of performance and the development of IEP goals, the IEP team should consider it from a trauma-informed perspective. Factors to consider are potential triggers for the student, family history, incorporation of student's strengths, school staff perception, rapport-building opportunities with the student, student involvement with IEP development when appropriate, the impact of the trauma on school performance, and predictable life events (e.g., the anniversary date of the trauma experienced). Goals should not be written just about the observable behavior (e.g., interrupting the teacher) but should address the underlying cause (e.g., lack of self-regulation). The IEPs should reflect the students' goals in developing skills and adaptive behavior. These goals may not specifically relate to academic achievement but could focus on social-emotional skill building, relationship building, and self-regulation. The educator's role in helping to achieve these goals should also be defined, such as tone and personal space. Thus, IEP teams should shift their thinking to a more trauma-informed lens when considering the social and emotional needs of students who have experienced traumatic events.

Conclusion

As has been outlined in many of the sections of this chapter, developing effective transition IEPs requires taking into consideration many factors and steps. Crafting meaningful transition plans must maintain focus on the individual student throughout the process, also taking into account the present and future environments where they are likely to engage. In practical terms, this means incorporating relevant assessment in academic and non-academic areas that is specific to the student's vision for the future. However, assessment and implantation of traditional transition IEP goals is not enough. Practitioners must consider other factors like applying CLR and trauma-informed approaches where needed. Additionally, specific transition considerations like integrating technology into transition planning can be critical for student success. Informing parents about supportive decision making

for students for whom guardianship may be a consideration can dramatically increase an individual's independence and self-direction throughout adulthood. Finally, although this section only briefly highlights many of the important considerations discussed in more detail throughout this text, such as paid work experience and self-determination instruction, these also should be included in transition planning and implementation.

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Transition Assessment

James R. Patton and Le M. Tran

The transition process that is mandated by federal law is a multifaceted set of activities that, at first glance, seems relatively simple. However, as anyone who has taken this mandate seriously knows, this process is anything but simple. Patton and Dunn (1998) noted this point: "Although the process of identifying transition needs in generating transition plans based on these needs is a relatively simple idea to present on a general level, the process gets much more complex as one looks closer" (p. 21).

Many transitions for which assessment is useful/needed can be identified throughout the school career of students with disabilities. Assessment should be part of the movement to critical "next" settings such as:

- Young children who are moving from early childhood intervention to preschool special education or other preschool setting
- Preschools students with disabilities who are entering kindergarten
- Students leaving the elementary level and entering middle school
- Middle school students who are moving to the high school setting
- High school students who are preparing for the adult world

All the aforementioned transitions are important and warrant attention. In reality, current law only mandates attention to the transition needs of students with disabilities at two points in time: prior to when a child turns 3 years old and is receiving early childhood intervention services and after youth who have been found eligible for special education services turn age 16. The first mandated transition planning involves children who are moving from Part C coverage under the Individuals with Disabilities Education Act (IDEA) to Part B of the law. This change from Part C to Part B involves not only a different delivery of services but also a change of perspective and philosophy that the family needs to understand and embrace. The second mandated transition is centered on preparing youth for the movement from high school to some type of postschool environment. This chapter focuses on a key component, assessment, of this latter mandated transition.

Basic Concepts of Transition Assessment

Assessment, in very simple terms, can be considered the acquisition of information and data for some stated purpose. In more formal terms, an online dictionary indicates that assessment can be thought

of as the evaluation or estimation of the nature, quality, or ability of someone or something. This definition works to a certain extent when thinking about transition assessment; however, a more nuanced and relevant definition is provided in the following.

Transition Assessment Defined

Assessment as it relates to the transition process can imply different meanings. The Division on Career Development and Transition (DCDT) of the Council for Exceptional Children in a position statement on transition assessment defined this process as the:

> Ongoing process of collecting data on the individual's needs, preferences, and interests as they relate to the demands of current and future working, educational, living, and personal and social environments. Assessment data serve as the common thread in the transition process and form the basis for defining goals and services to be included in the individualized education program (IEP).
>
> *(Sitlington, Neubert, & Leconte, 1997, pp. 70–71)*

Clark (2007) defined transition assessment as "a process of obtaining, organizing, and using information to assist all individuals with disabilities of all ages and their families in making all critical transitions in those individuals lives both successful and satisfying" (p. 2).

For the purpose of this chapter, transition assessment incorporates the intent of the DCDT definition. Our definition is: Transition assessment is the comprehensive accumulation of information and data that is related to a student's interests, preferences, strengths, and needs now and in the future; that informs the transition planning process; and that is comprehensive in nature.

Historical Perspective

A number of historical events have influenced the evolution of transition assessment. Current practice has been preceded by efforts that occurred as far back as the 1960s, although formal recognition of transition assessment did not occur until the mid-1980s. In reality, transition assessment has been operative at various times and in various ways in many locations across the country.

Early Special Education Programs

Prior to the transition initiatives of the 1980s, it is safe to say that school personnel were conducting various types of informal assessment activities as they prepared students for life after school. Patton and Dunn (1998) noted that "many of the work-study programs of the 1960s contained aspects of the transition process that is being espoused today. In addition, many families have done a superlative job of readying their adolescent children for the realities of adulthood" (p. 10). These programs of the past that inevitably involved certain aspects of transition planning were sporadic and lacked the comprehensiveness that is needed to truly prepare a student for the complexities of life after high school.

Formal Recognition

In 1984, the Office of Special Education and Rehabilitative Services (OSERS) introduced a "transition bridge model." This model is extremely noteworthy as it brought national attention to the topic of what happens when a student with disabilities completes school. As important as this model and accompanying initiative were to the overall evolution of transition, this model focused only on

employment. This initial OSERS conceptualization was broadened in 1985 by Halpern when he introduced his transition model that included three outcome areas: employment, social and inter-personal networks, and residential environment. The OSERS initiative on transition resulted in the funding of various transition projects in the 1980s that, for all practical purposes, began the formal study and development of transition as a key component of the programs of students receiving special education services. The projects that emerged in the mid- to late 1980s that dealt with transition continued a more expansive view of transition outcomes – in all of which assessment would play a key role.

IDEA Mandates for Transition

Even though transition activities were occurring during the 1980s, it was not until 1990, when IDEA was reauthorized, that a transition services mandate was part of the law for the first time. Specifically, "transition services" were defined as: "a coordinated set of activities for a student, designed within an outcome oriented process, which promotes movement from school to post school activities" (§602(a)(19)). This component on transition, which was now part of the federal law on special education, also included a requirement that IEPs include a statement of the needed transition services for students beginning no later than age 16 and annually thereafter (and, when determined appropriate for individuals, beginning at age 14 or younger), including, when appropriate, a statement of the interagency responsibilities or linkages (or both) before the student leaves the school setting (§602(a)(20)). While acknowledging the importance of now having a transition mandate, it is also notable to recognize that the 1990 reauthorization did not include any specific guidance about assessment as it related to "needed transition services" or "linkages" as required by law.

The federal law was reauthorized again in 1997. The transition mandate remained in place with some changes. Most notably, the age when transition services should commence was lowered to age 14. In addition, emphasis was provided about the transference of rights to the student when he or she reaches the age of majority (typically age 18 in most states).

The Individuals with Disabilities Education Act was reauthorized again in 2004 and, as of the writing of this chapter, is still the legislative mandate for transition. This reauthorization, for the first time, provided wording about transition assessment.

> Beginning not later than the first IEP to be in effect when the child turns 16, or younger if determined appropriate by the IEP team, and updated annually, thereafter, the IEP must include – (1) Appropriate measurable postsecondary goals based upon age appropriate transition assessments related to the training, education, employment, and, where appropriate, independent living skills.
>
> *(§300.320(b)(1))*

While the law clearly indicated that age-appropriate assessments are required to achieve the development of an appropriate transition services, as stated in the IEP, the law did not define or provide any specific guidance related to what are and how to conduct age-appropriate assessments. This task was left up to states, local educational agencies, and, in many instances, teachers and other transition-related professionals.

As early as the 1980s, when transition projects were beginning to define what transition meant on a local level, and continuing to a present day, it has become clear that information and data related to current and future functioning are needed for the three major life areas (working, learning, and living) of transition planning. Later sections of this chapter will provide specific suggestions on how to accomplish this task.

What Current Literature Says Related to Transition Assessment

Interest and professional activity in the transition planning process have generated a burgeoning amount of information related to this topic. Relatively little attention has been given to the assessment component of this process, however. In a review of literature over the last ten years, a number of issues and points of focus have been identified. Table 8.1 provides a summary of some notable

Table 8.1 Summary of Literature Related to Transition Assessment

Author	Key Transition Assessment Comments	Rationale
Asselin, 2014	Need to incorporate assistive technology consideration into transition assessment and planning to prepare students for demands of college.	Colleges provide accommodations based on the needs of the student's prior IEP. It is important for students to already have AT they are familiar with and working prior to meeting with vocational rehabilitation counselors at the college/university level. This will increase the accessibility of information.
Collier, Griffin, & Wei, 2017	Increase student involvement through student self-report transition assessment such as the Student Transition Questionnaire (pilot study).	Gathers information about the student from five domains related to transition. Students are able to evaluate their knowledge of and familiarly with transition to better improve their transition needs.
Greene, 2014	Need for culturally and linguistically responsive practices within transition assessments.	To better serve the students and the families, it is important to take into consideration the student's cultural background, needs, and linguistic abilities. Those qualities determine the type of supports that best suit the student.
Kellem, Springer, Wilkins, & Anderson, 2016	Increase collaboration among professionals, particularly school psychologists and special educators.	The transition assessment when done as a team gives everyone a "common thread" to work with in defining goals and services.
Lowenthal & Bassett, 2013	Use of multi-tiered assessment to focus on gap analysis model. Identify the gap in order to calculate the needed growth to meet the goal.	This model focuses on the use of a comprehensive assessment to understand the student's realistic abilities.
Rowe, Mazzotti, Hirano, & Alverson, 2015	Teachers are not familiar with the process and need guidance for each step from getting started to selection of appropriate assessments, conducting the assessment, and use of a multidisciplinary approach.	Teachers need a list of varied resources and an assessment review form with instructions on how to analyze the assessment results.
Tidwell, Kraska, Fleming, & Alderman, 2016	Teachers' lack of attention given to transition assessment and knowledge of resources.	Student information on the transition assessment came from reports that date back to elementary and middle school. Most often only up-to-date information was informal interest inventories.

contributions to the literature related to the topic of transition assessment. The major themes that can be pulled from this literature highlighted in Table 8.1 are the need to increase culturally and linguistically responsive practices, incorporate assistive technology, increase student involvement, increase collaboration among professionals, and increase special educator knowledge of transition assessments. While this is only a brief review of the literature, it is evident that one common theme persists – transition assessments need more attention given to them by special education teams in addition to better training to the professionals on the value and use of transition assessments.

Conceptualizing Transition Assessment

To best understand what is and how to conduct an age-appropriate transition assessment, two topics need to be discussed. The first topical area focuses on introducing an understandable model for organizing all the major facets that are part of an appropriate transition assessment process. Related to this first topic is the second topic, which identifies the major areas of adulthood that must be included in conducting a comprehensive assessment. A fundamental tenet of the transition process is that a thorough assessment of preferences and interests and a comprehensive assessment of needs and strengths increase the probability that a quality transition plan and services will result.

Model of Transition Assessment

Visual models are useful for conceptualizing concepts and processes. A model for conceptualizing the transition assessment process was first introduced in a book by Patton and Dunn in 1998 and reflected the thinking at that time. The most recent version is based on an updated model developed by Patton and Clark (in press; see Figure 8.1). This model represents a longitudinal vision of transition assessment that begins at an early age and continues through the end of secondary schooling. It also includes the idea that transition assessment does not necessarily stop upon graduation or at age 21. The implementation of additional transition assessment is warranted for those who pursue postsecondary education and are approaching the end of their programs.
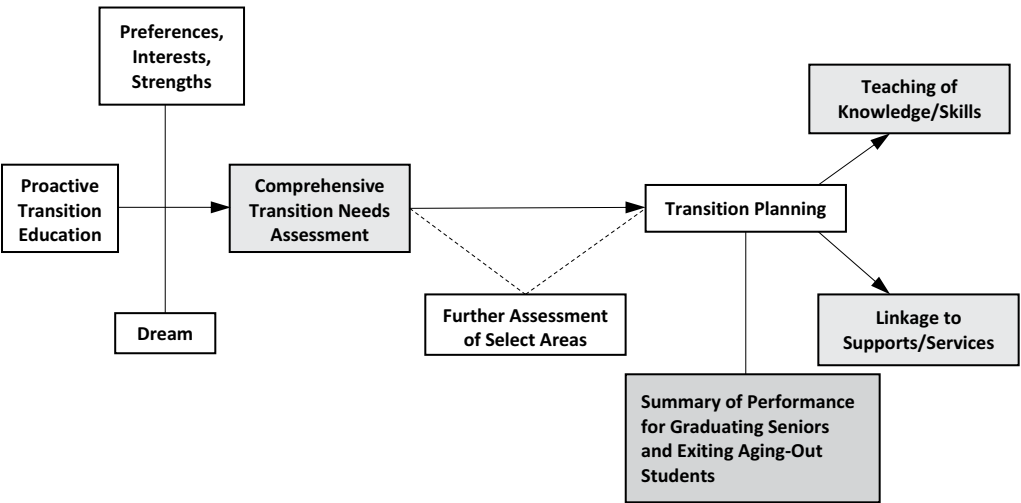
Figure 8.1   Transition Assessment Points

Source: Patton, J. R., & Clark, G. M. (2014). *Transition planning inventory* (2nd ed.). Austin, TX: PRO-ED. Reprinted with permission.

As can be discerned from Figure 8.1, the overall transition process involves a number of critical assessment points. Each of these assessment points can involve a number of different assessment practices:

- **Early on:** Various activities should begin at the middle school level that investigate a student's interests, preferences, and strengths; this is a time period when students should be allowed to "dream" about their future, regardless of how realistic these dreams may be. With proper time and discussion, "wild" dreams can be worked into realistic future outcomes.
- **Age 14 or 16:** A comprehensive assessment of a student's needs and strengths should be conducted to inform the transition services that will ensue. This assessment should occur when the transition process commences and should be repeated at different time periods throughout a student's secondary program. Often, more detailed assessment might be needed to further refine needs and strengths. Furthermore, existing data related to a student's transition "profile" (preferences, interests, needs, strengths) should be collected.
- **Ongoing during high school:** Although not depicted in Figure 8.1, another assessment point that is implicit as part of the implementation of the IEP goals that have been developed as a result of a transition needs assessment is the ongoing monitoring of progress, as required as part of the IEP process.
- **Near graduation or exiting of school:** The development of a personally designed Summary of Performance for use during the adult years is extremely important. This component of Figure 8.1 is a mandated requirement of IDEA for students graduating or completing age eligibility for school services. This particular document is intended to assist the student, and truthfully his or her parents, in dealing with the demands of life after high school. This document can and should be developed not only with consideration of the student but also with his or her participation.
- **Exiting from postsecondary settings:** For students who pursue postsecondary education or training, an additional transition phase arises, and a comprehensive transition assessment – much like the one done during high school – can be beneficial to students with disabilities.

As indicated in Figure 8.1, a comprehensive transition needs assessment may (a) reveal gaps or discrepancies in a student's overall transition "profile" or (b) changes over in time in regard to preferences, interests, needs, and strengths. As a result, the need for further assessment may be present. When this happens, select areas are identified for obtaining new or more in-depth information. Ultimately, this process results in the generation of knowledge and skills goals (IEP goals) along with linkage goals (action goals) that have the intent of making the transition from school to living in the community occur as smoothly as possible.

Transition Domains

Over the years, variation of opinion and taxonomy of what constitutes the important domains of adult living has existed. Professional literature related to the critical postschool or adult outcomes for individuals with disabilities has often focused on three general areas: community living, personal-social adjustment, and occupational adjustment (Flexer, Baer, Luft, & Simmons, 2007; Sitlington, Neubert, & Clark, 2010). Other professionals (Brolin & Loyd, 2004; Cronin, Patton, & Wood, 2007; Dever, 1988; Field, Martin, Miller, Ward, & Wehmeyer, 1998; Knowles, 1990) have refined these more general areas into critical life domains of adulthood. The consequence of all these efforts has led to an array of life skills associated with the transition process. This array of adulthood skills has particular implications for transition assessment and planning.

To date, consensus does not exist as to what constitutes a comprehensive set of transition domains. Broadly speaking, transition domains can be organized into three areas: working, learning, and living.

IDEA refers to a number of postschool activities (i.e., transition domains): postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, and community participation. If one interprets "independent living" and "community participation" broadly, this list of adult areas can be considered comprehensive. Table 8.2 provides a taxonomy of transition domains that are organized globally into one of the three major areas (working, learning, living) and represent a comprehensive set of transition areas that should be part of a thorough transition assessment process.

A key point that is essential to understand is that some level of consideration must be given to all these areas for all students for whom transition services are developed. Some students with IEPs will

Table 8.2 Transition Domains

Domain	Featured Content
Working	
Career Choice and Planning	Knows about jobs
	Knows how to get a job
Employment Knowledge and Skills	Can acquire and perform general and specific skills related to a job or jobs
	Knows how to change jobs
Learning	
Further Education/Training	Knows about options for further development beyond high school
	Has the skills to be successful
	Knows how to use support services
Functional Communication Self-Determination	Is able to read, write, listen, and speak in applied settings
	Understands one's strengths and weaknesses
	Has the ability to plan, set goals, and make decisions
	Has the ability to be in charge of one's life
Living	
Independent Living	Has skills related to a variety of everyday demands, such as cooking, cleaning, and making simple repairs
	Has the ability to solve everyday problems that arise
	Has the skills to use current technology
Personal Money Management	Has skills associated with buying everyday items
	Has the ability to pay bills, maintain checking/savings accounts, and budget money
Community Involvement and Usage	Has skills associated with being a capable citizen
	Has the ability to use services and resources in the community
	Has the ability to use local public transportation
Leisure Activities	Has awareness of a range of leisure activities
	Participates in indoor and outdoor activities
	Is engaged in various types of entertainment
Health	Has knowledge and skills associated with staying physically healthy
	Has knowledge and skills associated with staying emotionally/mentally healthy
	Has knowledge of appropriate sexual behavior
Interpersonal Relationships	Has skills to interact appropriately with a range of other people
	Has the ability to make and keep friends
	Has the ability to deal with conflict
	Has knowledge and skills required to be a good parent

not need transition services for some of the areas; other students will need transition activity for all the areas. However, assessment of each student should look comprehensively at the student. Ways of accomplishing this task are address in the next section.

Sources of Transition Assessment Information and Data

One overriding concern is understanding what is required by IDEA and what constitutes a reasoned, effective, and comprehensive sense of a student's transition profile. Too often, minimum compliance with the law is out of balance with the need for a comprehensive set of transition services. This section of the chapter identifies ways that an IEP team can generate appropriate and useful information and data for creating a comprehensive transition profile that should guide planning and direct needed services.

A related issue is who provides transition-related information. Patton and Clark (in press) suggest that information comes from multiple sources. Ideally, it is a good idea to obtain information from the student him- or herself, from school personnel who know the student well, and from parents or other family members who are in a position of support for and concern about the best interests of the student.

In general, assessment techniques that can be used for transition purposes will fall into two categories: formal and informal. Sitlington and colleagues (1997) provided a clear and succinct way of distinguishing these two types of assessment approaches.

> *Formal assessment* typically involves using a standardized procedure for administering, scoring, and interpreting an assessment. By clearly defining how an assessment is administered, scored, and interpreted, this allows a student score to be interpreted relative to other students (e.g., norms), although not all standardized instruments are norm-referenced.
>
> *Informal assessment* procedures are less structured and do not allow comparison with other students. However, because informal procedures allow assessment of student performance over time, they are useful in designing and evaluating the effects of instructional interventions. In addition, informal instruments include data to be collected from a variety of individuals (e.g., parents, teachers, employers) using a variety of non-standardized methods.
>
> *(pp. 70–71)*

The following content of this section of the chapter provides examples of both formal instruments and informal practices that can be used to generate a comprehensive transition profile on a student.

Existing Information and Data

Typically, students who have an IEP have an array of existing information and assessment data that can have a bearing on the transition planning process. Patton and Clark (2014) highlighted this point:

> Such information/data help develop the most comprehensive and realistic picture possible of the student. Some students will have an extensive amount of collateral information; others may have very little. . . . Some examples of collateral information that might exist for a student and be useful for planning purposes are adaptive behavior results, behavioral intervention plans, social skills assessments, study skills assessments, reading and math performance data, and career preference and interest data.
>
> *(p. 46)*

Assessing Preferences and Interests

Interests and preferences should drive the transition planning process. Gaumer Erickson, Clark, and Patton (2013b) defined interests as "activities that the student likes to do or would like to try in the future. These can include interest in academic subjects, jobs or careers, and/or leisure activities." These authors defined preferences as "priorities or things that the student likes better than other things. For example, some students prefer to work in groups, others alone; some prefer to be outside, others inside. Preferences imply a choice of some kind" (p. 1).

Most transition professional have always been sensitive to the preferences and interests of the students they are preparing for the future. In 2004, this practice became mandatory. IDEA 2004 specifically states that the "coordinated set of activities for a child with a disability" (i.e., transition services) to be delivered to students must be "based on the individual child's needs, taking into account the child's strengths, preferences, and interests" (§300.43(a)(2)). The law has made it very clear that the focus of transition assessment is very much on the needs of the student but not solely on this feature.

Most school districts have created their own procedures for determining preferences and interests. Typically, these techniques involve a set of questions that are asked to students. In some cases, these questionnaires are very brief and of questionable value; in other settings, the set of questions can be extensive. However, it is the quality of the questions asked that really matters.

Another feature of assessing preference and interests relates to the breadth of the questions asked. Too often, questions are restricted to employment and maybe living arrangements. While these are important topics, other areas of adult living should be investigated as well. An example of a preference and interest form that is simple to use and contains topics in the areas of working, learning, and living is provided in Figure 8.2. It is important to note that the assessment of preferences and interests should occur more than once. Commonly, this assessment occurs at the beginning of the transition planning process and never again. In reality, a student's preferences and interests are very much likely to change over time, and, as a result, assessment practices should be designed to capture these changes.

Another real concern of assessing preferences and interests is that a student in reality may have very little information or experience on which to base responses. It is not uncommon for a student to respond with an "I don't know" statement. Providing such a response is not an indication that the student is not interested; more often it reflects a scenario where the student has never engaged these topics before.

The assessment of parents' interests and preferences is also recommended. Insight into how parents see their child's future is extremely important to know when working with parents in this process. Identifying key areas of discrepancy among student, parents, and school will need to be worked on. Knowing the "hot spots" early allows school-based personnel time to prepare for upcoming discussions. Some formal instruments include forms for obtaining this information from parents.

Assessing Needs and Strengths

While all the transition assessment points noted in Figure 8.1 are important, identifying needs and strengths remains the center piece of the transition assessment process. Determining needs and strengths through a comprehensive assessment regimen informs the IEP team on how best to capitalize on what the student can do well and how to determine ways, through instruction and linkage activities to services and supports, to improve/address those areas that are challenges for the student. For instance, if a student is going to have to use local public transportation to get to work and she is not proficient doing so, the assessment process should be able to identify this area as needing attention, and, as a result, instructional goals need to be generated to reach proficiency. Furthermore, the student may need to be linked to the public bus system to obtain a bus pass for use in the future.

Transition Planning Inventory—Third Edition

Student Preferences and Interests Form—Basic

Student Name: _____ Date: _____

Directions: For each question, explain what you are thinking at this time based on your interests and preferences. If you do not have an answer to a question, leave it blank. Start at the top of each column and read downward. Begin with **1,** proceed to **2a** through **2e**, then move on to **3a** through **3e** and **4a** through **4e**.

1 General

1. What do you plan on doing after high school (like working, more school or training, choosing a place to live)?

2 Working	3 Learning	4 Living
2a. What jobs would you like to do after high school?	**3a.** Would you be interested in some type of education or training after high school?	**4a.** What do you like to do during your free time?
2b. Where would you like to work?	**3b.** How do you prefer to get information—by reading or asking questions?	**4b.** How would you like the school to help you with friendships?
2c. How would you like the school to help you get ready for getting a job?	**3c.** How do you prefer to share information—by speaking, writing, or signing?	**4c.** Do you like to make decisions by yourself or with others?
2d. How would you like family or others to help you get ready for getting a job?	**3d.** How would you like the school to help you get ready for going to college or entering a training program?	**4d.** How would you like the school to help you get ready for being able to deal with everyday life in the community?
2e. How will your disability affect you when you get a job?	**3e.** How will your disability affect you when you go to college or go into a training program?	**4e.** How will your disability affect you in everyday life?

Additional copies of this form (#XXXXX) may be purchased from PRO-ED, 8700 Shoal Creek Blvd., Austin, TX 78757-6897 800/897-3202, Fax 800/397-7633, www.proedinc.com

1 2 3 4 5 6 7 8 9 10   29 28 27 26 25 24 23 22 21 20

Figure 8.2 Sample Preferences and Interests Form

Source: Patton, J. R., & Clark, G. M. (2014). *Transition planning inventory* (2nd ed.). Austin, TX: PRO-ED, Inc. Reprinted with permission.

The determination of needs and strengths can be accomplished through both informal and formal techniques.

Formal Instruments

Prior to the 1990s, transition–specific formal instruments did not exist. Today, a range of formal instrument that are specifically designed for identifying needs and strengths are available. Most of these instruments are standardized (see Sitlington et al., 1997, prior) rating scales that can be completed on a student by various respondents, including the student. Table 8.3 provides the names and some basic information about some of the most commonly used formal instruments that are available commercially.

Table 8.3 Formal Transition Instrument

Instrument (listed alphabetically)	Target Group	Features

BRIGANCE Transition Skills Inventory (TSI) (Brigance, 2010)	• Middle and high school students
	• Varying skill levels
		• Criterion-referenced instrument – based on a compilation of material from BRIGANCE Employability Skills Inventory and the BRIGANCE Life Skills Inventory
		• 100+ assessments (in the form of individual performance-based assessments)
		• Assessment based on information collected by teacher or other school-based personnel
		• Components:
		  ○ Binder with introductory information and assessments and directions for activities
		  ○ Record book
		• Domains:
		  ○ Academic skills
		  ○ Postsecondary areas
		  ○ Independent living
		  ○ Community participation
		• Results can be used for generating present levels of performance and annual goals
		• Transition Skills Activities binder and student book are also available

Enderle-Severson Transition Rating Scales (ESTR) (Enderle & Severson, 2006).	• Full range of students – mild to significant needs	• Multiple set of rating scales
		• Assessment based on information collected from teacher and parents
		• Components:
		  ○ Eight different rating scales
		  ○ Manual (Transition Planning in the Schools)
		  ○ Online report generator
		• Domains:
		  ○ Employment
		  ○ Recreation and leisure
		  ○ Home living
		  ○ Community participation
		  ○ Postsecondary education

(*Continued*)

Table 8.3 (Continued)

Instrument (listed alphabetically)	Target Group	Features
		• ESTR-J: 　○ Designed for use with students with mild challenges 　○ Teacher and parent versions 　○ Spanish version of the parent form • ESTR-III: 　○ Designed for use with students with more significant challenges 　○ Teacher and parent versions 　○ Spanish version of the parent form • ESTR-S: 　○ Specially designed form for students with severe/ multiple impairments 　○ Teacher and parent versions
Transition Assessment and Goal Generator (TAGG) (Martin, Hennessey, McConnell, Terry, & Willis, 2015)	• Students with mild to moderate disability	• Online standardized assessment – paper version can be printed • Measures non-academic behaviors related to postschool settings • Components: 　○ TAGG-P (Professional) 　○ TAGG-F (Family) 　○ TAGG-S (Student) • Constructs: 　○ Strengths and limits 　○ Disability awareness 　○ Persistence 　○ Goal setting and attainment 　○ Employment 　○ Student involvement 　○ Support community
Transition Behavior Scales-Third Edition (TBS-3) (McCarney & Arthaud, 2012)	• Full range of students – mild to significant needs	• Standardized instrument • Measures student readiness for transition activities – focus on identifying areas for further development of skills and behavior improvement • Assessment based on information collected from teacher and student • Components: 　○ School version 　　▪ Technical manual 　　▪ Rating forms 　○ Self-report version 　　▪ Technical manual 　　▪ Ration forms 　○ IEP and intervention manual • Domains: 　○ Work-related behavior 　○ Interpersonal relations 　○ Social/community expectations • Computer "Quick Score" program available

Instrument (listed alphabetically)	Target Group	Features

Transition Planning Inventory, Third Edition (TPI-3) (Patton & Clark, in press)	• Full range of students – mild to significant needs	• Standardized instrument
		• Measures student/home preferences and interests as well as transition strengths and needs
		• Assessment based on information collected from three sources: student, home, and school
		• Components:
		  ○ Administration and resource guide
		  ○ Forms:
		    ▪ Core rating forms (student, home, school)
		    ▪ Modified form for students with autism and other significant support needs
		    ▪ Preference and interests forms (home, student-basic & advanced)
		    ▪ Profile and further assessment recommendations form
		    ▪ Summary of Performance Exit Document
		  ○ Informal Assessments for Transition Planning, -Second Edition
		  ○ Transition Instruction Guide
		• Domains:
		  ○ Career choice and planning
		  ○ Employment knowledge and skills
		  ○ Postsecondary education/training
		  ○ Functional communication
		  ○ Self-determination
		  ○ Independent living
		  ○ Personal money management
		  ○ Community involvement and usage
		  ○ Leisure and recreation
		  ○ Health
		  ○ Social/interpersonal relationships
		• Spanish version of home core rating form and home preference and interest form available
		• Online version available

Informal Techniques

A vast array of informal techniques have been developed to obtain transition-related information and data. Clark (2007) created a list of non-standardized assessments and procedures that are appropriate for gaining information about transition. His list includes the following techniques: observational reports, structured situational assessments, environmental assessments, person-centered planning/futures planning procedures, structured interviews (with the student or with those who know the student), adaptive/behavioral/functional skills assessments, checklists, and rating scales (employability, independent living, personal-social skills).

Informal procedures were deemed so attractive that a series of informal assessment books was created to provide an extensive assortment of teacher-generated resources that could be used for generating information across all the transition domains noted in Table 8.2 (see Clark, Patton, & Moulton, 2000;

Gaumer Erickson, Clark, & Patton, 2013a; Sitlington, Patton, & Clark, 2008; Synatschk, Clark, & Patton, 2008; Synatschk, Clark, Patton, & Copeland, 2007).

Specialized Assessment

Some instruments have been developed to target specific areas of functioning and, as a result, can be of significant value to transition personnel who believe in a comprehensive notion of transition assessment.

Career Interests

Career interest assessments are designed to uncover areas of career interest for an individual to assist him or her in choosing a career to pursue in the future. These instruments can be extremely useful in helping transition personnel in developing a work career plan for students. Examples of career interest instruments are:

- Career Assessment Inventory (Johansson, 2003)
- Career Interests, Preferences, and Strengths Inventory (Clark, Synatschk, Patton, & Steel, 2012)
- Reading-Free Vocational Interest Inventory, Third Edition (Synatschk & Becker, 2020)
- Student Self-Directed Search (Holland & Messer, 2013)

Self-Determination

One of the most discussed and important areas of interest for young adults is the ability to be self-determined. This particular area should always be part of the transition planning process. Informal techniques (e.g., checklists) for assessing self-determination have been developed by teachers and other professionals to measure the skills associated with this concept. Chapter 14 provides more information about self-determination and formal assessments of self-determination.

Assessment of Support Needs

Many young adults with disability who leave high school are likely to need some level of support during their adult lives and are potentially in need of a personal support plan (Schalock, Thompson, & Tasse, 2018). As a result, determining what type of supports and how intensive these supports need to be can greatly enhance the transition planning process. Assessing support needs can be accomplished informally based on observation and some type of qualitative instrument that identifies areas of need.

A sophisticated approach to assessing support needs can be accomplished by using standardized instruments. One of the most useful instruments is the Supports Intensity Scale – Adult Version (SIS-A) (Thompson et al., 2015). The intent of this instrument is to "measure the level of practical supports required by people with intellectual disability to lead normal, independent, and quality lives in society" (p. 9). It should be noted that this instrument is not a measure of competence at performing various functional tasks; other instruments (e.g., measures of adaptive functioning) attempt to accomplish that task. The SIS-A focuses on support needs and is divided into three sections – each of which includes items for determining needed levels of support.

- Section I: The Supports Needs Scale (six subscales): home living, community living, life-long learning, employment, health and safety, and social activities.
- Section II: Supplemental Protection and Advocacy Scale.
- Section III: Exceptional Medical and Behavioral Supports Needs.

Adaptive Functioning Measures

Probably no other area of assessment relates to transition assessment as does the measurement of adaptive functioning/adaptive behavior. The purposes of these two different types of measures are different. Adaptive functioning instruments look at current functioning across a range of everyday living areas. Transition needs/strengths instruments principally focus on future situations and the need to prepare for these situations. Nonetheless, these two areas of assessment share common elements, as noted in the following, where the domains of a transition assessment instrument (Transition Planning Inventory, Third Edition (TPI-3); Patton & Clark, in press) and a measure of adaptive behavior (Adaptive Behavior Assessment System, Third Edition (ABAS-3); Harrison & Oakland, 2015) are compared. As can be seen in Table 8.4, the overlap of topical areas is significant.

As noted previously, adaptive functioning data can inform the IEP team in terms of transition planning. As a result, adaptive information should be reviewed as part of this process. However, one important caution is needed. To be meaningful, the results of an adaptive functioning measure need to be relatively current (i.e., within three to four months), as levels of adaptive functioning can and should change as a function of instruction and experience.

Cultural Considerations in Transition Assessment

The ultimate outcome for transition planning is to create life situations where the person feels personally fulfilled and valued as an individual. Given that the nature of transitions are directly impacted by an individual's cultural background and linguistic abilities, it is important these aspects are taken into consideration throughout the transition assessment process (Hoover & Patton, 2017).

The professional conducting the transition assessment must possess knowledge of appropriate culturally and linguistically responsive practices prior to collecting data. It is important to allow students opportunities to share their personal preferences, strengths, and interests in a style that is most comfortable to them and enables them to fully complete the transition assessment to the best of their abilities. By providing varied modes (i.e., preferred language, written, interview, drawing, computer, etc.) of data collection, it provides students with ample opportunities to express themselves, which allows educators to capture all aspects of the student that are essential for transition planning.

Table 8.4 Comparison of a Transition Assessment (TPI-3) and an Adaptive Behavior Assessment (ABAS-3)

Transition Planning Inventory, Third Edition (TPI-3)	Adaptive Behavior Assessment System, Third Edition (ABAS-3)
Career Choice and Planning	Work
Employment Knowledge and Skills	Work
Postsecondary Education/Training	–
Functional Communication	Communication
	Functional Academics
Self-Determination	Self-Direction
Independent Living	Home Living
	Self-Care
Personal Money Management	Functional Academics
Community Involvement and Usage	Community Use
Leisure and Recreation	Leisure
Health	Health and Safety
Social/Interpersonal Relationships	Social

To facilitate appropriate transition services, the IEP team must not only evaluate the student's individual abilities and goals but also gather information from the family as well, as noted previously in the chapter. Family involvement is crucial for students from culturally and linguistically diverse backgrounds, for they play in instrumental role in the student's life.

The following are suggestions for educators to include when conducting a culturally responsive assessment:

- Collect transition information with an unbiased mindset through culturally and linguistically responsive practices (Greene, 2014; Hoover & Patton, 2017).
- Take into consideration the language preferences and needs of the student and families.
- Provide materials in the native language if necessary.
- Provide a thorough explanation to the families about the information gathered, why, and how it will be used to determine transition planning for the student.
- Provide opportunities for families to ask questions and share concerns (Hoover & Patton, 2017).
- Take time to get to know and understand the families' cultural traditions and background and, most important, their view on disability and how it impacts the student's life.
- Listen to the family's wishes and requests and respect their perspectives.
- Support the family's hopes and dreams for their child (Greene, 2014).

Issues Associated With the Transition Assessment Process

No matter what type of assessment is being conducted, issues arise in the process of conducting the actual assessment and often in the interpretation of the results. Transition assessment is not immune to these problems. This section discusses some of the most common issues encountered in the assessment phases of the transition process.

Lack of Comprehensiveness

Lack of conducting a comprehensive transition assessment has been addressed throughout this chapter. This topic is so important that it warrants another look. Far too often, transition assessment is comprised of a list of questions, mostly related to employment, that are asked to the student and maybe his or her parents. Acting in the best interest of students, it is essential to assess a full range of adult-referenced areas when planning for a student's future.

Participation of Families

Getting individuals at home to participate in the transition planning process can be difficult at times. Cultural, family value, educational, economic, and language factors may present obstacles to home participation. It is extremely important to convey to families how important this process is for their child. However, it is also very important to respect the level of involvement that family members are willing to give to this process.

Barriers to participation can be overcome. Two instances illustrate this point. First, for a family value issue where one or both parents are not be comfortable with an item on a transition needs instrument, such as one related to sexuality, the simple tactic is to disregard the item and move on to other items. Second, language barriers can be mitigated by having transition-related materials translated in the language spoken at home. However, when doing so, the translation must faithfully convey the transition material. Many formal transition instruments that are commercially available now include translations of various forms.

Disagreement Among Parties

If multiple respondents are used to generate transition data, discrepancies of opinion will inevitably occur. To many professionals involved in the transition process, this situation is a cause for concern. Differences of opinion provide the opportunity to discuss interests, preferences, and personal perspectives on functioning. The important point is that sufficient time is needed for various parties in this process to have a chance to share and discuss their perspectives through a reasoned process that has as its goal the successful transition of the student to life after high school.

Recommendations for Practitioners

As a way to conclude this chapter on transition assessment, a list of recommendations has been developed. This list can serve as guidelines for conducting age-appropriate and comprehensive transition assessments.

Information About Transition Assessment

- If possible, take a class on transition – whether in a face-to-face setting or online.
- Consult primary sources on transition and transition assessment.
- Read the current literature about transition assessment – e.g., *Career Development and Transition for Exceptional Individuals*.

Tools

- Acquire informal assessment materials that can be used to conduct an appropriate assessment – from school sources or from commercial sources.
- Consider using formal instruments that are linked to online resources for identifying interests, preferences, strengths, and needs.
- Develop an interests and preferences inventory that is tailored to your students and the environments in which they live.

Conducting Transition Assessments

- Be aware of cultural factors and family values when conducting assessments.
- Conduct assessments on a regular basis, as situations change – this is not a one-time-only type of assessment.
- Locate all relevant assessment data that can contribute to developing a comprehensive transition profile.
- If using informal assessment materials, incorporate them into lessons or other instructional activities.
- Do everything you can to involve parents, or other family representatives, in the assessment process.
- Ensure that the Summary of Performance document to which students are entitled under IDEA contains information and data that are meaningful and useful to the student in the future.

The transition requirement of IDEA is an extremely important part of the law. Even though transition assessment is not specifically or sufficiently explained in the law, the implicit meaning suggests that, to prepare students for life after high school, some type of assessment system is needed. The intent of this chapter was to provide ideas for developing and implementing such a system whereby a comprehensive plan for the future is developed for a student and his or her family and with the student's meaningful participation in the process.

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Student Involvement in the Transition Process

James Martin and Dalun Zhang

Active student participation in the transition education process represents a foundational secondary special education practice (Martin & McConnell, 2017; Martin & Williams-Diehm, 2013). Federal legislation and research on transition education practices provide strong support for students with disabilities to meaningfully engage in transition education practices. Federal special education law requires that transition–age students be invited to participate in their individualized education program (IEP) planning meetings, which includes the implied assumption students actively participate in the transition discussions to ensure the written IEP product represents students' needs, interests, and goals (Flexer & Baer, 2008). Active student engagement in the transition planning process increases student self-determination (Martin, Van Dycke, Christensen, et al., 2006; Seong, Wehmeyer, Palmer, & Little, 2015) and predicts more positive transition outcomes in postsecondary education and employment (Burnes, Martin, Terry, McConnell, & Hennessey, 2018).

Over the past two decades, researchers have developed models and effective strategies to teach students the skills to become active participants in transition planning, and educators have increased opportunities at schools to enable students to learn and use these skills. Kohler's pioneering work created the original Taxonomy for Transition Programming (Kohler, 1996) and more recently the Taxonomy for Transition Programming 2.0 (Kohler, Gothberg, Fowler, & Coyle, 2016). The Student-Focused Planning domain within the Taxonomy considers student involvement in the transition planning process essential to developing a meaningful plan, and the 2.0 update contains an entire section describing desired student participation outcomes, such as students being fully prepared to actively engage in the IEP meeting, where they express their interests, skills, and learning needs.

Landmark, Ju, and Zhang (2010) identified self-determination instruction, including active student involvement in transition education activities, as one of eight effective transition practices. Cobb and Alwell (2009) found student-focused planning and student development interventions had a great number of research studies supporting their use in transition education. Test et al. (2009) identified 32 evidence-based practices, including two student-focused planning instructional practices to increase student involvement in their IEP meetings. Prior to the actual IEP meeting, Zhang and Stecker (2001) suggested that educators need to follow a four-step process to ensure a student-focused process. First, educators need to arrange opportunities for students to talk to teachers and

family to discuss school and postschool interests, needs, and wants. Second, educators need to teach students what to do at their IEP meeting. Third, during the IEP meeting, teachers coach students to actively participate in discussions. Fourth, after the meeting, educators need to facilitate teaching goal-attainment skills and supporting student attainment of their transition goals.

Transition-age students with disabilities can be actively involved in each of the four stages. Following instruction and opportunity to use their learned skills in the transition planning process, students actively identified and discussed their strengths, needs, and goals (Cross, Cooke, Wood, & Test, 1999; Keyes & Owens-Johnson, 2003; Powers et al., 2001; Woods, Sylvester, & Martin, 2010). Students have learned to successfully write drafts of IEP documents, including choosing and writing goals and objectives (Konrad & Test, 2004, 2007; Konrad, Trela, & Test, 2006). Research has provided evidence that students can be taught strategies to implement their IEP plan by attaining IEP goals (Agran, Blanchard, & Wehmeyer, 2000; German, Martin, Marshall, & Sale, 2000; Shogren, Palmer, Wehmeyer, Williams-Diehm, & Little, 2012).

Field, Martin, Miller, Ward, and Wehmeyer (1998b), in a position paper by the Council for Exceptional Children's Division on Career Development and Transition, advocate for increased student engagement in the transition planning process to teach critical self-determination skills. To do this, students need to actively participate in the transition assessment process, meaningfully engage in transition planning and the IEP meeting, and then work on attaining their IEP transition goals. To facilitate these outcomes, we will first discuss student involvement in the transition assessment process as a means for students to identify postschool and annual transition goals. Second, we will examine how to obtain meaningful student engagement in the transition IEP meeting. Third, and last, we will examine the emerging practice of students attaining their annual transition goals.

Student Involvement in Transition Assessment

Federal special education law requires that transition goals be based upon information obtained through transition assessments (Miller, Lombard, & Corbey, 2007). To meet the intent of the law and inform students so they can meaningfully participate at IEP transition meetings, the transition assessment process must meaningfully include and involve students (Collier, Griffin, & Wei, 2016; Field & Hoffman, 2007). For students to become involved in the transition assessment process in a participatory manner, educators need to provide students opportunities to: (a) complete student versions of transition assessments; (b) understand information gleaned from the student, parental, and educator transition assessment versions; and (c) formulate postsecondary and annual transition goals using transition assessment results. Transition assessments provide information that students can use to answer critical questions to build postsecondary and annual transition goals. Thus, student involvement in the transition assessment process should begin with students learning the six questions that transition assessments will attempt to answer.

Key Transition Assessment Questions Students Need to Answer

The transition assessment process begins with students knowing these questions and perhaps developing tentative answers.

Postsecondary Goal Questions

- Where do I want to live after graduation from high school?
- Where do I want to work after graduation from high school?
- Where do I want to learn after graduation from high school?

Annual Transition Goal Questions

- What do I need to learn this year to live where I want after graduation from high school?
- What do I need to learn this year to obtain the career I want after graduation from high school?
- What do I need to learn this year to have the education I want after graduation from high school?

Transition assessments, structured interviews, experiences, and input from family members and educators will enable students with disabilities to answer these questions, and from these answers, postsecondary and annual transition goals can be built (Pulos & Martin, in press).

Collier et al. (2016) introduced an informal assessment tool, the Student Transition Questionnaire (STQ), designed to obtain student perspectives on transition-related topics. This assessment tool includes 38 items that students rate themselves on important transition-related activities. Based on the results of a pilot study with 186 students, these researchers found that it is useful to obtain student's personal strengths and needs.

Complete Student Versions of Transition Assessments

To build employment, independent living, and further education postsecondary and annual transition goals, at least three types of assessments need to be completed: (a) career interests and skills, (b) independent living, and (c) self-determination assessments. Educator selection of assessments depends upon student abilities and the opportunities students have to meaningfully participate in the assessment process. Selection of transition assessments also needs to consider the quality of assessments. After examining federal district court decisions regarding use of transition assessments, Prince, Plotner, and Yell (2014) recommend educators use at least one tool with ample validity evidence to support its use as a transition assessment for students with disabilities.

Interest and Exploration to Construct the Beginning of a Career

Loren is a high school freshman who has a learning disability. Her special education teacher arranged for Loren to complete the Career Clusters assessment (Career Clusters, 2011), which produced a ranked list of preferred career clusters. She wanted Loren to use this assessment because Loren will most likely attend the local Career Technology Center part-time during her last two years of high school, and the results from the Career Clusters assessment match the Career Technology's degree programs. After completing the assessment, Loren scored it and discovered her top career clusters were health science, hospitality and tourism, and human service. Over the next two weeks, Loren watched a series of videos at the Career One Stop website (http://acinet.org/acinet/videos. asp?id=27,&nodeid=27%00) that described various jobs by cluster, hiring opportunities, and qualifications across her top three job clusters. After thinking about the information and gathering information that described the requirements for different Career Tech Center programs, Loren talked it over with her family and special education teacher. Loren decided to pursue a career in health care and searched for a vocational school to enable her to become a phlebotomist and obtain employment at the local hospital. Through the use of transition assessments, she developed her postsecondary employment and further education goals.

Independent Living Assessment

Loren plans to live at home with her mom after graduation from high school for a few years until she obtains a job and saves some money. Then, she would like to move into her own apartment. To

determine if Loren's level of attainment across crucial independent living skills needs instructional attention, the special education teacher asked Loren and her mother to complete the Life Skills Inventory (Washington State Department of Social and Health Services, 2000). This inventory built a level of attainment profile across 15 independent living domains, including money management, food management, housekeeping, and emergency and safety skills. It rates students' attainment across each domain at the basic, intermediate, advanced, or exceptional levels. After completing the assessment and comparing the results with her mom's, Loren was higher in a few areas (money management, pregnancy prevention, and transportation), but on the other domains, their scores matched. Loren, with input from her mom and teacher, decided that an annual transition goal would be developed to improve her emergency and safety skills because her level of attainment in this domain was at the basic level.

Self-Determination Assessment

Loren's teacher asked her to complete the student version of the AIR Self-Determination Assessment (Wolman, Campeau, DuBois, Mithaug, & Stolarski, 1994). Loren's teacher scored the assessment and told Loren that she had obtained an overall self-determination score of 72%, which meant that she had developed many of the skills and had many opportunities to learn and practice them, but she still had more to learn. Loren's teacher explained that the opportunities at school to practice the self-determination skills needed to be increased, especially expecting Loren to set and attain her transition goals. Likewise, she had to learn more about setting and making her goals happen. Because of this assessment, Loren asked that setting and attaining her transition goals become an annual further education IEP goal.

Lesson Package That Uses Student Self-Assessment to Build IEP Sections

To encourage student involvement in the transition planning process, the Student-Directed Transition Planning (SDTP) lessons (Sylvester, Woods, & Martin, 2009) provide students a means to complete transition assessments in a guided process and link the results to the other transition planning components. To increase students' participation in transition discussions at their IEP meeting, Sylvester et al. (2009) created the eight-lesson SDTP sequence to enable students to become self-aware to develop postschool employment, independent living, and further education goals; to write a course of study to prepare them to attain the goals; to connect with needed adult services; and to develop a script for students to use to discuss transition information at their IEP meeting. Educators may freely download the scripted lesson manual and lessons and present them to students via PowerPoint files, associated exercises, and knowledge tests (www.ou.edu/content/education/centers-and-partnerships/zarrow/trasition-education-materials/student-directed-transition-planning.html). Through the lessons, students obtain information from family members and educators, then add their own thoughts. After consideration, students write their opinions on topics such as their career strengths.

Woods et al. (2010) found that the lessons significantly increased students' transition knowledge and self-efficacy. At the end of the lessons, the students believed:

- At the next IEP meeting, I know I can talk about my disability.
- I know the employment, further education, and adult living goals I will talk about at my next IEP meeting.
- I know I can tell my IEP team about the job I want after graduation.
- I know I can tell my IEP team about the plan of study that will help me reach my transition goals.
- I know I can tell my IEP team about the adult supports and services I might need after graduation.

The SDTP lesson package specifically teaches students the content needed to become actively involved in the transition discussions at their IEP meeting. As a part of the lessons, students complete several transition assessments and use the information, along with input from family and educators, to help build postsecondary transition goals. As students complete the lessons, they build a script of what they want to say about transition issues at their IEP meeting.

Student Involvement in the Transition IEP Meeting

The important role of students in the transition planning process has been widely recognized by researchers (Wagner, Newman, Cameto, Javitz, & Valdes, 2012) because the IEP process provides repeated opportunities for students to make decisions and self-advocate by learning to develop, participate, and manage their IEP (Martin, Marshall, & Maxson, 1993). Test and Neale (2004) suggested that the IEP meeting provides the opportunity for teaching and practicing a variety of important self-determination and self-advocacy skills, including: (a) describing a disability, strengths, needs, and present level of performance; (b) evaluating progress and alternative goals; (c) preparing for a formal presentation and self-advocating in a formal meeting; (d) communicating interests and preferences; (e) taking responsibility for improvements; (f) participating in discussions about postschool goals and plans; and (g) determining and requesting accommodations. Consequently, students need to be invited to their IEP meetings when their transition goals are discussed (Griffin, Taylor, Urbano, & Hodapp, 2014).

Martin and Marshall (1995) indicated that students need opportunities to learn the leadership skills to manage and actively participate in their IEP meeting and to tell their IEP team their "interests, skills, limits, and goals" (p. 152). Since IEP meetings must occur annually, they allow students to become involved at an early age, and their involvement can increase and continue over multiple years. As such, it is more likely that students would master these skills, as well as increase the chances of skill generalization and maintenance once they leave high school. Martin et al. (1993) suggested that students in elementary school observe and minimally participate in their IEP meetings. By middle school, students will actively participate in their IEP meetings, and during the high school years, students will manage their IEP meeting and process. This all will be done, of course, with educator preparation and coaching. "If educators and families are serious about involving students in their IEP process, then students must be taught their role. This means that even in fully included schools, students who have an IEP must receive instruction about the IEP process and their role in it" (Martin, Marshall, & DePry, 2008, p. 358). However, educator-directed IEP meetings dominate secondary special education practice.

Lack of Student Involvement in Educator-Directed IEP Meetings

In spite of strides being made in teaching students skills and providing opportunities for them to participate in the IEP process, special education has a long history of not actively involving students in their IEP meetings. For example, Lovitt and Cushing (1994) and Thoma, Rogan, and Baker (2001) indicated that students were unfamiliar with the IEP process. These data were supported by Mason, Field, and Sawilowsky (2004), who surveyed teachers, administrators, and related services personnel and found that only 46% of students attended IEP meetings and that students who attended were "not that involved" (p. 445). Although student attendance in the transition planning part of the IEP meeting has increased in recent years (Trach & Shelden, 2000), there is still a lack of active involvement by some students, especially those with autism spectrum disorders (Shogren & Plotner, 2012).

Powers, Turner, Matuszewski, Wilson, and Loesch (1999) interviewed students after they participated in educator-directed meetings. The students reported the meetings to be boring, that they did not understand much of what was said, and that they felt ignored by the adults at the meeting. Over a three-year period, Martin, Marshall, and Sale (2004) examined the perceptions of over 1,600 IEP

team members. The student team members reported dismal findings. They indicated that they knew the reason for the IEP meetings, knew what to do at the meetings, talked at the meetings, and felt good about the meetings less than any other team member.

Martin, Greene, and Borland (2004) found in a statewide survey of special education leaders that most believed their students with mild to moderate disabilities almost always were invited to attend IEP meetings, but only a few of their special educators had received any in-service training on facilitating student involvement. Not surprisingly, these administrators reported that students were only somewhat involved in the IEP meetings. Interestingly, the administrators furthest away from the meetings reported higher rates of student involvement than those who regularly attended IEP meetings. Martin, Van Dycke, Greene, et al. (2006) directly observed 109 middle and high school IEP meetings. The observations found that students spoke only 3% of the time, as opposed to 51% for special education teachers. At the observed transition IEP meetings, only a few of the students stated the purpose of the meeting, introduced everyone, or reviewed progress made on their past goals. Almost 50% of the students did discuss their interests, 27.1% discussed goals, and 20% discussed strengths and weaknesses.

Martin, Van Dycke, Greene, et al. (2006) observed 109 secondary IEP meetings, and, at the conclusion of each meeting, team members completed a survey. On a "not at all" to "a lot" survey scale, the IEP team members gave the transition participation questions the lowest scores of the survey, which suggests only minimal team transition planning discussions. The discussions that did happen focused on the jobs students might do after high school, educational opportunities after high school, and further supports. The teams gave a "somewhat" rating to the item that asked if the IEPs reflected the students' postschool visions and another "somewhat" rating to the item that asked if the team members thought students could attain the identified postschool goals.

Landmark and Zhang (2010) examined IEP documents of secondary students with disabilities for transition compliance and found that 93% of the students were invited to participate in their IEP meeting. However, simply being invited to the meeting, although it meets IDEA compliance requirements, is the lowest level of involvement. For the student, simply being invited to the meeting or being present at the meeting does not necessarily mean active student participation. For educators, simply providing the opportunity for students to attend the meeting, without teaching students what to do at the IEP meeting and offering them the opportunity to learn transition knowledge about themselves, misses the intent of IDEA 2004 (Woods et al., 2010). Data from the National Longitudinal Transition Study-2 indicated that 73.4% of all students receiving special education had attended an IEP meeting in the past two years (National Longitudinal Transition Study-2, 2009). Percentages ranged from a low of 68.5% for students identified with autism to a high of 86.7% for students with traumatic brain injury. However, attendance at IEP meetings, as established through the already discussed survey and direct observation studies, does not assume participation.

Lack of Student Involvement in Transition Planning Discussions

Martin, Van Dycke, Christensen, et al. (2006) observed 129 transition IEP meetings and found that 25% of the meeting time was used to discuss transition issues. Adult IEP team members dominated the transition discussions by talking 90% of the time, with students only talking 10% of the time. Special education teachers clearly dominated the transition discussions by talking 50% of the time. Family members and administrators both talked about 10% of time. Although students were present at these transition discussions, clearly adults talked to adults about students' transition plans, and students had minimal input into their transition plan.

Doronkin, Martin, Greene, Choiseul-Praslin, and Schreffler (in press) examined educator-directed IEP meetings and concluded they provide few opportunities for meaningful student discussion and interaction with the IEP team due to the meeting being form and educator driven. As a result, it led

the researchers to question whose meeting was it – was this meeting for the student or simply for the special educators? Far too often the most meaningful opportunity for student contribution to the discussion came when asked direct questions about their postschool goals and other future plans after being given only a few seconds to think of an answer. This situation was so prevalent, Doronkin et al. (in press) simply called this the instant vision request.

Summary

Despite the history of continued lack of active student involvement in the IEP meeting, research has indicated a widespread interest in increasing the level of student involvement in the IEP meeting. Both Agran, Snow, and Swaner (1999) and Mason et al. (2004) found that teachers and administrators were interested in learning how to prepare students to be actively involved in their IEP process. Grigal, Neubert, Moon, and Graham (2003) indicated that parents and teachers felt that students should be prepared to participate in their IEP meetings.

Strategies for Involving Students in IEP Meetings

While research indicates that historically students have not been actively involved in their IEP meetings, a growing body of research indicates that students can learn to become active participants in their IEP meetings. Test and Neale (2004) reviewed the literature and found that 16 studies demonstrated successful strategies designed to increase student involvement in IEP meetings. Their findings indicated that students with a variety of disabilities could learn to become active participants in their IEP meeting using either published student-directed or person-centered planning strategies. When published curricula were used, a combination of direct skill instruction and role-playing was the most commonly used instruction technique. Each of the lesson packages require that the students be taught skills prior to their IEP meetings and that educators provide opportunities for students to use the learned skills during the meetings.

Using Published Curricula to Teach Student Involvement in IEP Meetings

The National Technical Assistance Center on Transition reviewed the published research literature to identify methodologically sound studies that examined the effectiveness of lesson materials to teach student involvement in their IEP meetings (NTACT, 2016a). NTACT researcher found three lesson packages had sufficient quality research supporting their effectiveness to be considered evidence-based transition education practices, which is NTACT's highest quality ranking. The three lesson packages were the Self-Advocacy Strategy (Van Reusen, Bos, Schumaker, & Deshler, 1994), the Self-Directed IEP (Martin, Marshall, Maxson, & Jerman, 1996), and Whose Future Is It Anyway? (Wehmeyer, Lawrence, Garner, Soukup, & Palmer, 2004).

THE SELF-ADVOCACY STRATEGY

The Self-Advocacy Strategy teaches students to participate in an education or transition planning meeting. The steps of the strategy are called IPLAN (Van Reusen & Bos, 1994):

1. **I**nventory your strengths, areas to improve or learn, goals, and choices for learning or accommodations. Students complete an inventory sheet that identifies strengths, areas to improve or learn, goals, and choices for learning or accommodations that they can use at their meetings.
2. **P**rovide your inventory information. Students use their inventory sheet during IEP meeting discussions.

3. **L**isten and respond. Students learn proper times to listen (e.g., when someone is making a statement, when someone is asking a question) and respond (e.g., when someone asks a question, when you have information to add).

4. **A**sk questions. Students learn how to ask questions when they do not understand what people are saying.

5. **N**ame your goals. Students learn to name goals they would like included in their IEP.

The Self-Advocacy Strategy has been used to teach males and females aged 12–17 with mild to moderate disabilities to participate in their IEP meeting. The Self-Advocacy Strategy has been taught using both teacher-led instruction and technology using hypermedia and CD-ROM. For example, Test and Neale (2004) effectively taught the Self-Advocacy Strategy to four middle school students with disabilities in ten 20–45 minute tutoring sessions over two weeks.

THE SELF-DIRECTED IEP

The Self-Directed IEP teaches students 11 steps to follow to be able to lead their own IEP meeting in six to ten 45-minute sessions. The Self-Directed IEP includes assessments, videotape, and a student workbook. The 11 steps are:

Step 1: Begin meeting by stating the purpose, which involves students learning how to explicitly state the purpose of the meeting (e.g., review goals).

Step 2: Introduce everyone, which involves students learning who is required to be at an IEP meeting and who else they would like to invite, as well as practicing introducing these individuals.

Step 3: Review past goals and performance, which involves students stating their goals and learning which actions can be taken to help meet their goals.

Step 4: Ask for others' feedback, which involves students learning what feedback is and the different ways they can receive feedback on their goals.

Step 5: State your school and transition goals, which involves students identifying their interests, skills, and needs and the goals they would like to achieve in school.

Step 6: Ask questions if you don't understand, which involves students learning how to ask questions for clarification.

Step 7: Deal with differences in opinion, which involves students learning the LUCK strategy (**L**istening to the other person's opinion, **U**sing a respectful tone of voice, **C**ompromising or **C**hanging your opinion if necessary, and **K**nowing and stating the reasons for your opinion).

Step 8: State the support you will need to reach your goal, which involves students learning about supports that will help them achieve their goals.

Step 9: Summarize your current goals, which involves students restating their goals, actions they will take to meet those goals, and how they would receive feedback in meeting those goals.

Step 10: Close meeting by thanking everyone, which involves students learning how to end the meeting by using closing statements and thanking everyone for attending.

Step 11: Work on IEP goals all year, which involves students being reminded to work on their goals all year by taking actions and receiving feedback and support to accomplish these goals.

The Self-Directed IEP has been used to teach males and females, aged 12–21 and identified as having mild to moderate disabilities, to participate in their IEP meeting. The Self-Directed IEP has primarily been taught following the procedures outlined in the teacher's workbook combined with a model–lead–test prompting procedure (Allen, Smith, Test, Flowers, & Wood, 2001; Arndt, Konrad, & Test, 2006).

The third published curriculum, Whose Future Is It Anyway? (WFA), is now in its second edition (Wehmeyer et al., 2004) and has some research supporting its use. WFA was developed primarily for secondary transition-age students with disabilities. It is taught in 36 sessions with materials that are written for students. In addition, there is a Coach's Guide to help teachers provide any needed support to students. The five sections of the WFA include:

1. **Getting to Know You:** Introduces students to the concept of transition and transition planning, four transition outcome areas (i.e., employment, community living, postsecondary education, recreation and leisure), and disability awareness. During this section students identify their unique learning and support needs related to their disability.
2. **Making Decisions:** Introduces students to DO IT!, a decision-making process that is then applied to the four transition outcome areas. Students learn to use DO IT! to make a decision about a possible living arrangement and then apply the decision-making strategy to each of the other three outcome areas.
3. **How to Get What You Need, Sec. 101:** Teaches students to identify potential community supports for each transition outcome area.
4. **Goals, Objectives, and the Future:** Teaches students to write goals and objectives, as well as strategies they can use to track progress on their goals and objectives.
5. **Communicatin':** Teaches students about effective small-group communication strategies, types of communication (e.g., verbal, nonverbal), how to be assertive rather than aggressive, how to negotiate and compromise, and how to use persuasion.

The WFA has been used with high school and middle grade students with intellectual disability and learning disabilities. WFA has been primarily taught using printed workbooks but recently was taught using a computer-based reading support program called Rocket Reader (Lee et al., in press). Wehmeyer and Lawrence (1995) conducted an initial evaluation of the WFA, determining its efficacy in promoting transition knowledge and self-efficacy for transition planning. Wehmeyer, Palmer, Lee, Williams-Diehm, and Shogren (2011) conducted a randomized-trial placebo control group evaluation of the effects of the WFA with more than 400 high school students, determining that instruction using the WFA process resulted in significant, positive differences in self-determination when compared with a placebo-control group and that students who received instruction with the WFA process gained transition knowledge and skills.

Strategies for Teaching Students to Draft Their IEP

So far, the strategies described have focused on teaching students to actively participate in their IEP meeting. This section describes two strategies that can be used not only to teach students to write parts of their IEP but also to infuse teaching self-determination skills into academic writing instruction. The two strategies include using an IEP template (Konrad & Test, 2004) and the GO 4 IT . . . NOW! strategy (Konrad et al., 2006).

The IEP Template is a "fill-in-the-blank" IEP that students use to write a draft of a first-person IEP in complete sentences (Konrad & Test, 2004). The template helps students understand IEP content and format. Teachers can prepare students to use the template by: (a) using online interest and career inventories and working with their school guidance counselors to help students develop

vision statements about their postschool goals; (b) working with students to identify strengths and academic, functional, social, and behavioral needs; (c) teaching students how to turn a need into a goal; and (d) using modeling and guided and independent practice to teach students to complete the template. While teaching students to complete the template, teachers can also teach writing and communication skills. For example, they can teach capitalization, punctuation, and parts of a sentence (subject, verb) using sentences from student templates. Students can then learn to use transition words and phrases to combine sentences into paragraphs. Next, teachers can also teach letter-writing skills by having students write letters to invite IEP team members to their meetings. Finally, students can be encouraged to participate in their IEP meetings by bringing their completed templates and/or paragraphs to the meetings or developing presentations from their templates.

GO 4 IT . . . NOW! GO 4 IT . . . NOW! is a learning strategy designed to teach students how to write paragraphs about their IEP goals (Konrad & Test, 2007), and it has been used effectively with a variety of students (Konrad et al., 2006). Students are taught: (a) that one paragraph is about one goal and that goal is the topic of the paragraphs, (b) that objectives are the supporting details, and (c) to restate the goal and indicate how long it will take to complete as a concluding sentence. The GO 4 IT . . . NOW! mnemonic is:

G – Goals
O – Objectives
4 – 4 objectives
IT – Identify **T**imeline
N – Did I **NAME** my topic?
O – Did I **ORDER** my steps?
W – Did I **WRAP** it up and restate my topic?

Teachers can use GO 4 IT . . . NOW! by: (a) helping students identify their academic, functional, social, and behavioral needs and then explicitly teaching students to turn a need into a goal using an "I will" statement and (b) providing explicit instruction on how to write a goal paragraph, using modeling and guided and independent practice and "transition words" to teach student to put objectives into a logical order. Once students are able to write effective paragraphs, students can be taught to combine their paragraphs to create longer essays. Finally, students can be encouraged to share their paragraphs and essays at their IEP meeting or send them with the IEP invitation letters to prepare team members for the meeting.

TEACH STUDENTS TO DEVELOP AND USE THEIR SUMMARY OF PERFORMANCE WITH THE SDTP LESSONS

IDEA 2004 requires that, for a child whose eligibility under special education terminates due to graduation with a regular diploma or due to exceeding the age of eligibility, the local education agency "shall provide the child with a summary of the child's academic achievement and functional performance, which shall include recommendations on how to assist the child in meeting the child's postsecondary goals" (Kochhar-Bryant & Izzo, 2006, p 71). The purpose of the Summary of Performance (SOP) is to assist the student in the transition from high school to further education, employment, and independent living. While IDEA does not provide much detail on the content of the SOP, the field has developed a number of forms and practices to make the SOP more comprehensive and useful. Moreover, lessons have been developed to teach students to self-direct the writing of their SOP and to use the SOP to provide essential transition information students can use to help with transition discussions during the IEP meeting and for student presentation of the SOP at the exit IEP meeting (Martin, Van Dycke, D'Ottavio, & Nickerson, 2007).

The Student-Directed Transition Planning lesson package (Sylvester et al., 2009), which was described earlier in the student involvement in transition assessment section, teaches students to systematically construct their own SOP. Students bring the completed SOP to their IEP meeting and use it as a script to provide essential transition information. To date, one published study validates SDTP's effectiveness to increase students' transition knowledge (Woods et al., 2010).

The Me! Self-Awareness and Self-Advocacy lesson package (Cantley, Little, & Martin, 2010) uses the IEP and other resources to teach students to understand their disability and advocate for themselves using the information contained in their IEP. Knowledge quizzes provide feedback on student acquisition of crucial knowledge. Projects include the Me! portfolio in which students compile their own special education history, along with detailed information about their disability, skills, and limits. Students take this additional information into their IEP meeting and use it to participate in meaningful conversations. This lesson package is freely available by downloading it from the OU Zarrow Center website.

Using Person-Centered Planning Strategies to Increase Student Participation in IEP Meetings

Test and Neale (2004) identified a number of studies that used person-centered planning strategies to increase student involvement in the IEP meeting, including Whole-Life Planning (Timmons & Whitney-Thomas, 1998), Personal Futures Planning (Miner & Bates, 1997a), and the McGill Action Planning System (Vandercook, York, & Forest, 1989). Person-centered planning maintains an explicit emphasis on empowerment of and primary direction from the individual for whom the planning is being conducted (Timmons & Whitney-Thomas, 1998) and therefore is an excellent tool for gathering information on a student's future vision and putting the student as the central focus of the transition planning process (Collier et al., 2016). Person-centered planning is particularly applicable to the transition process because of its ability to mobilize and empower families, community members, and students as full participants in the collaboration process (Michaels & Ferrara, 2005). Based on research with ten students, Timmons and Whitney-Thomas (1998) found that student participation in transition planning is greatly enhanced if the person-centered planning approach is taken and student personal conversation style is taken into consideration. Person-centered planning can be used to develop the student personal profile. School teams are encouraged to offer opportunities for the student and family to use their dreams for their students' future to help with transition planning (Michaels & Ferrara, 2005).

Person-centered planning (PCP) strategies are typically a facilitated process designed to plan and develop supports to meet the specific desires of the focal person. Students need little to no prior instruction, and the facilitation takes place during the actual meetings. While PCP strategies vary, they typically involve similar steps. The student and family members identify a group of people who have an interest in developing goals and future supports, then the group meets at a convenient location, such as the student's home or a restaurant. During the meeting, a facilitator guides the group through a series of questions designed to solicit information that can then be used to develop a plan that includes goals, action steps, and responsible persons for helping to achieve the student's goals. For example, the McGill Action Planning System (Vandercook et al., 1989) asks the following questions:

1. What is the individual's history?
2. What is your dream for the future?
3. What is your nightmare?
4. Who is the individual?
5. What are the individual's strengths, gifts, and abilities?
6. What are the individual's needs?

7. What would the individual's ideal day at school look like?
8. What must be done to make it happen?

Miner and Bates (1997b) suggested four steps for developing a personal profile:

- Draw a "circle of support map," with the student in the center, close friends and family members immediately outside the student, and other support personnel in the outer circle.
- Draw a "community presence" map, consisting of a list of community settings the student uses or can use.
- Make a list of things that work or do not work for the student.
- List the student's gifts and capacities.

Meadan, Shelden, Appel, and DeGrazia (2010) proposed to use person-centered planning to develop a long-term vision for a student, which serves as a statement of the desired transition outcomes. Based on a review of five person-centered processes/tools and their steps for implementation, they identified six steps that are common to all of these processes/tools, including (a) organizing and preparing a team meeting; (b) developing a personal profile that outlines the student's strengths, interests, and dreams; (c) constructing a long-term vision; (d) developing action steps; (e) providing support; and (f) evaluating process toward goals. These steps can be used by the student and his/her support team to envision best possible outcomes.

Although person-centered planning strategies have traditionally been used primarily with students with moderate to severe intellectual disabilities, all students with disabilities can benefit from using these strategies to assess their transition needs and plan for long-term transition services (Meadan et al., 2010). Person-centered planning meetings can be conducted either in school settings or in community settings, with the final plan shared at the student's IEP meeting. At times, these meetings are used to develop students' IEPs.

Summary

Research has clearly demonstrated that students with a variety of ability levels and ages can be taught to actively participate in writing a draft IEP and meeting to write the final draft. Strategies include three research-based curricula: the Self-Advocacy Strategy, the Self-Directed IEP, and Who's Future Is It Anyway? along with person-centered planning strategies. Finally, the IEP Template and GO 4 IT . . . NOW! can be used to teach students to write their IEPs, as well as include self-determination skills when teaching academic writing skills. Next, student involvement in achieving their goals will be discussed.

Student Involvement in Attaining Their Annual Transition Goals

Good transition planning does not necessarily lead to appropriate actions if adequate follow-up actions are not taken. Too often the transition IEP gets stored in students' files while instructional activities or transition services laid out in the plan are not implemented. To ensure adequate implementation, we believe that students need to be actively involved in attaining their transition goals. The last section of this chapter will explore methods to involve students in attaining their transition IEP goals.

Self-Determination and Goal Attainment

Self-determination refers to skills that enable students to engage in goal-directed behavior (Field et al., 1998a), and self-determined individuals will choose their goals and "doggedly pursue them" (Martin & Marshall, 1995, p. 147).

Take Action Goal-Attainment Process

The ChoiceMaker Curriculum has three main sections that teach students to become more self-determined: (a) choosing transition goals, (b) expressing transition goals by being an active IEP meeting participant, and (c) taking action to attain transition goals. The Take Action lesson package (Marshall et al., 1999) teaches students to attain transition goals by building a plan that:

- Breaks an annual transition goal into smaller, doable short-term goals that can be accomplished in a week
- Sets a standard to know when a short-term goal has been attained
- Describes feedback on performance toward attaining the goal
- Identifies motivation factors associated with attaining the goal
- Identifies strategies that will be used to attain the goal
- Lists needed supports to attain the goal
- Schedules when work on short-term goals will be done (Martin & Marshall, 1995)

After the plan has been implemented, students evaluate performance and make any adjustments in the plan if the short-term goal has not been accomplished. The following studies have demonstrated the usefulness of the Take Action process to enable students to attain their IEP goals.

German et al. (2000) demonstrated the usefulness of the Take Action lesson package to teach six high school students with intellectual disabilities to attain IEP goals using the plan, act, evaluate, and adjust process. Using the modified Take Action process, the students built daily plans that answered three questions: (1) What will I do? (2) What help will I need? and (3) When will I do it? Students then implemented the plan, evaluated their performance, and made adjustments to be included in the next day's plan. Instruction in the Take Action goal-attainment strategy produced an increase in the number of daily goals attained, and this level of goal attainment was maintained after withdrawal of teacher instruction. This brief instructional intervention provided students with 360 minutes of instruction and four to six days of guided practice. Teacher observations noted that daily evaluation and plan adjustments taught students how to make changes in their plans so they could be attained.

Martin, Marshall, and El-Kazimi (2011) taught 101 middle school students in general education English classes the Take Action goal-attainment process. Overall, the results found statistically significant improvement in the number of long-term goals the students set and met and in self-determination assessment results. The mean growth percentage found the largest gain among the students with disabilities in the general education English classes. Students' positive comments indicated that the Take Action process enables them to be more organized and focused on tasks. Martin, Martin, and Osmani (2011) used the Take Action process in a transition education class to teach six high school juniors with learning disabilities to attain their annual transition goals. Students first learned the Take Action goal-attainment process, then the students applied the Take Action plan, act, evaluate, and adjust process to attain self-selected annual transition goals.

Self-Determined Learning Model of Instruction (SDLMI)

The SDLMI (Mithaug, Wehmeyer, Agran, Martin, & Palmer, 1998; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000) provides a series of questions to enable teachers to teach students to self-select and attain goals. Because researchers have completed numerous high-quality research studies demonstrating the effectiveness of the SDLMI, the National Technical Assistance Center on Transition has declared the SDLMI an evidence-based research practice, which is NTACT's highest quality ranking (NTACT, 2016b).

The SDLMI consists of three phases: (1) learn to set a goal; (2) develop and implement a self-directed action plan to achieve the goal; and (3) design and implement a self-monitoring plan, use the plan to evaluate progress toward the goal, and make necessary adjustments based on the evaluation. Instruction in each phase is presented by posting a series of four challenging questions to the student, who is required to answer the questions and solve the problem. Unique features of this model include teacher objectives that are linked to student questions and a list of educational supports that teachers can use to enable students to self-direct learning, and the three phases are progressively connected so that the student learns a sequence of skills that are essential for goal setting and attainment. The overall theme and goal of the model are for the student to become the primary causal agent for choices, decisions, and actions.

Agran et al. (2000) used the SDLMI at job sites with 19 secondary-aged youth who had multiple disabilities, including intellectual disability. Each student, with teacher support and the students' IEPs, selected a target behavior, including social skills, community living skills, and employment related skills. The students learned the SDLMI process that involved developing a plan, evaluating the plan, and revising the plan as needed to attain their goals. Students determined their goal by answering four questions: (1) What do I want to learn? (2) What do I know about it now? (3) What must change for me to learn what I don't know? and (4) What can I do to make this happen?

To begin to attain their goals, students moved into Phase 2 of the SDLMI and answered another four questions: (1) What can I do to learn what I don't know? (2) What could keep me from taking action? (3) What can I do to remove these barriers, and (4) When will I take action? The answers produced the action plans. After the action plan had been implemented, students answered four Phase 3 SDLMI questions: (1) What actions have I taken? (2) What barriers have been removed? (3) What has changed about what I don't know? and (4) Do I know what I want to know? Goal-attainment scaling indicated that over two-thirds of the students exceeded expectation of their teachers and that 89% of the students achieved their goals at or above the levels initially expected by their teachers.

McGlashing-Johnson, Agran, Sitlington, Cavin, and Wehmeyer (2003) used the SDLMI with four high school students with mental retardation who had extensive to pervasive support needs to self-select workplace goals at their community-based work experience site. The students set their own goals, developed an action plan, and evaluated their progress. The active problem solving enabled students to improve their work performance.

Conclusions

This chapter began with the premise that active student participation in the transition education process represents best practice. Federal special education rules and regulations and numerous researchers strongly support meaningful student involvement in the transition planning process through three primary means. First, students need to become involved in the transition assessment process to have input and then learn the results to develop postsecondary and annual transition goals. Second, students need to learn how to become active members of the IEP team and learn transition relevant information about themselves to participate in planning discussions. Educators need to teach students IEP involvement skills and provide opportunities for students to learn transition knowledge about themselves and then provide students opportunities to actively participate in their IEP meetings. Third, students need to learn goal-attainment skills to be able to actively work on achieving their postsecondary and annual transition goals. Educators need to teach students these skills and then provide opportunities for students to practice their skills in attaining their transition and other educational goals. Together, educators and family members need to provide opportunities and teach needed skills so that the transition education process prepares students for further education, employment, and independent living.

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10

Family Involvement in Adolescent Transition Planning

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According to the Individuals with Disabilities Education Act (IDEA, 2004), transition planning is a coordinated set of services for adolescents with disabilities. Transition planning considers the strengths and interests of the adolescent with a disability. Further, transition plans focus on instruction and experiences that will lead to positive postschool outcomes such as postsecondary employment, education, training, and independent living. Although transition plans involve many IDEA-required components (e.g., services, appropriate goals, interagency collaboration) meant to enhance student outcomes, adolescents with (versus without) disabilities continue to have worse postschool outcomes with respect to employment, self-advocacy, self-awareness, community living, and postsecondary education (Hong, 2015; Sanford et al., 2011; U.S. Department of Labor, Bureau of Labor Statistics, 2018).

Researchers have found that family involvement positively influences transition planning and postschool outcomes of adolescents with disabilities (Boehm, Carter, & Taylor, 2015; Lindstrom, Doren, & Miesch, 2011). Family involvement, or the involvement of "people who think of themselves as part of the family, whether related by blood or marriage or not, and who support and care for each other on a regular basis" (Poston et al., 2003, p. 319), consists of families and educators regarding each other as reliable allies; also, family involvement entails families experiencing multiple opportunities for meaningful involvement in educational planning for their child (Haines, McCart, & Turnbull, 2013). There are various ways in which families may be involved in transition planning, including providing information for student transition assessments and participating in transition service delivery (Kohler, Gothberg, Fowler, & Coyle, 2016). In addition, family involvement may also encompass families modeling a positive work ethic, exposing adolescents to a variety of postsecondary options, establishing high expectations for employment and community living, and engaging adolescents in supported-decision making (Boehm et al., 2015; Neeley-Barnes, Graff, Marcenka, & Weber, 2008; Timmons, Hall, Bose, Wolfe, & Winsor, 2011). Therefore, given the important role of families, it imperative that educators meaningfully involve families throughout transition planning.

In this chapter, we detail the rationale for family involvement in transition planning. Then we describe the effects of family involvement in transition planning. We also describe the effect of family involvement in transition planning, as well as barriers to family involvement in transition planning. Because there is limited intervention research about family involvement in transition planning (Morningstar & Mazzotti, 2014), we offer burgeoning evidence-based practices to facilitate family involvement in transition planning. We conclude with directions for research, policy, and practice.

Rationale for Family Involvement in Transition Planning

There are numerous reasons to ensure family involvement in transition planning. In this section, we offer the following reasons: families are a pillar of transition planning, family involvement is emphasized by IDEA, family involvement during transition planning is supported by other federal legislation, families continue to be involved in postschool life, person-family interdependent planning is important, adolescents want their family to have input and be satisfied with transition planning, and families are the "linchpin" of connecting school to adult services.

Pillars of Transition Planning

It is generally accepted that transition planning should reflect the Taxonomy of Transition Programming 2.0 (Kohler et al., 2016). The transition taxonomy has been used to evaluate best practices in transition, including family involvement (e.g., Cobb & Alwell, 2009; Landmark & Zhang, 2012). The taxonomy includes five pillars: student-focused planning, student development, interagency collaboration, family engagement, and program structures (Kohler et al., 2016). With respect to family engagement, there are three primary activities: family involvement, family empowerment, and family preparation. "Family involvement" activities include using family culture and background to inform individualized education programs (IEPs) and families fully participating in transition planning by contributing to assessments, program evaluation, and decision making. "Family empowerment" includes educators providing families transition-related supports prior to students turning 14 years old and educators supporting families to engage with adult service providers during transition planning. Finally, "family preparation" includes educators ensuring that families are knowledgeable about transition planning. Family preparation also refers to educators encouraging families to set high expectations, support self-determination, and serve as natural supports for their adolescent with a disability. The inclusion of these three activities in the transition taxonomy reinforces that dynamic family involvement is critical to providing meaningful and ongoing opportunities for families to be involved in transition planning.

Emphasized by IDEA

Recognizing the difficulties faced by many individuals with disabilities after exiting high school (Hasazi, Gordon, & Roe, 1985; Hasazi, Gordon, Roe, Hull, et al., 1985), IEPs to transition students from school to postsecondary activities were mandated in the 1990 IDEA reauthorization. Transition planning was expanded in the 1997 reauthorization of IDEA. In the most current reauthorization of IDEA, transition planning is defined as a:

> coordinated set of activities for a child with a disability that (a) is designed to be within a results-oriented process focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post school activities, including post-secondary education, vocational education, integrated and supported employment, continuing and adult education, adult services, independent living or community participation and (b) is based on the individual child's unique needs, taking into account the child's strengths preferences, and interests.
>
> *(IDEA, 2004)*

Other text in IDEA specifically grants families safeguards to ensure their participation in educational decision making. Safeguards include providing consent for evaluations and having dispute resolution options to address conflict. Considering the safeguards for families and requirements for transition

planning, it is clear that family involvement is a critical aspect of transition planning, potentially facilitating a smooth transition from school-based to adult services (Hanley-Maxwell, Whitney-Thomas, & Pogoloff, 1995; Hirano & Rowe, 2016; Lindstrom et al., 2011).

Supported by Other Federal Legislation

Other legislation also supports the principle of family involvement in transition planning. For example, the Developmental Disabilities Act of 2000 and the American Rehabilitation Act of 1973 support family involvement during transition planning and into adulthood for individuals with disabilities. More recently, the Workforce Innovation and Opportunity Act (2014) also highlights the importance of family involvement by emphasizing the importance of families serving as a source of support and information for their adolescent offspring. Further, the Workforce Innovation Opportunity Act calls for services for families to facilitate employment outcomes for adolescents with disabilities.

Families Continue to Be Involved in Postschool Life

Because of IDEA, students with disabilities are eligible for mandated school services until the age of 22 years or they exit high school. However, after exiting high school, these young adults encounter an adult disability service–delivery system that is inadequately funded, fragmented, and difficult to navigate (Francis, Gross, Turnbull, & Turnbull, 2014). As many adolescents with disabilities require assistance in employment and activities of daily living (Ballaban-Gil, Rapin, Tuchman, & Shinnar, 1996; Billstedt, Gillberg, & Gillberg, 2005; Eaves & Ho, 2008; Francis, Reed, & Howard, in press; Howlin, Goode, Hutton, & Rutter, 2004; Lindstrom et al., 2011), it may be difficult for adolescents themselves to navigate adult services without appropiate supports. As such, families may continue to be involved in supporting their adolescents with disabilities in accessing adult services (Hanley-Maxwell et al., 1995; Francis et al., in press; Rupp & Ressler, 2009).

Person-Family Interdependent Planning

Given the continuing importance of family involvement in the lives of individuals with disabilities, families may need to be included as supports during transition planning. Specifically, person–family interdependent planning refers to a planning process that includes the individual with a disability and the family. Kim and Turnbull (2004) identified two rationales for why person–family interdependent planning is important. First, transition impacts not only the individual with disability but also the entire family. Given that the quality of life of the individual with disability may depend, in part, on their surrounding context (i.e., the family quality of life), it is important to conduct person–family interdependent planning. Second, for individuals with more significant support needs, supports (e.g., family) may help facilitate self-determination (Jordan & Dunlap, 2001). Moreover, several family theories, including Bowen family systems theory (1998) and family systems theory (Allen & Henderson, 2017), recognize the importance of ongoing family interdependence throughout the lifespan by describing the bidirectional nature of family interactions on family member outcomes.

Adolescents Want Their Families to Have Input in and Be Satisfied With Transition Planning

Although transition planning is focused on the adolescent with a disability, many adolescents report wanting their families to not only be involved in transition planning (Francis et al., in press) but also to be satisfied with their transition plans (Morningstar, Turnbull, & Turnbull, 1995). Regarding the

latter, parent dissatisfaction is problematic because, for transition to be successful, it is critical to have family input (Kim & Turnbull, 2004; Turnbull, Turnbull, Wehmeyer, & Shogren, 2015). When families are involved in transition planning, parents report greater satisfaction with transition outcomes (Neece, Kraemer, & Blacher, 2009). Unfortunately, many families have expressed dissatisfaction with transition planning. For example, in study of adolescents with severe disabilities, Hetherington et al. (2010) found that many parents and their adolescents were dissatisfied with their transition plans. Parents and adolescents commented on: insufficient school communication, frustration with stereotypes about the adolescent, lack of individualization of postschool outcomes, and the absence of school accountability.

Families Are the "Linchpin" of Connecting School to Adult Services

During their adolescent's transition from high school to adulthood, family members are often viewed as the "linchpins" of services (Timmons, Whitney-Thomas, McIntyre, Butterworth, & Allen, 2004), simultaneously navigating the adult service-delivery system (Timmons et al., 2004), continuing to provide caregiving (Smith, Greenberg, & Mailick, 2014), and advocating for appropriate services (Fong, Wilgosh, & Sobsey, 1993). Many parents describe their son or daughter's transition from high school to adulthood as "falling off a cliff" or the "second shock" of parenting a child with a disability (Hanley-Maxwell et al., 1995). Families, then, are central players in the successful transition from school to adulthood for most adolescents with disabilities (Burke, Patton, & Taylor, 2016; Test, 2016).

Effects of Family Involvement in Transition Planning

There are several effects of family involvement in transition planning. Most effects either relate to the family or to the adolescent with a disability. Regarding family outcomes, family involvement may yield improved family well-being. With respect to the adolescent, family involvement may facilitate stronger transition plans, increased self-advocacy and self-determination, and improved postschool outcomes.

Effect of Family Involvement on Families

As discussed earlier, family involvement and satisfaction with transition planning influences outcomes. Satisfaction with transition planning and, relatedly, outcomes is important because when families are more satisfied, they may experience greater family well-being (Blacher, 2001). In a study of 128 parents of transition-age adolescents with intellectual and developmental disabilities (Neece et al., 2009), family involvement was one of the strongest predictors of family satisfaction with transition outcomes. Further, families with greater involvement and satisfaction with transition planning and outcomes were significantly more likely to report greater family well-being. Conversely, families who were dissatisfied with their involvement reported significantly worse well-being.

Effect of Family Involvement on Adolescents

When families are more involved in transition planning, researchers have found that transition plans are more likely to be of higher quality. In a study of 76 adolescents with disabilities, there were strong, positive correlations between family involvement and the quality of the transition plan (Morningstar et al., 2010). Notably, family involvement included items related to parent advocacy for their adolescent with a disability.

Researchers have also found that family involvement is associated with young adults demonstrating greater levels of self-determination and self-advocacy (Francis, Duke, & Siko, 2019). Put

simply, when families model advocacy, their adolescents are more likely to self-advocate in both high school and postsecondary educational settings (deFur, Todd-Allen, & Getzel, 2001; Morningstar et al., 1995; Morningstar et al., 2010). Specifically, in a study with adolescents with disabilities, the adolescents reported that their parents' advocacy facilitated their own self-determination and self-advocacy (Morningstar et al., 1995).

A growing body of research has demonstrated that family involvement improves postschool outcomes (Johnson, Stodden, Emanual, Luecking, & Mack, 2002; Kraemer, McIntyre, & Blacher, 2003; Schall, Wehman, & McDonough, 2012; Wehman, 2013; Test et al., 2009). For example, within the context of adolescents with autism spectrum disorder (ASD), family involvement in transition planning facilitated better transition planning and improved postschool outcomes with respect to employment, education and training, and quality of life (Kraemer et al., 2003; Schall et al., 2012; Wehman, 2013; Test et al., 2009). The effects of family involvement are not limited to students with ASD. From the National Longitudinal Transition Study-2 (NLTS-2), Newman and colleagues (2005) found that, across disability groups, greater family involvement was related to improved academic achievement, increased involvement in organized groups, more friendships, and better employment outcomes.

When considering the effect of family involvement on adolescent outcomes, it is critical to isolate one facet of family involvement: expectations (Mann, Moni, & Cuskelly, 2016; Papay & Bambara, 2015). Family expectations have a strong effect on postschool outcomes for adolescents with disabilities. For example, when parents have high expectations for their adolescents with disabilities, adolescents are more likely to demonstrate increased employment outcomes (Mazzotti et al., 2016). Parent expectations are also predictive of postschool employment outcomes for adolescents with severe disabilities (Carter, Austin, & Trainor, 2012). In fact, Carter and colleagues (2012) found that when parents held the expectation that their adolescent with a severe disability "would definitely get a paying job" (p. 15), the adolescent was five times more likely to be employed following high school. Similarly, Doren, Gau, and Lindstrom (2012) found that parental expectations related to positive postschool outcomes (e.g., graduation, earning a standard diploma, competitive employment, postsecondary education) regardless of family demographics (e.g., race, ethnicity, socioeconomic status).

Barriers to Family Involvement in Transition Planning

Despite legal requirements and research documenting the benefits of family involvement during transition planning, numerous barriers may stymie meaningful family involvement during this important life stage. Such barriers include: lack of parent-school communication, an absence of professional training regarding engaging families, lack of information for families and professionals about postschool services, little information to inform families about transition planning, lack of parent-teacher agreement, and exacerbated and unique barriers among marginalized families of adolescents with disabilities.

Lack of Family-School Communication

Many studies have identified inadequate parent-school communication during transition planning (Cooney, 2002; deFur et al., 2001; Hetherington et al., 2010; Timmons et al., 2004). In a study of nine adolescents with severe disabilities, their parents, and school and adult service professionals, Cooney (2002) found that parents and professionals had inadequate and ineffective communication. Specifically, parents were rarely invited to offer meaningful input about transition planning. When professionals did solicit parent feedback, due to a lack of knowledge about transition planning, parents often struggled to offer meaningful input.

Lack of Training for Professionals to Engage in Meaningful Partnership with Families

Although many educational professionals value family input, such professionals report a lack of preparation to meaningfully involve families in transition planning (Greenfield, Epstein, Hutchins, & Thomas, 2012; Martinez, Conroy, & Cerreto, 2012; Lindstrom et al., 2011). The lack of such training can occur for two reasons. First, transition-related policy provides limited guidance about how families and educators can meaningful partner to support positive adolescent outcomes (Bezdek, Summers, & Turnbull, 2010). Second, despite known benefits and barriers to family involvement during transition planning, there exists limited research about how professionals can partner with families (Francis, Fuchs, Johnson, Gordon, & Grant, 2016; Hirano & Rowe, 2016; Russa, Matthews, & Owen-Deschryver, 2015).

Lack of Information About Adult Services

Adult services are complex and difficult to navigate (Francis et al., 2014). Even when an adult with a disability is eligible for services, the adult service-delivery system is fragmented, offering many unconnected systems, often in varying locations, for services and supports. Families and teachers must contact separate departments for services related to employment, independent living, and education and training. Unsurprisingly, research indicates that teachers and families lack knowledge about adult services (Achola & Green, 2016; Blacher, Kraemer, & Howell, 2010; Heller & Caldwell, 2006; Lubbers, Repetto, & McGorray, 2008). Antosh and colleagues (2013) found that 90% of families reported needing information about adult services. Due to the absence of information, families often harbored misinformation, such as believing that their family members will lose all state and federal benefits (e.g., Medicaid, Supplemental Security Income) if they gain employment (Butterworth, Smith, Hall, Migliore, & Winsor, 2009), although this may not be true (Dutta, Gervey, Chan, Chou, & Ditchman, 2008). Accordingly, teachers and families require training to address adult services in transition planning (Kohler et al., 2016; Mazzotti, Rowe, & Test, 2013).

Lack of Information About Transition Planning for Families

Families often lack information about transition planning (Achola & Green, 2016; Hetherington et al., 2010; Lindstrom et al., 2011; Russa et al., 2015; Shogren & Plotner, 2012). Further, there is a notable drop in family involvement as students age into high school (Hirano & Rowe, 2016), and parents of adolescents with disabilities are expected to "step back" as their children approach adulthood (Francis et al., 2016). However, families frequently lead the efforts to support their adolescents into adulthood, making their continued involvement and knowledge essential to positive adolescent outcomes (Carbone, Behl, Azor, & Murphy, 2010; Hirano & Rowe, 2016; Timmons et al., 2011).

An important aspect of transition planning involves teachers providing families with information about transition services (Trach, 2012). Yet this information is commonly not provided. In a nationally representative sample of transition-age students with intellectual disability, ASD, and other disabilities (the NLTS-2), nearly 50% of teachers reported they had not given families information about transition and adult services (Shogren & Plotner, 2012). The absence of information provided to families may reflect the schools' lack of awareness about services (Knott & Asselin, 1999; Shogren & Plotner, 2012).

Lack of Parent-Teacher Agreement

An additional barrier is the absence of parent-teacher agreement regarding transition planning. In a study about parent-teacher dyads within the context of transition planning for students with severe

disabilities, Carter, Brock, and Trainor (2014) found that parent-teacher agreement about the youth's strengths and needs was less than half (48%) for nine transition domains: leisure activities, interpersonal relationships, communication, health, self-determination, employment, daily living, further education and training, and community participation. Notably, parent-teacher dyads were most likely to disagree about communication, further education and training, health, and employment.

In a related study, Patton and Burke (2017) examined parent-teacher agreement with respect to employment goals for adolescents with severe disabilities. In their study of 38 parent-teacher dyads, there was virtually no agreement about desired employment outcomes for adolescents with severe disabilities. Notably, disagreements were more focused about the level of support needed for employment rather than the setting for employment. For example, dyads often agreed about the setting of the employment (e.g., competitive employment) but disagreed about the support needed (e.g., a job coach, natural supports).

Barriers to Family Involvement in Transition Planning Among Marginalized Families

The aforementioned barriers are amplified among families of color, immigrant families, and other marginalized populations. For example, Latina caregivers of adolescents with disabilities reported several barriers to transition planning (Francis, Gross, Lavín, Casarez Velazquez, & Sheets, 2018; Hetherington et al., 2010). Some of these barriers are similar to barriers experienced by all families – however, the barriers can be exacerbated among marginalized families. For example, communication barriers are often compounded for bilingual families due to the lack of translated materials and an absence of interpreters during transition meetings (Francis et al., 2018). Latina families report instances of discrimination and microaggressions by educators and administrators (Francis et al., 2018; Hetherington et al., 2010).

Marginalized families also experience culturally biased processes and assumptions in the education system (Kalyanpur & Harry, 2012). For example, cultural differences between families and professionals from dominant U.S. cultures (e.g., the value of interdependence versus independence) often result in miscommunication about family involvement during transition planning (Achola & Greene, 2016). And educator expectations regarding family involvement can play a role. For example, in a study of 308 parents of transition-age children with disabilities and 52 school professionals, Geenen and colleagues (2001) found that culturally and linguistically diverse (CLD) families were active in transition planning. In some transition practices, in comparison to White families, CLD families had more active involvement. However, professionals described CLD families as less active in transition planning than White families.

Practices to Improve Family Involvement in Transition Planning

Unfortunately, there is limited extant research about interventions to increase family involvement in transition planning. In a review of 63 evidence-based practices for transition planning (Test at al., 2009), only one practice was related to family involvement. Thus, little research has documented ways to increase family involvement during transition planning (Kochhar-Bryant, Shaw, & Izzo, 2007). In this section, we describe three emerging practices to improve family involvement in transition planning.

Increasing Expectations

As discussed, expectations may influence student outcomes. For example, family expectations for their youth with disabilities can influence transition outcomes (Carter, Austin, & Trainor, 2012;

Lindstrom et al., 2011; Mann et al., 2016; Papay & Bambara, 2015; Timmons et al., 2011). Educators can use several methods to enhance family expectations, including sharing local stories of individuals with disabilities who achieved positive postschool outcomes such as competitive employment (Gross, Francis, & Pijem, 2015), engaging in person-centered planning (Marfull-Jensen & Flanagan, 2015), creating opportunities for families and adolescents with disabilities to network with other families in the community (Gross et al., 2015), and ensuring that transition planning focuses on goals that families value (Anderson, Larson, & Wuorio, 2011). Also, professional expectations for family involvement can influence family involvement. Often, professionals may view family involvement as families conducting academic activities in the home (Daniel-White, 2002). By expanding this narrow expectation of family involvement to include involvement initiated by the family (e.g., the family talking with the child about life after school, the family finding opportunities for the child), families may become more engaged in transition planning.

Increasing Knowledge

One facet of family involvement is the knowledge of the family with respect to the adolescent and transition planning. Rowe and colleagues (2015) conducted a Delphi study with 22 experts in the field to operationally define evidence-based predictors in secondary transition, including "family involvement." In their study, family involvement was operationally defined as "parents/families/ guardians are active and knowledgeable participants in all aspects of transition planning (e.g., decision making, providing support, attending meetings, and advocating for their child)" (Rowe et al., 2015, p. 122). Thus, the definition includes providing families with information about transition planning and support networks. Notably, such information needs to be accessible and responsive to all families, especially in relation to linguistic and cultural competence.

In addition, educators can also provide families with disability-specific information about adult services. In a study of 246 parents of young adults with ASD, Down syndrome, and cerebral palsy, there were differential effects and, relatedly, needed knowledge, depending on the adolescent's disability (Blacher et al., 2010). Additionally, there were disability-specific differences with respect to expectations for employment and independent living. In recognition of the differential expectations, information needs to be individualized to meet each family's unique needs. In another study, Young, Morgan, Callow-Heusser, and Lindstrom (2014) examined the effect of an informational brochure and training on the knowledge of families of adolescents with disabilities. Compared to parents who received only an informational brochure about transition, parents who received an informational brochure and a 60-minute transition training session developed greater knowledge about transition planning. Notably, the training session content focused on educating parents about the adult disability service system.

Increasing Advocacy

Parent advocacy trainings can help facilitate family involvement in transition planning. To increase advocacy among families of adolescents with ASD, the Volunteer Advocacy Program-Transition (VAP-T) was developed (Taylor, Hodapp, Burke, Waitz-Kudla, & Rabideau, 2017). The VAP-T is a 30-hour advocacy training that educates parents of adolescents with ASD about the adult service-delivery system (e.g., postsecondary education, health insurance, and financial support) and provides parents with training about how to advocate for services. Taylor and colleagues conducted a randomized controlled trial to test the VAP-T with 41 parents of adolescents with ASD. Parents in the intervention (versus waitlist-control) group demonstrated significantly greater knowledge, advocacy skills, and empowerment. Further, intervention (versus waitlist-control) group participants demonstrated increased access to adult services and reduced unmet service needs as well as improved postschool outcomes (Taylor et al., 2017).

Improving Problem Solving and Reducing Stress

Increasing family problem solving and reducing parent stress may facilitate family involvement in transition planning. For example, Transitioning Together is a group psychoeducational intervention for families of adolescents with ASD (Smith et al., 2014). The training includes content about transition planning, problem solving, and individual future planning. Transitioning Together uses a cohort model wherein families meet other families of adolescents with ASD. Intervention (versus control) group participants demonstrate significant reductions in family distress as well as improved problem solving and increased knowledge of the child's disability and transition planning (DaWalt, Greenberg, & Mailick, 2018). By intervening to reduce parent stress, this may allow families to devote more time and effort to plan for next steps in collaboration with professionals during transition planning (Neece et al., 2009).

Conclusion

Although there remain many needs to further enhance family involvement in transition planning, two issues are especially pressing. First, there is little doubt that family involvement is critical to streamlining the movement from the school to the adult service-delivery system. Currently, after exiting special education, many adults with disabilities lack needed services (Braddock, Hemp, Tanis, Wu, & Haffer, 2017). Unmet services needs are influenced by a lack of effective transition planning and involvement of families in the process. Adults with disabilities may go for years without needed formal services and rely on family (including parents and siblings) to provide needed support (Sanderson, Burke, Urbano, Arnold, & Hodapp, 2017). To address these negative outcomes, changes are needed in research, policy, and practice. First, according to the five pillars of taxonomy, family involvement is critical to transition planning. Yet there is limited intervention research targeted to family involvement. Research is needed to develop and test interventions that can inform families and adolescents with disabilities about adult services to facilitate the transition from school to adult services. With respect to policy and practice, IDEA provides little guidance about how families can be supported to participate in transition planning. Further, the emphasis on family involvement across a variety of policies (e.g., Workforce Innovation and Opportunity Act, American Rehabilitation Act) may serve to diffuse rather than strengthen family involvement. By having stronger and clearer guidance about ways to facilitate family involvement in IDEA, practitioners may have a better understanding of how to involve families in the transition from school to adult services.

Second, family-professional partnerships need to be improved to facilitate family involvement in transition planning. Broadly speaking, family-professional partnerships are comprised of seven dimensions: equality, communication, advocacy, professional competence, respect, trust, and communication (Haines et al., 2017). In this chapter, there were clear barriers to achieving these dimensions (e.g., inadequate family-school communication, Cooney, 2002; deFur et al., 2001; Hetherington et al., 2010; Timmons et al., 2004) within transition planning. Research is needed to understand how to strengthen each dimension in transition planning. In doing so, targeted interventions can be developed and tested. IDEA may consider providing specific guidance about how to fulfill each dimension of family-professional partnerships in transition planning. Further, educational practitioners should consider each dimension and whether they are able to fulfill the dimensions with each family during transition planning.

Although there is limited extant literature about family involvement – especially evidence-based practices to increase family involvement – in transition planning, this chapter highlights the importance of family involvement and barriers to achieving family involvement. In light of its importance, it is critical to move beyond identifying barriers to family involvement to developing and testing interventions to increase family involvement in transition planning.

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Academic Skill Instruction in Adolescent Transition Education

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Higher societal expectations and increased opportunities for adolescents with disabilities support the importance of receiving high-quality academic instruction. Schools are more responsible than ever before for the academic achievement and progress of students with disabilities as a result of policy mandates emphasizing the importance for all students to graduate from high school ready for college and careers. The Individuals with Disabilities Education Act (IDEA, 2004) mandates all students have the opportunity to learn grade-level content based on grade-level standards and participate in state assessments based on those standards. As a result, individualized education programs (IEPs) must address how students will participate and make progress in the general education curriculum, and students with disabilities must receive instruction using scientifically based practices to achieve these goals. In this chapter, we articulate the importance and impact of high-quality academic instruction for adolescents with disabilities and outline research-based instructional strategies in the areas of literacy, mathematics, and science.

Impact of Academic Skills on Postschool Opportunities

Long-term success for students with disabilities could be influenced by enrollment in and completion of postsecondary education (PSE) programs (Newman, Madaus, & Javitz, 2016). In 2008, the Higher Education Act of 1965 (P.L. 89–329) was reauthorized as the Higher Education Opportunity Act of 2008 (P.L. 110–315) and included access to higher education for students with intellectual disability for the first time by providing funding for the development of Transition and Postsecondary Programs for students with Intellectual Disability (TPSID). Data from the National Longitudinal Transition Survey-2 indicates students who attended PSE had increased career options, greater satisfaction with their job, potential for earning higher wages, and increased job security similar to their peers without disabilities (Fleming & Fairweather, 2011). Participation in TIPSID PSE programs increases the odds of successful employment for students with intellectual and developmental disabilities (Grigal, Hart, & Migliore, 2011). Additionally, transition-age supported employees with intellectual disability who have PSE experiences work more hours and earn higher wages across a wider range of occupations compared to youth with fewer PSE experiences (Cimera, Thoma, Whittenburg, & Ruhl, 2018).

Adolescents with disabilities need high-quality instruction in academic content in order to attend and complete PSE and attain positive adult outcomes in employment. Students with disabilities who

receive an education with a focus on academics are more than twice as likely to attend PSE after high school (Bouck & Joshi, 2015). To prepare students with disabilities for opportunities in PSE and competitive integrated employment, researchers have worked to identify skills correlated with positive postschool outcomes. Test et al. (2009) and Mazzotti et al. (2016) together identified 20 in-school predictors of postschool success for individuals with disabilities; three related to academic instruction of students included (1) program of study, (2) inclusion in general education, and (3) exit exam requirements and high school diploma. Academic performance positively contributes to PSE outcomes, employment opportunities, wages earned, and hours worked (Migliore, Timmons, Butterworth, & Lugas, 2012).

Students with disabilities need to acquire key academic skills to be competitive in the current job market and pursue employment in the growing science, technology, engineering, and mathematics (STEM) fields. Data indicate that the STEM occupation group is projected to demonstrate the most growth in the future (Fayer, Lacey, & Watson, 2017). Unfortunately, data from the National Assessment of Educational Progress (https://nces.ed.gov/nationsreportcard/) indicates students with disabilities may not be achieving these skills, as more eighth grade students with disabilities perform below the basic level of achievement in mathematics than their peers without disabilities (51% vs. 16%) and fewer students with disabilities perform at proficiency levels in mathematics than their peers without disabilities (16% vs. 44% performing below the basic achievement level since 2005. The "school effects" of mathematics are important to consider, as school is likely the only place students will receive instruction in this area (Van de Walle, Karp, & Bay-Williams, 2010). NAEP data also suggest that students with disabilities lag behind their peers without disabilities in reading. Without proficient reading skills, adolescents with disabilities are more likely to drop out, introducing more barriers to successful outcomes.

High-Quality Academic Instruction for Adolescents With Disabilities

Research-based interventions and supports that embed academic skills within transition programming can give individuals the foundational skills necessary for postschool success. To provide access to the general education curriculum that is academically rigorous, inclusive, and supported by universal design for learning (UDL) principals, a program of study should include an individualized set of courses, experiences, and curriculum designed to develop students' academic and functional achievement (Rowe, Mazzotti, Hirano, & Alverson, 2015). Through assessment data, teachers should identify which foundational and grade-aligned academic skills are in a students' repertoire and which need to be taught. Foundational skill knowledge should not be a barrier or deterrent from simultaneously teaching grade-level content. To have access to the general education curriculum in a meaningful way, students need ongoing instruction at their level on key foundational skills (e.g., reading, listening comprehension, number sense) and targeted instruction on grade-level content.

Prioritizing content from grade-level standards requires knowledge of the student, the student's environment and transition goals, and state standards. Practitioners can view instructional goal setting and planning as an opportunity to consider how academic and transition skills overlap. Combining academic content with transition goals by presenting academic content using real-life scenarios and applications may support generalization of these critical skills.

To maximize personal relevance, educational teams should use a person-centered planning model to provide opportunities, instruction, and support for students to make meaningful and appropriate contributions to their academic programming. Effective person-centered planning requires understanding the perspectives and beliefs of students, as well as their families, since data indicates parent expectations are a predictor for education, employment, and independent living outcomes for adolescents with disabilities (Test, Fowler, Kohler, & Kortering, 2010).

Educators should use a range of effective instructional strategies to increase engagement and participation in general curriculum by students with disabilities. In this section, we will discuss considerations for planning literacy, mathematics, and science instruction for adolescents with disabilities, along with research-based practices to support acquisition of academic skills.

Literacy

Literacy skills include listening, speaking, and interacting as well as reading, writing, and spelling. From reading utility bills to communicating with potential employers, literacy influences almost every aspect of modern life (Toews & Kurth, 2019). Although students with disabilities perform well below typically developing peers in reading (Gilmour, Fuchs, & Wehby, 2019), adolescents with disabilities may have varying levels of literacy dependent on their specific disability and history of instruction. Older students may demonstrate a complex range of difficulties with reading, such as word reading and decoding, understanding word meanings, making text connections, and utilizing background knowledge. For learners with lower-incidence disabilities with more extensive support needs, such as students with autism spectrum disorder or intellectual disability, an emphasis on literacy skills has sharpened in focus and depth over the past two decades, evolving from an antiquated focus on readiness and functional skills toward rich opportunities to engage with and communicate about text (Browder, Gibbs, et al., 2009; Toews & Kurth, 2019). Regardless of disability, all secondary students benefit from instruction in literacy skills.

The National Reading Panel (NRP) reviewed research on teaching reading to students' preschool through 12th grade to identify five key areas of literacy instruction: (1) phonemic awareness, (2) phonics, (3) fluency, (4) vocabulary, and (5) comprehension. The emphasis on each area of reading should vary depending on student skill levels. For example, more time should be devoted to comprehension and vocabulary development if learners have good word reading skills. Regardless of a student's disability or entry level of literacy, all students with disabilities should receive comprehensive literacy instruction using evidence-based instructional strategies.

Foundational Skills: Phonemic Awareness, Phonics, and Fluency

Explicit instruction strategies are effective in building foundational literacy skills for adolescents with a range of disabilities. Published Direct Instruction curriculum provides sequenced scripted lessons with appropriate examples, quick pace of instruction, and practice exercises that demonstrate positive impacts on foundational reading skills of adolescents with disabilities. Example programs with a strong research base include REWARDS (Vaughn et al., 2011; Vaughn et al., 2015), Corrective Reading (Przychodzin-Havis et al., 2005), and PHAST (Morris et al., 2012).

Learners with more extensive support needs will likely be more delayed in their development of literacy skills. In fact, students with moderate intellectual impairment may need three years of instruction for one year of typical growth in reading (Allor, Mathes, Roberts, Cheatham & Champlin, 2010). As a result, these students have different curricular needs from their same-age peers with higher incidence disabilities. However, foundational literacy curricula effective for younger students are not age appropriate, and teachers may be tempted to let instruction in sight words override instruction in foundational literacy skills. Browder, Gibbs, et al. (2009) argued for an approach to literacy instruction for secondary students with severe disabilities promoting independence as a reader within individualized instruction on skills with current and long-term utility. Many students with extensive support needs may not have received quality early reading instruction and may need access to instruction on these skills as adolescents.

Research from the past decade indicated students with extensive support needs are able to learn foundational reading skills when provided with intensive instruction for an extended period of time

(Allor, Mathes, Roberts, Cheatham, & Otaiba, 2014). In fact, IQ does not always correlate with faster progress for learners with intellectual disability (Allor et al., 2014); practitioners should keep this in mind, as IQ should not determine the design of reading instruction. In a series of studies teaching foundational literacy skills to learners with intellectual disability, Allor and colleagues reported the need to individualize instruction (Allor, Champlin, et al., 2010) since several students experienced extreme difficulty in blending sounds to form words. Foundational literacy skills instruction for some learners with extensive support needs will likely need adaptations and modifications, especially for students with complex communication needs (Browder, Gibbs, et al., 2009).

Several research-based curricula are available for teaching foundational literacy skills to adolescents with extensive support needs that include principles of explicit and systematic instruction and supports for complex communication needs, including Early Literacy Skills Builder for Older Students (ELSB; Browder, Gibbs, Ahlgrim-Delzell, Courtade, & Lee, 2017) and Early Reading Skills Builder (ERSB; Browder, Ahlgrim-Delzell, & Wood, 2015). The upper level of ELSB corresponds with beginning levels of traditional reading curricula (e.g., Reading Mastery, McGraw-Hill, 2002). Students with complex communication needs may have persistent difficulty using traditional reading curricula given their inability to vocalize responses. The ERSB fills this gap, providing explicit instruction on foundational literacy skills, comprehension, and writing through a blended curriculum using software and/or a tablet application with text-to-speech technology to augment the students' voice when working through activities. The software records student performance to assist teachers in making data-based decisions. Implications from this research for educators is that when given access to a phonics curriculum with technology-based supports for communication, learners with extensive support needs can achieve more than sight word recognition.

Developing Vocabulary and Background Knowledge

Gaining understanding and meaning from texts is the ultimate goal of reading. Cromley and Azevedo (2007) used statistical models to identify building background knowledge and vocabulary as essential to improving reading comprehension for learners with reading problems. Adolescents with disabilities will need to be explicitly taught vocabulary, although how words are targeted or selected and taught may vary depending on specific disability and needs. Beck, McKeown, and Kucan (2002) categorize words as belonging in one of three tiers. "Tier one" words are common words most students without disabilities know without receiving formal instruction. For learners with extensive support needs, however, these words may still be unknown, or the learners may have limited understanding of them that does not generalize beyond their own experiences. In this case explicit instruction on tier one vocabulary is relevant and beneficial as these words are common in text and spoken English. "Tier two" words, also known as "general academic words" in state standards, are more likely to occur in written text than everyday speech. These words are commonly used in multiple content area texts. Students with disabilities need explicit instruction in these terms as they enhance comprehension of concepts and texts. Finally, "tier three" words, also known as "domain-specific words" in state standards, do not occur frequently and usually are related to specific content. In an effort to guide practitioners in identifying which words should be given more instructional time and emphasis, Archer and Hughes (2011) suggested targeting words that fall under most of these categories: (a) unknown words; (b) words critical to understanding a text or unit; (c) words students will hear, read, write, and say in the future; and (d) words that are difficult to learn and need interpretation.

After vocabulary words are selected, practitioners must decide how to teach them in a way that facilitates student understanding of relationships among concepts, not just memorization of word definitions (Beck et al., 2002). Effective strategies include direct instruction using student-friendly definitions, connections to background knowledge and new vocabulary, explicit instruction

in morphology, and use of examples and non-examples (Archer & Hughes, 2011). Each of these strategies provides explicit instruction on vocabulary while connecting new knowledge to prior knowledge.

For students with extensive support needs, constant time delay (CTD) is a well-established evidence-based practice (EBP) for teaching vocabulary (Browder, Ahlgrim-Delzell, et al., 2009). When using CTD, a controlling prompt is provided immediately after the instructional cue during initial sessions, providing a "zero second" delay between cue and prompt. In subsequent sessions or trials, a constant interval of time is inserted between the instructional cue and the prompt, during which a learner has the opportunity to make an independent response. Teaching sight words and vocabulary to learners with extensive support needs may be a common and familiar practice, and practitioners should embed sight-word and vocabulary instruction within a broader approach to literacy. This goes beyond the sight-word-only approach by contextualizing words in a larger language concept. Sight-word or vocabulary instruction can be integrated following guidelines provided by Archer and Hughes (2011) to prioritize words for instruction within comprehensive literacy programs.

Supporting Comprehension Through Multicomponent Strategies

Multicomponent strategies focus on the most effective before, during, and after reading strategies and may result in better comprehension than single-strategy training (Kamil et al., 2008). Two research-based multicomponent effective reading strategies for adolescents with disabilities are Peer-Assisted Learning Strategies (PALS; Fuchs et al., 2001) and Collaborative Strategic Reading (CSR). These flexible cooperative-reading strategies can be implemented in various secondary settings and content areas to support adolescents with disabilities. PALS, a modification of Class-Wide Peer Tutoring, incorporates structured activities with frequent verbal interaction between tutors and tutees, with reciprocity of tutoring roles (Fuchs et al., 2001). In high school PALS, partner teams earn work-themed rewards (e.g., PALS dollars deposited in a checking account) rather than the sports-themed points common in elementary PALS. Research on PALS for high school students with disabilities found positive effects in both reading comprehension and beliefs about work habits during reading instruction (Fuchs et al., 2001; Fuchs, Fuchs, & Kazdan, 1999).

In CSR, students work collaboratively before, during, and after reading in a peer-mediated learning environment. Prior to reading, students use the *Preview strategy* to activate prior knowledge and make predictions about what they will learn from the text. During reading students use two strategies; (1) *Click and Clunk*, where they monitor their own comprehension of vocabulary as they read and apply fix-up strategies to inform the meaning of unknown words by the context, and (2) *Get the Gist*, where they identify the most important information contained within each section of the text. After reading students use the *Wrap Up strategy* to generate questions and answers based on the information in the passage just read.

ALTERNATE ACHIEVEMENT LITERACY

Alternate achievement literacy (AAL) is a multicomponent strategy providing access to age-appropriate grade-level texts to learners with extensive support needs (Fleury et al., 2014). While traditional "functional reading" approaches emphasize memorization of sight words and using sight words in daily tasks, AAL emphasizes comprehension and use of texts typical of their chronological age while building sight words and applying emergent reading skills. Planning for AAL involves four steps: (1) choose a grade-level state standard; (2) choose literature or text from assigned grade level based on chronological age; (3) adjust text complexity for reading or listening comprehension level of student; and (4) select systematic instruction strategy to teach engagement, vocabulary, and comprehension.

Chronological age-appropriate literature for adolescents with extensive support needs can be the platform for exposure to important topics in society (e.g., racism and fear by reading *To Kill a Mockingbird* or *Hidden Figures*), other cultures (e.g., Mexican culture by reading *The Pearl*), other time periods (e.g., the Roaring Twenties in *The Great Gatsby*), or understanding their own disability (e.g., ASD through reading *Marcelo and the Real World*). Collaborating with general education teachers is a great way to identify age-appropriate texts and plan instruction on the same standards and texts, which can also increase opportunities for inclusion (Fleury et al., 2014). Texts will likely need to be adapted for text complexity by shortening or simplifying to reduce lexile, or reading level, while maintaining core elements of the plot. When making adaptations, it is important to maintain important vocabulary terms previously targeted for instruction. The text can be written to include explanations using context clues, such as, "If the pot is not <u>flawless</u>, or perfect, Min has to start over." Finally, adding supports such as pictures or a repeated story line of the "big idea" of the passage or chapter can provide cognitive access for learners with extensive support needs. Access to literature should be provided to all students through the use of a skilled peer or adult reader, utilizing technology and text-to-speech, or read-aloud features.

Students with extensive support needs will likely need explicit and systematic instruction in vocabulary, engaging with the text, and comprehension of the text. Prior to beginning a read-aloud, prioritized vocabulary from the text (e.g., flawless) or state standard (e.g., synonym) should be taught using CTD. Following the read-aloud, students should engage in comprehension activities aligned with the state standard, such as answering questions or completing graphic organizers. A system of least prompts can be used to support students with extensive support needs in comprehension activities by teaching them how to go back into the text to support a response. After giving students the opportunity to independently answer the question, the instructor or peer can re-read the paragraph containing the answer and re-present the question. If unsuccessful, the next level prompt would be reading the sentence with the answer. Finally, the answer in the passage is read while supporting the student to repeat the correct response. Student independence and self-advocacy can be further supported by providing a "help please" response option or teaching students to request assistance in going back into the passage to find the answer.

Supporting Written Expression

Writing is particularly important for students with disabilities as it is required in a variety of personal, vocational, and educational settings. Particularly in the secondary grades, written expression is a primary way students "show what they know" in the classroom. The self-regulated strategy development (SRSD) model is well documented as effective in teaching writing strategies to students with disabilities (Graham & Harris, 2005). Self-regulated strategies are intended to support student development of self-control and self-management and are taught alongside academic content. The SRSD model supports students to learn four basic self-regulation strategies, including goal setting, self-monitoring, self-talk, and self-reinforcement. The SRSD model can be used with students with disabilities in individual, small group, or whole classroom settings. GO 4 IT . . . NOW! is a learning strategy that follows the SRSD model to integrate self-determination skills, strategy instruction, and academic writing skills (Rowe, Mazzotti, & Sinclair, 2015). Specifically, the GO 4 IT . . . NOW! mnemonic − **G**oals, **O**bjectives (**4** objectives), **I**dentify **T**imeline, **N**ame topic, **O**rganize details, **W**rap it up − teaches students to write six-sentence paragraphs about potential IEP goals and generalize their skills to other types of paragraphs. The work of Konrad and colleagues has shown GO 4 IT . . . NOW! strategy instruction improves high school students with disabilities' ability to write paragraphs about potential IEP goals, their overall paragraph writing skills, and their ability to generalize those skills to write expository paragraphs (Konrad, Clark, & Test, 2017).

Mathematics

Mathematics can provide students with enhanced opportunities for independence and inclusion in an increasingly technological society by giving students the knowledge and skills necessary for success and independence in many activities. The National Council of Teachers of Mathematics (2000) emphasizes the importance of high-quality mathematics instruction for all students, regardless of "personal characteristics, backgrounds, or physical challenges" (p. 12). State standards help educators set targets for mathematical learning experiences individuals will need to prepare for daily living and future careers. Preparing students with disabilities for secondary mathematics requires an emphasis on conceptual understanding, computational or procedural fluency, and problem-solving skills.

The learning characteristics of adolescents with disabilities present challenges to mathematical learning, including problem solving. Theories of problem solving rely on the individual's ability to use metacognitive strategies to plan and execute problem solving. This requires students to rely on executive functioning and working memory, which are impaired for many students with disabilities. However, research provides effective strategies for teaching problem solving to students with disabilities that consider these learning characteristics. During problem solving, students learn mathematics through real contexts, problems, situations, and models (Van de Walle et al., 2010). Procedural and conceptual knowledge are not bifurcated; contexts and models provide meaning as students apply a range of procedures toward a solution. For students with disabilities, teaching problem solving is a way to contextualize mathematics instruction within current and future environments. This may simultaneously provide access to grade-aligned academics and address personal transition goals. Examples are teaching mathematical standards related to percent of change within the context of calculating the cost of recipe ingredients inclusive of sales tax (Collins, Hager, & Galloway, 2011) or the final cost for activities or items when using a coupon (Root, Cox, Hammons, Saunders, & Gilley, 2018).

Many learners with disabilities will have deficits in early number sense that impede their progress in the general education curriculum. Defined as an individual's ability to comprehend numbers and operations and use these concepts and strategies to make mathematical judgments for problem solving (Clements & Sarama, 2014), number sense includes numerous skills such as number identification, rote counting, representation of numbers and counting with one-to-one correspondence, number conservation, composing and decomposing numbers, magnitude of numbers, early measurement concepts, understanding effects of operations, and patterning. Most students enter school with some number sense, and the early number sense skills a student possesses by first grade are a strong predictor of future quantitative understanding and achievement (Clements & Sarama, 2014). Lack of exposure in early years or developmental deficits in memory or cognition may put learners with disabilities behind their typically developing peers in the area of mathematics. The gap in mathematical achievement and accessing the general curriculum will continue to widen in each grade level. As a result, adolescent learners with disabilities may lack many of the critical foundational skills to accessing secondary mathematics curriculum. However, with sound, explicit instruction, using research-based strategies such as the Concrete-Representation-Abstract framework and schema-based instruction, students can develop these skills and bridge the gap.

Concrete-Representation-Abstract Framework

The Concrete-Representation-Abstract (CRA) sequence, and its variation Virtual-Representation-Abstract (VRA), are effective in teaching conceptual and procedural understanding of mathematical operations for students with disabilities. Both of these procedures use a graduated sequence of explicit instruction that first teaches students to use manipulatives (either concrete or virtual), then representations or drawings, and finally to solve using abstract methods (Agrawal & Morin, 2016).

CRA is an EBP for students with learning disabilities (Agrawal & Morin, 2016; Bouck, Satsangi, & Park, 2018). It has been successfully used to teach algebra, place value, addition, subtraction, multiplication, fractions, word problem solving, area, and perimeter to students with disabilities (Bouck, Satsangi, & Park, 2018). There is emerging evidence of its effectiveness for teaching learners with extensive support needs place value, multiplication, and fraction skills (Bouck, Park, Shurr, Bassette, & Whorley, 2018).

Schema-Based Instruction

Learning how to solve mathematical story problems is the basis for learning how to apply mathematic skills to real-world problems (Van De Walle et al., 2010). One EBP for teaching problem solving is schema-based instruction (SBI), which uses a conceptual teaching approach by combining reading comprehension strategies to teach students to identify underlying problem structures before learning to solve problems (Jitendra & Hoff, 1996). Four key components of SBI are (1) structure for approaching unfamiliar problems and monitoring progress, (2) identifying problem structures, (3) using diagrams to highlight quantitative relations, and (4) developing procedural flexibility.

Schema-based instruction is thought to be effective because it lessens the cognitive demands placed on students and teaches a highly structured format for solving the problem. SBI focuses on conceptual knowledge by enhancing comprehension to ensure students can effectively create representations of the problem situation and develop an understanding of the underlying problem structure. This step is imperative to successful problem solving because most errors in word problem solving are a result of students' misunderstanding of problem situations, rather than computation errors (Jitendra, 2008). In SBI, students learn about semantic structures of word problems through text analysis to identify quantitative relations between sets or actions and create a visual model of these relationships (Jitendra & Hoff, 1996). From this mathematical representation, or model, a student selects an operation to solve. Procedural rules for solving problem types are directly related to underlying concepts. For example, rather than teaching students to add when the total is unknown (i.e., procedural rule), SBI would teach a rule related to the concept of the algorithmic procedure (e.g., two small parts are combined to a create a whole, or "part-part-whole"; Jitendra, 2008). Metacognitive strategy knowledge is learned as students are taught to use think-alouds to explain their reasoning. In addition, students are given heuristics, often in the form of mnemonics such as FOPS (**F**ind the problem, **O**rganize information using schematic diagram, **P**lan to solve the problem, **S**olve the problem) or DISC (**D**iscover, **I**dentify, **S**olve, **C**heck). Some researchers have used CRA in addition to SBI to support students' problem solving (Flores, Hinton, & Burton, 2016).

Recent research focusing on mathematical problem solving for students with extensive support needs has added EBPs for teaching mathematics to learners with extensive support needs by modifying traditional SBI in a strategy coined "modified schema-based instruction" (MSBI; Spooner, Saunders, Root, & Brosh, 2017). The conceptual model for MSBI has four components to address learning characteristics of students with extensive support needs: (a) create access to the problem, (b) support conceptual understanding of the problem, (c) support procedural knowledge, and (d) plan for generalization. To create access to mathematical problem solving for learners with extensive support needs, problems need to be developed in an accessible format. Just as in literacy, ability to decode the problems should not be a barrier; rather, a read-aloud from a skilled peer or adult reader or technology should be used. Building on research on adapting grade-level text for cognitive accessibility, Spooner and colleagues developed guidelines on writing word problems to increase accessibility, such as using common and specific language, using verbs that indicate clear action, purposefully selecting numbers based on the learner's numeracy skills, and intentionally placing numbers within word problems. Another important component of accessibility is ensuring the problems reflect realistic real-world situations for solving problems. Adolescents with extensive support needs

have multiple instructional priorities, and by contextualizing mathematics instruction within natural events (e.g., using an algebraic equation to calculate how many hours need to be worked to save for a ticket to a concert), both transition and academic goals can be taught simultaneously.

Visual diagrams are a key component of both traditional SBI and MSBI. Instead of having students draw schemas, as is typically in SBI for students with learning disabilities (LD), premade graphic organizers are provided for each problem type and include visual supports such as color coding and picture cues in MSBI. Another support provided in MSBI is a task analysis instead of a mnemonic, as emerging readers may not benefit from these. In MSBI students are taught to follow the steps of the task analysis while self-monitoring. Recent MSBI studies with adolescents with extensive support needs have embedded self-graphing of progress and goal setting (Root, Cox, et al., 2018) to further support development of self-determination skills. Many students with disabilities will need support in procedurally solving problems. Both manipulatives and calculators have been effective in supporting procedural knowledge of students with disabilities in problem solving (Peltier et al., 2019; Root & Browder, 2019; Root, Saunders, Spooner, & Brosh, 2017).

Given that students with disabilities often have difficulty generalizing skills learned in isolation, it is important to promote the development of mathematics skills in students' naturally occurring routines. Practitioners must plan for generalization in problem solving instruction, as it is essential for students to be effective with real-world mathematical tasks. Research with adolescents with extensive support needs found they have difficulty with generalizing skills when instructional supports are faded (Root & Browder, 2019) and may need additional generalization training (Root, Cox, et al., 2018). Yet adolescents have shown they can generalize among interventionists (e.g., peers; Ley Davis, 2016), using calculators (Root, Saunders, et al., 2017), and from video-based to paper-based problems (Saunders, Spooner, & Ley Davis, 2018). These results highlight the importance of both using generalization strategies in instruction as well as directly measuring generalization.

Science

In our increasingly technological society, students with disabilities need positive experiences with scientific learning. A lack of scientific understanding could prevent students with disabilities from engaging in the rapidly expanding STEM career field, developing STEM-related hobbies, or sharing interests with peers in science (Knight, Wood, McKissick, & Kuntz, 2019). The Next Generation Science Standards (NGSS Lead States, 2013) provides useful guides for teaching science content. This framework includes skills and processes students need to develop an appreciation for science, gain employment skills based on scientific principles, acquire knowledge of scientific content, and gain lifelong skills of thinking critically about science information (NGSS Lead States, 2013). Science instruction using NGSS will not only teach students content but skills such as asking questions, analyzing data, and communicating information (Osborne, 2014). High-quality science instruction will provide students with disabilities the means to investigate and understand their natural world. National data indicate students with disabilities struggle with science; students with disabilities scored almost one standard deviation lower than general education peers on NAEP assessments (https://nces.ed.gov/nationsreportcard/). Requirements for inductive and deductive thinking, vocabulary, executive functioning, and interrelated academic skills (e.g., literacy, language, mathematics) may pose challenges for students with disabilities.

Supporting Participation in Scientific Inquiry

Inquiry-based approaches are normal in science education. Inquiry, an active process, requires students to go through a process of making observations to ask questions, examining sources to determine what they know, planning investigations, selecting tools to gather data, making predictions, and

communicating results. The inquiry process relies on the ability to ask questions, identify variables and connections, and follow a logical sequence to organize, measure, and explain change. Scientific inquiry is not a set of steps to follow but rather a practice to be applied in life (Jimenez & Carlone, 2014). Therefore, inquiry should build students' use of their own interests and curiosity to investigate, communicate, and build content knowledge. Adolescents with disabilities need instruction and supports that directly address cognitive, linguistic, and executive functioning demands.

Structured inquiry is an effective way to support participation of adolescents with disabilities in science classrooms (Knight et al., 2019; Rizzo & Taylor, 2016; Therrien, Taylor, Hosp, Kaldenberg, & Gorsh, 2011). Using structured inquiry to teach science supports engagement of students by providing instruction on how to participate in inclusive classrooms using self-regulation. Elements of structured inquiry support success for students with disabilities include (a) providing a focus on overall concepts/big ideas, (b) using hands-on concrete experiences under teacher direction, (c) formative feedback, (d) behavioral supports to increase engagement, and (e) practice and review of core concepts and vocabulary (Therrien et al. (2011).

Supporting Acquisition of Science Vocabulary and Concepts

As in other content areas, vocabulary knowledge is critical for success in science. As adolescents with disabilities enter middle and high school, science vocabulary becomes increasingly complex and technical. Tier three words become more critical for understanding science content, and their presence in science texts can lead to a heavy cognitive load, especially for learners who struggle with decoding and comprehension (Knight, & Sartini, 2015). To support acquisition of science vocabulary and concepts, learners need exposure to words in multiple contexts, multiple opportunities to practice and personalize word meanings, and generative strategies for learning words, including use of context, morphological structure, and definition tools (Townsend, Brock, & Morrison, 2018).

There are several recent innovative approaches for teaching science vocabulary that capitalize on utility of technology-aided instruction (TAI). Kennedy, Deshler, and Lloyd (2015) designed and tested a multimedia approach to vocabulary instruction titled Content-Acquisition Podcasts, or CAPS. These brief instructional vignettes include (a) rationales for why learning the term is important, (b) direct instruction of word meanings, (c) awareness of closely related terms, and (d) identification of morphemes in terms (Kennedy, Deshler et al., 2015). CAPS can also include a keyword, or acoustically similar word, along with an image of the keyword interacting with the definition of the term. Research by Kennedy and colleagues found CAPS to be effective for teaching science and social studies vocabulary to high school students with learning disabilities (Kennedy, Kellems, Thomas, Newton, 2015; Kennedy, Thomas, Meyer, Alves, & Lloyd, 2014). McMahon and colleagues used augmented reality (AR) to teach science vocabulary words to college students with intellectual disability (ID) and ASD (McMahon, Cihak, Wright, & Bell, 2015). AR technology can provide instructional supports for adolescents with disabilities by providing access to digital content like pictures, text, audio, and video through mobile devices. A benefit of both CAPS and AR is that learners are in control of their presentation and are able to repeat and review them as needed.

An additional benefit of TAI is that it can be combined with other EBPs to deliver instruction with fidelity to multiple students and decrease demands on practitioners. For example, TAI can be used to deliver explicit instruction on science vocabulary and concepts through narrated presentations that embed explicit instruction strategy of model-lead-test (McKissick, Ley Davis, Spooner, Fisher, & Graves, 2018; Smith, Spooner, & Wood, 2013). TAI also makes it possible to embed multiple exemplars to promote generalization of concepts (Knight et al., 2019).

Supporting Communication and Comprehension in Science

In addition to explicit instruction in science vocabulary and concepts, adolescents with disabilities need instruction on how to communicate science discoveries and increase comprehension of content. Graphic organizers are a form of visual supports and can provide concrete models of abstract concepts. They are most effective when there is explicit, teacher-directed instruction on how to effectively use them, including modeling and independent practice with feedback (Gardill & Jitendra, 1999). For learners with extensive support needs, task analytic instruction combined with prompting hierarchies can be used to directly teach and support student use of graphic organizers (Knight et al., 2019). Jimenez, Browder, Spooner, and Dibiase (2012) emphasized using KWHL charts to support students with disabilities in organizing information to complete steps of science inquiry. KHWL charts are graphic organizers with the following headings: (a) K for "What do you know?" (b) W for "What do you want to know?" (c) H for "How will you find out?" and (d) L for "What did you learn?" Peers can support adolescents with disabilities in completing KWHL charts during general education science class (Jimenez et al., 2012). Beyond KWHL charts, graphic organizers in the format of charts and diagrams can also support generalization of science concepts (Knight, Spooner, Browder, Smith, & Wood, 2013).

Reliance on auditory processing and observational learning to acquire content and verbal expression to communicate is another barrier to student engagement in and acquisition of science learning (Jimenez, Lo, & Saunders, 2014). Students need ways to receive and express scientific knowledge that are not solely dependent on these mechanisms. One strategy to support engagement is guided notes, or an outline of the lesson with blanks inserted where students fill in key concepts and examples (Jimenez et al., 2014). Academic performance of students with disabilities may be strengthened when guided notes are used alongside systematic instruction techniques (Konrad, Joseph, & Eveleigh, 2009). Practitioners can add guided notes as an accommodation for adolescents with disabilities to support their participation in inclusive science classrooms.

While inquiry-based science methods are common in classrooms and a departure from textbook approaches, comprehension of science text is still critical. Adolescents with disabilities still need explicit instruction in content area literacy strategies. For example, Roberts, Kim, Tandy, and Meyer (2019) found a multicomponent intervention that included explicit instruction in comprehension strategies before, during, and after reading an adapted science text to improve the ability of high school students with extensive support needs to answer multiple choice and open-ended comprehension questions. Graphic organizers can further support adolescents with disabilities' understanding of text structure and comprehension of science texts (Carnahan & Williamson, 2013).

Conclusion

Academic skill instruction has the potential to significantly impact transition outcomes of adolescents with disabilities (Bouck & Joshi, 2015). Providing instruction in core academic skills in ways that are relevant, meaningful, and necessary in current and future environments can provide students with a full educational opportunity, addressing multiple priorities integral for successful transition to adulthood.

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Life Skills and Community-Based Instruction

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One of the purposes of the Individuals with Disabilities Education Act (IDEA, 2004) is to ensure that all children with disabilities have an opportunity for a free appropriate public education that includes transition services designed to prepare them for further education, employment, and independent living. Part of living independently is the ability to engage in domestic and community-based activities that lead to a more autonomous, self-reliant adult life. Specific skills associated with domestic (home) and community living are used on a regular basis (daily, weekly, monthly) and are important to enable participation in home and community environments and activities (Spooner & Test, 1994). Domestic skills include basic self-help skills like toothbrushing (Horner & Keilitz, 1975), toileting (Azrin & Foxx, 1971; Baumeister & Klosowski, 1965), feeding (Azrin & Armstrong, 1973), and dressing (Azrin, Schaeffer, & Wesolowski, 1976; Day & Horner, 1986; Minge & Ball, 1967), as well as more advanced skills that we might call household chores like clothing selection (Nutter & Reid, 1978), cooking (Schleien, Ash, Kiernan, & Wehman, 1981), meal planning (Sarber & Cuvo, 1983), doing the laundry (Cuvo, Jacobi, & Sipko, 1981; Miller & Test, 1989), mending clothes (Cronin & Cuvo, 1979), and basic finance skills (Rowe & Test, 2012). Community-based skills are activities and tasks that occur outside the home, like traveling in the community and riding forms of public transportation (Neef, Iwata, & Page, 1978), grocery shopping (Gaule, Nietupski, & Certo, 1985; Morse & Schuster, 2000), placing an order at a fast food restaurant (Marholin, O'Toole, Touchette, Berger, & Doyle, 1979), banking (Bourbeau, Sowers, & Close, 1986; Shafer, Inge, & Hill, 1986), and using a mobile phone in the community (Taber, Alberto, Hughes, & Seltzer, 2002).

When public schools began offering services for students with intellectual disability, including those with extensive support needs, in the mid-1970s there was concentrated professional interest in how to best teach domestic and community-based skills. Lou Brown and his colleagues at the University of Wisconsin–Madison helped focus the field on teaching chronological age-appropriate skills to support students' participation in daily and family routines (L. Brown et al., 1979). A few years later, Snell and Browder (1986) followed with a roadmap for what they called "community-referenced instruction" based on the underpinnings of normalization philosophy (Wolfesnberger, 1972) and instructional and measurement practices derived from applied behavior analysis (Baer, Wolf, & Risley, 1968; Bijou & Baer, 1961). Ten years after Snell and Browder introduced community-referenced instruction, Test and Spooner (1996, 2005) developed a practitioner-oriented community-based instructional guide. To date, there is a large body of research on how to teach daily living as

well as community-based skills such as eating, dressing, toileting, brushing teeth, housekeeping, food preparation, laundry skills, traveling in the community, grocery shopping, and using mobile phones (Browder, Spooner, Courtade, in press; F. Brown, McDonnell, & Snell, 2016).

Importance of Domestic and Community-Living Skills

Teaching and providing supports for domestic and community-living skills are important because this increases the independence of the individual. These skills are essential to everyday existence. If an individual cannot perform or does not have the appropriate supports (e.g., technology) in place to engage in basic self-help skills, someone will need to perform that skill for the individual. This is why these basic, essential, domestic skills have been termed "functional" skills and why the focus of instructional and curricular efforts in the mid-1970s and the 1980s shifted to the criterion of ulti-mate functioning (L. Brown, Nietupski, & Hamre-Nietupski, 1976), which was designed to provide services that will assist the person with a disability to live as independently as possible. When people with disabilities acquire these domestic skills, it increases their choice options and ability to cook, shop, and order favorite foods. Early on in the chronology of the development of instructional tech-nology, Epps and Meyers (1989) commented that when these skills are acquired, family responsibili-ties are reduced, and ongoing research has suggested that, when high expectations are established, people with a range of support needs can acquire and utilize these skills, acting more autonomously in home and community environments.

Donnelly and Karsten (2017) as well as Klinger, Klinger, Mussey, Thomas, and Powell (2015) have indicated that independence in personal care skills can be an important factor for achieving positive postschool outcomes, especially for students with more extensive support needs. Although home and community skills are just as important today as they were in the mid- to later 1970s (Bambara, Koger, Burns, & Singley, 2016), with the recent emphasis on training academic skills for all students, includ-ing those with severe disabilities, attention to teaching domestic and community-based skills has waned, but the importance of life and community skills remain a priority within special education.

Assessing and Teaching Life and Community-Based Skills

In this section, we will describe and provide suggestions for teachers on how to assess, prioritize, and plan to teach life and community skills. Additionally, recommendations concerning embedded self-determination and promoting generalization also are discussed.

Assessing and Prioritizing Life Skills

One of the first tasks for designing a student's educational programming is to assess what skills a student needs in order to live as independently as possible. Transition assessments, especially in terms of life and community skills, must address roles before, during, and after postsecondary transitions; consequently, these assessments include a spectrum of informal to formal options across student interests, preferences, community participation skills, and personal care skills (Sitlington, Neubert, & Leconte, 1997). More detailed information can be found in Chapter 8 for specific examples of transi-tion assessments. One of the biggest advantages of formal, standardized assessments is the comparison of skills based on a norm group of same-age peers without disabilities. This comparison can help address potential bias for selecting life skills that are important to the general public or what skills might be required when a student with a disability is competing for employment with people with-out disabilities (Rowe, Kortering, & Test, 2012).

While standardized assessments are necessary and play an important role in determining a student's education programming, practitioners may gather more person-centered and practical information

from informal assessments. Additionally, informal assessments may be more affordable and available for educators, especially in rural school districts where a lack of resources is a well-documented challenge (Berry & Gravell, 2013; Berry, Petrin, Gravelle, & Farmer, 2011). In addition to the assessments described in Chapter 8, direct observation, student and family interviews, and ecological inventories within community activities and experiences (Rowe et al., 2012; Sitlington & Paybe, 2004; Synatschk, Clark, & Patton, 2008) are vital in preparing transitioning students for adulthood.

Once targeted life and community skills are identified, those skills should be prioritized based on student, family, and teacher input. Although family members and educators often consider home living and community skills a priority in secondary school settings, waiting until middle school to begin instruction on these skills can be problematic. For example, while it would be inappropriate for an elementary school student to learn how to shave, a personal grooming skill appropriate for elementary school students to work on that addresses personal grooming may include washing one's face or brushing one's hair. Similar to any other transition or functional skill, if teachers wait until middle school or high school to begin assessing and teaching life and community skills, there might not be opportunities for repeated practice that students with disabilities might need in order to master the targeted skill.

The Impact of Self-Determination on Teaching Life Skills

One method educators can use to begin embedding life skills as early as kindergarten is by teaching self-determination skills (e.g., problem solving, goal setting, self-awareness). Focusing on providing high-quality instruction by embedding self-determination skills has been best practice within special education for over two decades (Algozzine, Browder, Karvonen, Test, & Wood, 2001; Field, Martin, Miller, Ward, & Wehmeyer, 1998; Wehmeyer & Palmer, 2003). Table 12.1 highlights examples of how to embed self-determination skills from elementary through high school.

Community-Based Instruction

Because life skills are used outside the school setting in a student's community and/or home, it is imperative that students have repeated opportunities to practice these skills outside of the classroom. Community-based instruction (CBI) allows teachers to provide instruction of targeted life skills in the community setting where they are most likely used and is important for promoting student success (Richter, Mustian, & Test, 2012). CBI has been successfully used to teach a variety of banking skills such as using an ATM (Alberto, Cihak, & Gama, 2005) and cashing a check (Bates, Cuvo, Miner, & Korabek, 2001; Collins, Stinson, & Land, 1993), purchasing skills (Cihak & Grim, 2008), and safety skills (Branham et al., 1999; Taber, Alberto, Seltzer, & Hughes, 2003).

Table 12.1 Self-Determination and Life Skills Infusion

Examples of Life Skills	Self-Determination Component	Infusion
Eating meals	Choice Making	Student can choose which meal he/she would like to eat for lunch.
Budgeting checking or savings account	Goal Setting	Student can set a goal of having $100 in his/her savings account and list the steps that will be followed to reach that goal.
Using caution with strangers	Problem Solving	Student can identify different course of action in case of an emergency if he/she was approached by a stranger.

The biggest advantage of CBI is that it allows for direct assessment of student performance of the targeted skill in the real world. The challenges of implementing CBI include: (a) cost and complexity of transportation to community settings; (b) difficulties with reconciling with school schedules (e.g., 45-minute class periods); (c) school liability and insurance needs related to frequent trips in the community; (d) how to navigate when some students may not have the money or resources to participate in frequent community outings; and (e) logistics related to managing classes that have multiple students with different CBI-related needs. For teachers that do not have the option of taking their students on CBI, simulated instruction is another viable option.

Simulated Instruction

Simulated instruction is still community referenced but takes place in a non-community setting (e.g., classroom) that has been staged to mimic the community setting. Simulated instruction has been used to successfully teach banking skills (Aeschleman & Gedig, 1985; Cihak, Alberto, Kessler, & Taber, 2004), ordering from a fast food menu (Mechling & Cronin, 2006), and making purchases via debit card (Rowe, Cease-Cook, & Test, 2011).

As previously indicated, the biggest advantage to simulated instruction is providing community-referenced practice if CBI is not a viable option or frequent CBI trips are not possible. Unlike CBI, simulated instruction does not pose the same scheduling challenges throughout the day; students can practice in a safe, comfortable environment where they can have unlimited opportunities to practice the targeted skill. Similarly, within simulated instruction, teachers can control for variables that may interfere in an unpredictable community setting. Finally, simulated instruction is easily implemented in any instructional format (large group, one on one). Some disadvantages of simulated instruction include extensive teacher preparation time to make/create and facilitate the simulated setting and the fact that, although it is as authentic as possible, it is not the community setting.

Pairing CBI and Simulated Instruction

Combining CBI and simulated instruction is an effective strategy for addressing the challenges associated with implementing either practice in isolation while maximizing the benefits of both in terms of community participation (Alberto et al., 2005; Richter et al., 2012). Combining both types of instruction allows students to practice skills in simulated settings prior to going out on CBI so they can first acquire the skills without the pressures of social norms and can practice performing the skill fluently in a controlled setting. Then, by following up on CBI, the student still has access to the authentic community setting and will have the opportunity to also practice coping skills associated with the unpredictable nature of the real world.

How to Teach Life Skills

The key to effectively teaching life skills to students with disabilities is embedding strategies that promote generalization of those skills. Traditionally, generalization is a challenge for students with disabilities (Collins, 2012), but in addition to practicing skills in simulated and community settings, there are several other strategies teachers can include in their instructional planning that will promote generalization of skills across stimuli, time, and responses.

Some generalization strategies educators should consider include sequential modification, training loosely using multiple exemplars, and common stimuli (Cooper, Heron, & Heward, 2007; Stokes & Baer, 1977). In sequential modification an educator or family member uses a teaching procedure that has already been effective in another setting or context to work on the new targeted skill. For example, if a student is performing some of the steps in a handwashing task analysis at school (e.g., rubbing

hands together after getting soapy, turning off water), the teacher and parents could work together to ensure that at both home and school, parents/teacher are prompting the task the same way (e.g., let's wash your hands) and the soap used is similar across settings.

Training loosely is another generalization strategy that often involves a teacher including multiple exemplars when training a specific skill. To use this strategy, a teacher would make sure to include stimuli from across the range. For example, if a teacher was teaching a student to wash dishes, the teacher might include a variety of brushes, sponges, or tools that can all be used to clean dishes in the sink so the student could wash the dishes using a variety of tools and not just the sponge he or she used when originally taught in the classroom.

Using common stimuli across settings is a third means of promoting generalization of life and community skills. Often, this requires parents, family members, and teachers to collaborate so that some common stimuli can be used during training in both settings. For example, if a student was learning to do laundry, it is unlikely that the school and the home have the exact same washer and dryer, but the education team can work together to ensure both settings are using similar washing detergent (e.g., liquid or pods). Additionally, the student's family can ensure that the same types of laundry baskets, task analysis, and procedure for sorting laundry are common across the home and school setting.

Finally, when determining how best to teach life skills for students with disabilities, it is imperative that teachers consider the evidence that supports each practice. The next section will describe practices that have been identified as evidence-based practices and research-based practices (Council for Exceptional Children, 2014; Mazzotti et al., 2016; Test et al., 2009).

Evidence- and Research-Based Practices for Teaching Life Skills and CBI

As previously discussed in Chapter 4, evidence-based practices (EBPs) and research-based practices (RBPs) are those practices that have been shown to be effective for teaching students with disabilities. Remember that EBPs are considered the "gold standard" in special education and have more empirical studies with more participants than RBPs, but for both EBPs and RBPs, the practice was effective in teaching participants the skills targeted by the researchers (CEC, 2014; Mazzotti, Test, Voggt, & Gadd, 2020). Both EBPs and RBPs meet legal mandates that special educators use teaching strategies that have data to support their use in the classroom and community settings. The majority of the identified EBPs and/or RBPs are based on systematic instruction and rooted in applied behavior analysis (Collins, 2012; Cooper et al., 2007). The goal of systematic instruction is to create structured learning that is defined and replicable for use with students with low-incidence disabilities by relying on performance data to inform modifications through the stages of learning (Snell, 1983). During systematic instruction targeted skills are taught by using attentional cues, prompts, and specific consequences to promote learning a new skill within instructional trials. Systematic instruction is known to be most effective with this population of learners because they typically require the explicit and repeated instruction used within this strategic approach (Collins, 2012).

Response Prompting

Within systematic instruction, response prompting is when a teacher provides an additional visual, auditory, textual, or symbolic prompts that helps a student perform desired behavior. Response prompting using a self-operated audio prompting system has been deemed an EBP for teaching food preparation and cooking (Mazzotti et al., 2016; Test et al., 2009). Other examples of response prompts to successfully teach life and community skills include video response prompts

(Van Laarhoven & Van Laarhoven-Myers, 2006), auditory response prompts (Briggs et al., 1990), and textual response prompts (Cuvo, Davis, O'Reilly, Mooney, & Crowley, 1992). Response prompting also is considered a RBP for food grocery shopping (Graves, Collins, Schuster, & Kleinert, 2005), laundry (Taylor, Collins, Schuster, & Kleinert, 2002), leisure (Nietupski et al., 1986), purchasing (Nietupski, Welch, & Wacker, 1983), and social skills (Frea, 1997).

Constant Time Delay

Time delay is a response prompting procedure that varies the amount of time in between presentation of the natural stimulus and the response prompt (Snell & Gast, 1981; Touchette, 1971). The purpose of using time delay is to transfer stimulus control from a prompt to a more natural stimulus by delaying the presentation of the prompt that follows the natural stimulus. Constant time delay (CTD), a variation of time delay, is implemented by presenting several trials using a zero-second delay between the presentation of the natural stimulus and the response prompt. After the initial zero-second delay session is completed, the subsequent trials follow a predetermined fixed time delay (e.g., three seconds; Cooper et al., 2007). Related to life and community skills, CTD has been deemed an EBP for teaching food preparation and cooking skills such as preparing a sandwich or milkshake (Mazzotti et al., 2016; Test et al., 2009). CTD also is a RBP for banking (McDonnell & Ferguson, 1989), functional life skills (Wolery, Ault, Gast, Doyle, & Griffen, 1991), and recreation/leisure skills (Wall, Gast, & Royston, 1999).

Video Modeling

Video modeling involves providing the learner with a visual model of the desired behavior via video recording and playing back recordings to assist learning a desired skill and has been determined an EBP for individuals with autism spectrum disorder (ASD), as well as with students with severe disabilities (Browder, Wood, Thompson, & Ribuffo, 2014; Wong et al., 2015). Video modeling has been found as an EBP for home maintenance skills (Mazzotti et al., 2016; Test et al., 2009). For example, Mechling, Gast, and Gustafson (2009) used video modeling to teach young adults with intellectual disability how to extinguish fires typical of home cooking situations. Video modeling also is a RBP for food preparation/cooking skills (Mechling & Stephens, 2009) and fine motor tasks (e.g., gift wrapping; Spencer, Mechling, & Ivey, 2015).

Research-Based Practices for Teaching Life Skills and CBI

Computer-Assisted Instruction

Although computer-assisted instruction (CAI) has been deemed an EBP for teaching academics to students with ASD (Wong et al., 2015), in terms of teaching life and community skills, computer-assisted instruction is still classified as a RBP. CAI is defined as "the use of a computer and other associated technology with the intention of improving students' skills, knowledge, or academic performance" (Okolo, Bahr, & Rieth, 1993, p. 1). CAI is unique as it offers an interactive format that can provide multiple examples and immediate feedback to students while including effects featuring different modalities, such as graphics, photographs, audio, text, and video (Hutcherson, Langone, Ayres, & Clees, 2004). CAI has been use to teach food preparation and cooking skills such as how to make a sandwich, use a microwave, and set the table (Ayres & Cihak, 2010). It also has been used to teach students with intellectual disability to read grocery aisle signs and locate items within each aisle (Mechling, Gast, & Langone, 2002).

Progressive Time Delay

Similar to CTD, discussed as an EBP, progressive time delay (PTD) is another version of time delay where the time intervals vary between presentation of the natural stimulus and the response prompt. PTD also presents initially with a trial with a zero-second delay between the presentation of the natural stimulus and the response prompt; however, PTD then gradually and systematically extends the time delay, often in one second intervals (e.g., zero to two to three seconds) rather than staying consistent across trials (Cooper et al., 2007). PTD has been used to teach skills such as crossing the street (Collins et al., 1993). This study also involved a task analysis of steps for how to cross the street, and a PTD procedure prior to delivering the controlling prompt was used, increasing from a one-second to a five-second delay interval. PTD also has been used successfully to teach purchasing (McDonnell, 1987) and safety skills (Sandknop, Schuster, Wolery, & Cross, 1992).

Task Analytic Instruction Using Total Task and Forward and Backward Chaining

Task analytic instruction involves breaking a complex skill into smaller, teachable units (Cooper et al., 2007). The purpose of using a task analysis is to make the teaching process more manageable during teaching and skill acquisition (Wong et al., 2015). Chained tasks are any tasks where the steps for completion can be broken down into sequential steps (Cooper et al., 2007). There are three main ways to teach chained tasks using a task analysis, including total task presentation, forward chaining, and backward chaining.

Total Task Presentation

Total task presentation refers to when the learner receives training on every step (i.e., from beginning to end) in the task analysis during each session (Gold, 1972; Cooper et al., 2007; Spooner, 1984). Reinforcement is delivered only once the total task has been completed. Total task presentation has been used to teach functional/leisure skills such as how to bowl and how to play pinball by providing instruction on all the steps in the task at the same time (Vandercook, 1991).

Forward Chaining

Forward chaining is often used for behaviors that make the most sense taught in their naturally occurring order. Prior to beginning instruction, the teacher will "chunk" steps from the task analysis. For example, when making a sandwich, it might make sense to chunk all the steps for gathering materials. During instruction, reinforcement occurs when a student reaches mastery on that predetermined "chunk" before teaching the next chunked steps in the task analysis (Cooper et al., 2007). For example, McDonnell and McFarland (1988) used forward chaining to teach the steps of a task analysis developed for using a washing machine in a laundromat. Students were only taught the first step to begin with, how to locate the washing machine, then moved to separate teaching trials that taught how to locate the washing machine and select the correct soap. This was repeated until all the steps in the chain were mastered.

Backward Chaining

Backward chaining is similar to forward chaining, but the last step or last chunk of steps in the task analysis is taught first. Once the last step is mastered, it is reinforced, and the training of the next-to-last

step may begin (Cooper et al., 2007). Backward chaining is particularly useful for students who need access to the reinforcer to stay motivated to participate. For example, when teaching food preparation skills, backward chaining is particularly useful because students will always have access to the reinforcer for preparing food because they will always have the opportunity to eat the food they have prepared. Backward chaining has been successful in teaching first aid safety skills (Ersoy, Tekin-Iftar, & Kiracaali-Iftar, 2009). Additionally, Gast, Winterling, Wolery, and Farmer (1992) taught first aid skills using backward chaining for how to treat a minor cut, a burn, and an insect bite.

Task Analytic Instruction Using Least-to-Most Prompting

When using task analytic instruction, prompts are delivered within a hierarchy to ensure correct responding through gestural cues, verbal instructions, modeling, or physical guidance (Cooper et al., 2007). The prompting hierarchy is predetermined and begins with the least intrusive prompt (i.e., student completes step independently with no additional prompting) and concludes with the most intrusive prompt (e.g., hand-over-hand physical prompt).

Two practices that are often used in tandem are task analytic instruction and least-to-most prompting, also called the system of least prompts. The purpose of system of least-to-most prompts is to transfer stimulus control from response prompts to the natural stimulus whenever the participant does not respond to the natural stimulus or makes an incorrect response within a task. Least-to-most prompts allow the participant to first have an opportunity to perform the response with the least amount of assistance on each trial. Later, more assistance is provided with each successive trial without a correct response for each of the steps in the task analysis (Cooper et al., 2007). Task analytic instruction has been paired with least-to-most prompting to teach communication (Heller, Allgood, Ware, & Castelle, 1996), food preparation/cooking (Arnold-Reid, Schloss, & Alper, 1997), functional living (i.e., grocery shopping, using a commercial laundromat, purchasing a soft drink, and cleaning a restroom, Bates et al., 2001), grocery shopping (Arnold-Reid et al., 1997), purchasing (Westling, Floyd, & Carr, 1990), and safety skills (Collins et al., 1993; Taber et al., 2002).

Task Analytic Instruction Using Most-to-Least Prompting

Another prompting system often paired with task analytic instruction is most-to-least prompting. Most-to-least prompting has the same goal of transferring stimulus control from response prompts to the natural stimulus whenever the participant does not respond to the natural stimulus or makes an incorrect response in a task; however, most-to-least prompting begins with the most intrusive, also called the controlling prompt, such as a physical hand-over-hand prompt (Cooper et al., 2007). Another difference in using most-to-least prompting versus least-to-most prompting is that the educator must predetermine probes where no prompts are provided throughout instruction to give students the opportunity to show independent, correct responses as learning sessions continue with less assistance. Task analytic instruction has been combined with most-to-least prompting for purchasing food at a fast food restaurant and purchasing items at a grocery store (McDonnell & Laughlin, 1989. It also has been found to work well for teaching functional life skills, such as banking (McDonnell & Ferguson, 1989), exercise routines (O'Conner & Cuvo, 1989), and leisure activities (e.g., bowling and pinball; Vandercook, 1991).

"One More Than" or Next Dollar Strategy

The "one more than" strategy is a common purchasing strategy used by individuals with intellectual disability and other disabilities. It is defined as teaching individuals to pay one more dollar than requested (e.g., cost is $3.29 and the individual gives $4.00; Denny & Test, 1995). It also is referred to

as "next dollar," "counting on," or "dollar more" strategy. It has been used for teaching purchasing skills (Colyer & Collins, 1996; Denny & Test, 1995; Test, Howell, Burkhart, & Beroth, 1993) and can be used across settings. For example, Cihak and Grim (2008) taught students with ASD to use the strategy to give one dollar more than the listed price across classroom, school store, and community settings.

Simultaneous Prompting

Simultaneous prompting is another response prompting procedure that involves the presentation of an individualized controlling prompt (one that ensures a correct response) immediately following the presentation of a task direction (Collins, 2012; Gibson & Schuster, 1992). After instructional sessions are conducted, subsequent daily probe sessions are conducted immediately before instructional sessions so the instructor can determine when stimulus control, or acquisition of the target skill, has occurred (Collins, 2012). Simultaneous prompting is preferred when the goal is errorless learning because the instructional cue and controlling prompt are presented simultaneously with probes conducted prior to the instructional session to measure skill acquisition (Collins, Lo, Park, & Haughney, 2018). This procedure also is advantageous for students who are not responsive to either time delay procedure because they learn to just wait for the prompted response. Fetko, Schuster, Harley, and Collins (1999) used simultaneous prompting to teach young adults with intellectual disability how to unlock a locker secured with a keyed lock. It also has been used to teaching grocery words (Singleton, Schuster, Morse, & Collins, 1999), restaurant words (Smith, Schuster, Collins, & Kleinert, 2011), and leisure skills such as playing solitaire (Seward, Schuster, Ault, Collins, & Hall, 2014).

Future Directions for Teaching Life Skills

The previous section outlined what are currently known to be the EBPs and RBPs for teaching life skills to students with disabilities, but those practices do not make up the whole of what we know about teaching life skills. Our next steps in the field of special education lie in the promising or emerging practices that we have begun studying to determine if they are just as effective in teaching life skills.

Many of these practices focus on the use of technology to support independent life and community skills. For example, the use of portable devices as instructional tools (Mechling, 2011), including using devices to deliver video modeling to teach daily living skills (Cannella-Malone et al., 2006) and video prompting to teach cooking skills (Graves et al., 2005), have shown efficacy. Although older technologies such as portable DVD and MP3 players can still be valuable teaching tools, there are newer technologies and applications that have been designed to expedite instruction (Burckley, Tincani, & Fisher, 2015; McMahon, Cihak, Gibbons, Fussel, & Mathison, 2013). For example, Burckley et al. (2015) used an iPad-based video activity schedule to improve community shopping skills while McMahon et al. (2013) used a mobile app to support people with disabilities to identify food allergens. Similarly, skills such as sending email, accessing and organizing social media, managing cloud storage, and bookmarking websites also have successfully been taught using combinations of EBP and research-based strategies (Cihak, McMahon, Smith, Wright, & Gibbons, 2015; Cihak, Wright, McMahon, Smith, & Kraiss, 2015). Potential applications of technology to teach and support people with disabilities to participate in activities in their homes and communities are continuously emerging.

Summary

In this chapter we have illustrated one of the purposes of IDEA as to provide transition services for children and youth with disabilities so they can further their education, employment, and independent living. Donnelly and Karsten (2017) as well as Klinger et al. (2015) suggest independence in daily living skills is an important factor in achieving positive postschool outcomes. To that end, we have

defined and documented domestic and community-based skills, starting with the early work for self-help skills (e.g., toileting, Azrin & Foxx, 1971; toothbrushing, Horner & Keilitz, 1975; dressing, Azrin et al., 1976; feeding, Azrin & Armstrong, 1973), the extension of those basic self-help skills to household chores like doing the laundry (Cuvo et al., 1981), cooking (Schleien et al., 1981), and meal planning (Sarber & Cuvo, 1983), and then moving outside the home to examine community-oriented skills like ridding public transportation (Neef et al., 1978), grocery shopping (Gaule et al., 1985), and using mobile devices in the community (Taber et al., 2002). These domestic and community-living skills are vital because they increase the ability of people to engage in preferred activities in their homes and communities. The more recent focus on teaching academic skills to these students as mandated by general curriculum access has minimized the emphasis on investigation in these basic areas. On the other hand, as indicated by Bambara et al. (2016), home and domestic skills are just as important as they were in the mid- to late 1970s, and more work is needed to integrate the teaching of these skills, based on the individualized learning goals of transition-age students with disabilities.

The application of standardized as well as informal assessments is important in developing a plan for what skills need to be taught. After skills have been identified through the assessment process, specific skills are targeted for instruction. Infusing self-determination into the assessment and instruction process through choice making, goal setting, and problem solving is critical as it assists in facilitating more autonomy for individuals.

In teaching domestic and community-based skills, we have highlighted the evidence that has been built across the course of the last 70 years including the importance of generalization (e.g., Stokes & Baer, 1977) and the emerging body of evidence-based and research-based instructional practices (e.g., systematic instruction as a package including components like response prompting, task analysis, chaining procedures, time delay, and simultaneous prompting). The application of technology (e.g., video modeling and prompting, Cannella-Malone et al., 2006; Graves et al., 2005, and computer-assisted instruction, Ayres & Cihak, 2010; Hutcherson et al., 2004) holds great promise in our endeavor to support students with disabilities to lead full and meaningful lives.

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New Social Relationships

Social Skills, Supports, and Networks in Adolescent Transition Education

Laura T. Eisenman, Marisa Kofke, and Majd Subih

Laying a foundation for adult social relationships in the community, in further education, and at work is a central task of transition services for adolescents with disabilities. Halpern (1994) noted that developing "effective *personal and social relationships* may be the *most important* of all the transition goals" (p. 120, italics in original). In special education literature, approaches to developing personal and social relationships often focus on increasing students' *social skills* and *social competence* (e.g. Alwell & Cobb, 2007; Gresham, Sugai, & Horner, 2001; Rowe et al., 2015). Social skills refer to particular behaviors that individuals employ to participate in a social interaction. Shaking hands, initiating a conversation, or requesting assistance are examples of social skills. Social competence refers to using such skills in ways that are valued by others within a specific culture or context. Knowing with whom and when to shake hands as well as moderating the strength of one's handshake to avoid negative judgments from others are both examples of social competence. Using skills competently may also be referred to as *social effectiveness* (Walker et al., 2011).

Youth social effectiveness is connected to *social acceptance* and *social inclusion* (Chadsey & Shelden, 1998; Devine & Lashua, 2002; Walker et al., 2011). Others are more likely to acknowledge and engage with a person who displays social behaviors that are seen as normative, if social interactions with the person are viewed positively (or at least not negatively), or if the person holds a valued social role, such as friend or colleague (Wolfensberger, 2000). Because people typically encounter many different social groups across different environments (e.g., school, work, leisure), their social acceptance and inclusion may vary by context. Being seen as a socially competent or valued member in one community does not ensure the same in another. Importantly, social inclusion is not entirely dependent on a person's skills or competence. Inclusion within a group may be based on other strengths or attributes that are more highly valued by the group. Further, social effectiveness can be formally or informally mediated by others in ways that support and strengthen otherwise weak social relationships, thus providing opportunities for social inclusion that might be unavailable to the person without those supports.

Social capital (Bourdieu, 1986; Trainor, 2008; Trainor, Morningstar, Murray, & Kim, 2013) encompasses the ideas of social relationships, skills, competence, acceptance, and inclusion by focusing attention on the ways that social networks influence personal opportunities, success, and well-being. Social networks may be thought of as the multiple relationships that create bonds within groups or bridges between diverse groups based on reciprocity and trust. Social capital is an asset that individuals can accrue and leverage – or lack – based on the qualities of their connections to others.

Having diverse social networks (a variety of reciprocating connections with many types of people) may have both a protective and empowering function for people with disabilities. Being known and valued by networks of people that include both intimates and acquaintances decreases the likelihood of a person becoming isolated and vulnerable and increases a person's opportunities to effect personally meaningful changes in community, work, and education settings. The transition from school to adult life is a time to systematically invest in developing the social capital and enhancing the social networks of youth (Trainor, Smith, & Kim, 2012; Trainor et al., 2013).

Importance of Social Relationships in Postsecondary Environments

Prior research suggests that limitations in the social skills, supports, and networks of youth with disabilities negatively affect their success in employment, postsecondary education, and independent living or community participation. Conversely, in each of these new environments, their social relationships can provide them with access to new opportunities and the support they need for success.

Employment

Young adults' social skills have a potential predictive relationship on postschool employment. Indicators of social skills, such as higher ratings of students' social skills by teachers, being invited by peers to join social activities, or successful completion of high school curricula with a social skills component, have been associated with better postschool employment outcomes and career adjustment (Mazzotti, Rowe, Sinclair, Poppen, Woods, & Shearer, 2016; Murray & Doren, 2013; Pinkney, Murray, & Lind, 2012; Test et al., 2009). Social skills, supports, and relationships have long been connected to employment outcomes of youth with disabilities; finding and maintaining employment may be problematic due to limited social skills and supports (Chadsey & Shelden, 1998). However, the process of finding employment can be facilitated by the social relationships acquired during the school years and the acquaintances that formed during vocational and recreational experiences (McDonnall, 2011; Trainor et al., 2012). When seeking employment, social networks with many "weak ties" (i.e., acquaintances) positively influence knowledge of and access to employment choices (Eisenman, 2007). Integrated employment opportunities, such as supported employment, also have been found to increase the richness of young adults' social networks (Forrester-Jones, Jones, Heason & Di'Terlizzi, 2004). Unfortunately, young people with disabilities may have social networks that are constricted, with few interconnections (Eisenman, Farley-Ripple, Culnane, & Freedman, 2013; Trainor et al., 2012). Especially if their school experiences have been primarily in segregated environments, they may feel less socially supported in inclusive environments and may rely primarily on peers with disabilities and family members for social support.

Social relationships are important during employment as well. Employers and educators identify interpersonal engagement skills as critical to early employment success (Agran, Hughes, Thoma, & Scott, 2016; Morningstar, Lombardi, Fowler, & Test, 2017). People with disabilities must be able to navigate the culture of the workplace and make connections with co-workers. Workplace culture refers to the unspoken rules and customs within the workplace (Hagner, Dague, & Phillips, 2015). The consequence of not understanding the culture can have a direct effect on an individual's social relationships and acceptance within the workplace. Participating in acceptable workplace behavior can help counter negative biases of co-workers and employers, establish social relationships, and gain opportunities for new social supports (Butterworth, Hagner, Helm & Whelley, 2000; Vornholt, Uitdewilligen, & Nijhuis, 2013). Socialization in the workplace is the way in which people are incorporated into the organization and become accepted as insiders rather than outsiders (Morningstar et al., 2017; Szymanski & Parker, 1996).

Further Education

There may be a predictive relationship between postsecondary education outcomes and the social skills of youth with disabilities (Mazzotti et al., 2016; Test et al., 2009). Having skills that facilitate joining and becoming involved in new extracurricular activities, navigating informal social interactions, and establishing personal relationships are important to the success of youth with disabilities in postsecondary education (Morningstar & Shoemaker, 2018; Prohn, Kelley, & Westling, 2019; Schoffstall et al., 2016). As more adolescents with disabilities choose to go on to further education, social relationships in that setting must be an important focus for transition. As Lombardi, Murray, and Kowitt (2016) stressed "college students who develop social networks tend to experience more academic success" (p. 3).

Students may experience significant changes in their social networks when they enter college (Eisenman et al., 2013). Socially navigating a college campus can be overwhelming as there are many differences from high school (Alverson, Lindstrom, & Hirano, 2019; Eisenman & Mancini, 2010; Elias & White, 2018). The need to find assistance independently and the level of personal freedom often represent major changes from the secondary environment. Having realistic expectations for social involvement, developing social networks, and locating mentoring support in college settings can help students navigate personal and institutional barriers (Cullen, 2015; Freedman, Eisenman, Grigal, & Hart, 2017; Garrison-Wade & Lehmann, 2009; Prohn et al., 2019; Shepler & Woosley, 2012). For example, a student new to a college campus may be interested in joining clubs or organizations but unaware or unsure of how to do so. Peer mentors can assist with learning about which groups match a student's interests, when organizations meet, what they do, and how to become a member. Through peer-support groups, students share personal stories with people who have had similar experiences, which can foster self-realization and promote a sense of unity and community. These groups can aid in the transition and retention of students in postsecondary settings (Bialka, Morro, Brown, & Hannah, 2017; Björnsdóttir, 2017; Getzel & Thoma, 2008).

In addition to support from social networks and mentors, young adults in postsecondary school environments need self-advocacy skills, including awareness of their personal, social, and communication attributes (Alverson et al., 2019; Getzel & Thoma, 2008; Mull, Sitlington & Alper, 2001; Shepler & Woosley, 2012). They need to recognize when and know how to secure accommodations, which may include finding campus services, building relationships with professors, and developing support systems through friends, mentors, and support groups. Through the process of building social relationships and becoming a self-advocate, the postsecondary environment can become less overwhelming and lead to success.

Independent Living and Community Participation

Social relationships are considered key to successful independent living and community participation. Although research has not established a strong predictive relationship between the quality of students' social skills in high school and later independent living outcomes (Haber et al., 2016; Mazzotti et al., 2016), certain types of social participation during high school may be influential. These include spending more time with friends and family, participating in extracurricular activities, and having access to inclusive academic and work experiences (Mazzotti et al., 2016; Schoffstall et al., 2016; Test et al., 2009). Additionally, for adolescents with mild intellectual disability, participation in social skills or life skills classes may serve to reduce their involvement in unhealthy behaviors such as smoking, alcohol consumption, and sexual activity (Savage & Bouck, 2017).

Many youth with disabilities desire social participation and continue to have regular communication with friends in postschool settings. However, the majority do not engage in community group activities, and a small number have no contact with friends apart from occasional organized

activities. Even during secondary education, young adults with disabilities are less likely to text daily or get together weekly with friends as compared to their peers, although the frequency of their involvement in clubs has risen over time (Liu et al., 2018; Lipscomb et al., 2017; Newman, Wagner, Cameto, & Knokey, 2009; Gauthier-Boudreault, Beaudoin, Gallagher, & Couture, 2019).

Limited postsecondary community engagement may be due to physical, resource, and attitudinal barriers in community settings (Gauthier-Boudreault et al., 2019; Stewart et al., 2012; Trainor et al., 2013). Accessing the types of supports needed for participation in community social and recreational settings can be difficult for people with complex or profound impairments. Disability stigma can operate to preclude social opportunities and limit relationships (Trainor et al., 2013). Further, because of disability stigma, people with disabilities may view themselves negatively (Spassiani & Friedman, 2014).

Active construction of mutually supportive social interactions can counter negative views and support a positive self-image. Perceiving oneself as socially accepted is critical to many people when participating in community leisure activities (Devine & Lashua, 2002). A person's self-determination skills and social competence, particularly social cognitive problem-solving abilities, play a role in sustaining relationships and a higher quality of adulthood life and well-being (Murray, 2003; Shogren & Shaw, 2016). Students who are socially competent or have established social supports will be less vulnerable in new social situations, such as negotiating living arrangements with roommates or experiencing healthy intimate relationships.

The families of students with disabilities are often a major source of social support postschool (Eisenman, Tanverdi, Perrington, & Geiman, 2009; Hirano & Rowe, 2016), although this is not always the case. People with intellectual or psychiatric disabilities may see themselves as having fewer supportive ties and being less central in their families. Over time, they tend to have fewer spouses, partners, or children and, thus, limited family-based social capital (Widmer, Kempf-Constantin, Robert-Tissot, Lanzi & Carminati, 2008). Building social supports beyond the family may be important for long-term success in the community. Rural communities sometimes act as an informal support system with the whole community participating in a supportive role (Irvine & Lupart, 2006). For young people who live in urban or suburban environments, social supports may need to be built through small communities or circles of support to bolster independence, community participation, and social networks. Having a supportive social network enhances resilience and provides a way to overcome barriers and decrease vulnerability during transitions (Gerber, Ginsberg, & Reiff, 1992; Murray, 2003).

Embedding Social Goals into Transition Planning

Facilitating new social relationships for adolescents in transition means looking beyond secondary school settings and into the postsecondary environments where students' postsecondary goals are likely to take them. For purposes of transition planning, individualized education program (IEP) teams should consider the roles of social skills, supports, and networks to students' success in employment, further education, and independent or community living. The team must also acknowledge students and families' cultural standards (National Transition Technical Assistance Center [NTACT], 2016; Rowe et al., 2015; Shepler & Woosley, 2012; Szidon, Ruppar, & Smith, 2015).

Assessments for Social Transitions

As with other transition-related goals, social goals for transition should be based upon transition assessments that assist the IEP team to understand a student's current situation, become familiar with future environments, and develop a plan for moving toward postsecondary goals (NTACT, 2016). Many formal and informal transition assessments include relevant components on social skills within

and across postschool goal areas of employment, further education, and independent living (Clark, 2007; NTACT, 2016, 2018; Sitlington, Neubert, Begun, Lombard, & Leconte, 2007). Ecological assessments are ideally suited for understanding the types of social interactions and supports that are likely to occur in new environments (NTACT, 2016; Rowe et al., 2015). Teaching students how to evaluate their social interactions supports students' knowledge about different settings, promotes self-awareness, and enhances their contributions to the planning process (Rowe et al., 2015). Through this type of assessment process, annual goals can be clearly linked to students' postsecondary goals. Students' annual goals could address awareness (e.g., recognizing unspoken rules of the workplace), exploration (e.g., practicing different ways to negotiate for accommodations in higher-education settings), or preparation (e.g., joining community groups).

Social Networks Assessment

Regardless of the assessment approach or tool used, the fact that students' relationships are in transition must be considered. The IEP team should identify the family and community relationships that are likely to remain with the student postschool, which relationships may fall away, and where new relationships must be built. Assessment of current and future social relationships can be incorporated into the transition planning process through the use of informal social network interviews and social network mapping conducted by or with the student and family members. Interview techniques used by researchers to determine the extent of individuals with disabilities' social networks (e.g., Butterworth et al., 1993; Eisenman et al., 2013) can be adapted for use in transition assessments. Simple questions can be used to begin the process of mapping a person's current network. For example:

- In what activities do you regularly participate at (home/community/work/school)? How often? Where?
- With whom do you typically interact in these activities? How? What is your relationship with (identified individuals)? Who else is involved in these activities? What is your relationship to them?
- If you were doing (an activity) at (home/school/work/community) and (needed help getting something done/wanted some advice/wanted to do something fun), whom would you ask?

Likewise, pictorial or photo methods used to diagram a person's circle of support as part of a person-centered planning process can be adapted to help IEP teams consider the diversity and durability of students' social networks within and across postschool domains (Amado & McBride, 2001; Robinson, Hill, Fisher, & Graham, 2018; Small, Raghavan, & Pawson, 2013). Network interviews and mapping with people in the community also can be conducted to help IEP team members understand the social relationships that are central to the student's future environments. Social network interviews and maps can be regularly updated and re-evaluated as part of the transition assessment process.

The results of these assessments also can be analyzed in a variety of ways to identify sources of support and opportunities for growth. Such analysis might focus on social "bonds" (e.g., What are the social groups with which the young person is affiliated or identifies? How are or could these groups be connected to the person's postschool goals?) and "bridges" (e.g., What new groups might the youth affiliate with to further his or her goals? Who is familiar with those new groups and would welcome the person in?).

A second point of analysis is to consider the types of relationships represented in the student's current and future networks (e.g., acquaintances, friends, family, colleagues, professionals). If the students' relationships are of only one or two types, is there a need to increase the variety of relationships in order to reduce social vulnerability and increase access to opportunities? A third take on relationships

is to consider whether the young person's level of social engagement in current and future activities is or will be sufficient to promote a sense of belonging and the recognition by others that the young person is an integral and valued part of the activity. Who would miss the young person if he or she was absent during the activity? What degree of presence and participation is personally meaningful to the young person? What variety of social roles are available within the activity? What kinds of supports (e.g., accommodations, assistive technology, personal assistance) would promote the young person's inclusion in the activity? Wolfensberger (2000) reminded those who work with people who have disabilities, especially intellectual disability, that messages of "valuing" and "devaluing" are conveyed in social activities on multiple levels: physical environment, social context, activities, and language used with and about people. Teaching young people with disabilities to observe these elements in their networks can be a helpful component of transition assessment as they make plans for enhancing their networks.

Learning Opportunities That Promote Students' Social Transition

The multidimensional framework proposed for embedding social goals into transition assessment and planning drives consideration of learning opportunities that promote young people's social transitions. These opportunities must promote social awareness, exploration, and preparation for postsecondary environments. They must address the multiple facets of social relationships: building social skills and competence, supporting social acceptance and inclusion, and enhancing social networks.

Building Social Skills and Competence

Social skills training interventions for secondary school–age youth with disabilities have been shown to have moderate effects (Alwell & Cobb, 2007). Such school-based interventions are particularly important for students whose social interaction difficulties are a primary manifestation of disability, such as autism. For students who have communication difficulties, educators must ensure that assistive technologies and augmentative communication devices are integrated into social skills interventions (Rowe et al., 2015). Targeted interventions conducted by supportive educators within a familiar social environment can be an effective way to bolster students' social knowledge and skills. However, as with any skill set, direct instruction based on individualized assessment and sufficient opportunities for practice must be provided to have an impact on knowledge, application, and generalization (Rowe et al., 2015).

Individualized skills such as participating in an activity with a group or expressing wants and needs can be taught through a variety of means. These include opportunities that involve sharing and evaluating one's social interactions, social stories, role-playing, counseling, video modeling, assertiveness training, practicing management and leadership of group work, and testing strategies for responding to teasing or other negative acts (Black & Ornelles, 2001; Devine & Lashua, 2002; Irvine & Lupart, 2006; Murphy, Radley, & Helbig, 2018; Stauch, Plavnick, Sankar, & Gallagher, 2018; Wang & Spillane, 2009). Comprehensive intervention frameworks are the most effective. Such interventions promote instruction on a variety of social interactions across the curriculum. They involve peers, families, and educators and operate as part of schoolwide efforts (Carter et al., 2014; Rowe et al., 2015).

Authentic Contexts and Situations

For students in transition, social skills instruction must assist students in learning about social expectations for postsecondary environments (Rowe et al., 2015). This may be accomplished in part by embedding authentic social tasks into community-based instruction, extracurricular activities, and

career education lessons (Andrews, Falkmer, & Girdler, 2015; Murray & Doren, 2013; Schoffstall et al., 2016). Youth with disabilities also need opportunities to develop skills for participating in healthy intimate relationships (Treacy, Taylor, & Abernathy, 2018; Ward, Atkinson, Smith, & Windsor, 2013). Further, social skills interventions need to account for generalization of skills into naturalized environments, which can be accomplished by incorporating homework activities that use family input (e.g. the Program for the Education and Enrichment of Specific Skills, or PEERS) or with peers in an environment outside of the intervention setting (Ke, Whalon, & Jun, 2018).

Explicit instruction on problem-solving skills that are related to interpersonal relationships and participating in social spaces is critical (Rowe et al., 2015). For students with physical disabilities, this extends to problem solving and developing strategies for managing social supports in a variety of environments (Stewart et al., 2012). Also, learning how to recognize risk and make decisions about safety can help reduce students' vulnerability to negative peer situations (Khemka, Hickson, & Mallory, 2016; Savage & Bouck, 2017). This includes navigating and managing expectations in online social media spaces. Social interactions in online environments operate through multiple formats and under different norms of engagement than other types of interpersonal spaces. Students benefit from direct instruction in how to use social media critically, how to protect themselves, and how to avoid victimizing others (Miller, 2017; Morgan et al., 2016).

Peer Supports and Friendships

Social skills instruction should lead to the development of relational skills such as initiating making plans with friends and having friends reciprocate getting together (Laugeson, Ellingsen, Sanderson, Tucci, & Bates, 2014; Locke, Ishijima, Kasari, & London, 2010). Peer social networks can provide opportunities for practicing social-communication skills in the context of shared activities of interest to the group and can result in increased social engagement (Gardner et al., 2014; Lombardi et al., 2016; Rowe et al., 2015). To determine the social validity of a social-focused intervention for youth with autism, Bottema–Beutel, Mullins, Harvey, Gustafson, and Carter (2016) surveyed and interviewed adolescents and young adults regarding their preferences for each element of a planned socially focused intervention. While the participants had diverse views, they had preferences for (a) the ways in which peers would be recruited (based on shared interests), (b) the use of shared activities as a platform for developing social skills (less stigmatizing than direct instruction and more likely to focus on peer group social norms), and (c) limiting involvement of adults (viewed as potentially stigmatizing, intrusive, and awkward). Disclosure of disability in the course of instruction was viewed both positively (instructive for peers) and negatively (stigmatizing by peers).

Supporting Social Acceptance and Inclusion

Building new social relationships as part of the transition process requires attention to issues of stigma and experiences of exclusion that youth with disabilities may face. This involves helping youth to foster a positive disability identity and providing additional supports for multiply marginalized youth.

Constructing Positive Disability Identity

Students with a positive disability identity have more opportunities to make healthy social connections with peers, community members, and people with disabilities. However, students may perceive their disability negatively and feel the need to act "normal" in order to make friends (Sosnowy, Silverman, Shattuck, & Garfield, 2019). When students have a negative view of their disability or are confused about their disability identity, "passing" behavior – purposefully attempt to conceal disability – may occur (Carey, 2013). Students with autism, particularly girls and young women, may

attempt to appear less autistic by "masking" or "camouflaging" their autistic traits (Baines, 2012; Lai et al., 2017). Investing in passing behavior can make students more susceptible to mental health issues like anxiety or depression.

An identity model of disability (Brueggemann, 2014) can support positive understandings of disability. Gill (1997) explained that the "attempt to fashion an identity that excludes important parts of the self, i.e. the disabled parts, then, results in a sense of self in conflict or a self-image riddled with significant gaps" (pp. 43–44). Self-determination strategies that help a student develop self-realization, psychological empowerment, and autonomy can support students in positive disability identity development (Wehmeyer, 2008). An identity model of disability also involves connecting to others with similar experiences and learning more about them. Reaching out to others with the same disability often leads to finding a sense of strong connection and bonding. Being understood by others who share the same experience provides individuals with an emotional support group and widens their social network (Brueggemann, 2014; Forber-Pratt & Zape, 2017; Straus, 2010). Further, students who positively identify with their disability may come to view themselves as part of a minority group connected to a rich disability culture. Facets of disability culture include sharing the lived experience of disability through writing, art, or engaging with a disability community as well as recognizing the importance of access to independent choices made by people with disabilities (Petner-Arrey, 2012).

Supporting Multiply Marginalized Groups

Students' intersecting experiences of disability and membership in racial/ethnic minority groups are associated with poorer postschool outcomes than those of other students (Newman et al., 2011). Their more limited success has been attributed to: discrimination based on differing expectations for social behaviors in schools and community environments; social skills interventions that ignore cultural dimensions of identity and relationships; limited acknowledgment of students' strengths; and fewer opportunities for social inclusion (Leake & Black, 2005). Educators must become aware of and responsive to these challenges when considering how to enhance the social acceptance and inclusion of multiply marginalized youth. Leake and Cholymay (2004) suggested that cultural brokers can be an important key to facilitating the social engagement of youth. Brokers are people with or without disabilities who have bonds to multiple social identity groups and who are skilled at creating bridges between groups. They are willing to establish relationships with youth who have disabilities, introduce them to others, and provide guidance and support as these youth learn to navigate new social territory and establish bonds within a new group.

A group that is often ignored in discussions of transition services is LGBTQ youth with disabilities (Dykes & Thomas, 2015; Morgan, Mancl, Kaffar, & Ferreira, 2011). They have the same social development needs as other youth, yet they are more likely to face heightened stigma and harassment in the secondary school environment and may be less likely to reach out for information and support. Educators must be intentional about assisting LGBTQ students with disabilities to gain access to school and community resources that provide them with information about their emerging social identities and relationships. This should include guidance about safely navigating online social spaces. Miller (2017) noted that college-age youth who self-identified as LGBTQ and disabled frequently used social media as platforms for identity exploration and management. They often view online environments as safer than physical environments despite known risks. Within schools, educators must create safe spaces, access to trusted adults, and supportive school activities (Dykes & Thomas, 2015; Morgan et al., 2011). Gay-straight alliances can play a central role in establishing social supports in the school by promoting acceptance and positive interactions among peers, although there is a lack of research on whether or how students with disabilities have been integrated into such groups.

Enhancing Social Networks

To become a socially engaged adult, students must do more than generalize their knowledge and skills for use in postschool settings. They need to learn about the importance of networks and work on making new connections (McDonnall, 2011; Trainor et al., 2013). Building social networks can be supported through community engagement and mentoring activities.

Community Engagement

Youth with disabilities who participate in extracurricular activities tend to be those with more friends and larger social networks. Involving students in extracurricular activities and community groups may lead to greater social skill capacity, friendships, and social capital (Trainor et al., 2012; Wagner et al., 2003). Community engagement may include work experience, academic clubs, and other social organizations inside and outside of school. Teachers have a central role in promoting students' social competence and relatedness. Teachers can identify opportunities afforded by the classroom, school, or community for students' access to adult and peer role models, engagement with peers and adults in supportive relationships, and participation in socially meaningful activities. They can critically examine and, as needed, alter school structures or processes that limit opportunities for youth with disabilities to experience valued and positive peer social interactions, such as beliefs about which students should participate in which school and community activities (Swedeen, Carter, & Molfenter, 2010). Teachers must ensure that all social activities include a "stretch" component of encouraging students to ask questions regarding their social awareness, exploration, and preparation: What am I learning about the social world beyond my immediate situation? What am I learning about my social interests and abilities? What social experiences might help me become a member of new groups?

Recognizing that the school setting is not always conducive to helping students establish connections beyond the school walls, students, families, and other IEP teams and community members must be enlisted to identify work, volunteer, and leisure activities in the community where new social relationships can be explored. The community activities and locations should be places where youth can be present and participate with those who have mutual interests or goals. These may be formal or informal activities where, in addition to learning about specific social activities, youth have an opportunity to experience a variety of reciprocating social roles (e.g., giving and receiving support, companionship) (Butterworth et al., 2000). Participation in community groups and clubs can provide opportunities for young adults to practice negotiation and advocacy skills in a safe environment. Cullen (2015) also suggests providing information to families and students about online resources for postsecondary settings they may be less familiar with; for example, Think College and OASIS, which highlight important dimensions of postsecondary education relevant to youth with autism and developmental disabilities.

Mentoring

Mentorship is another mechanism of support for students with disabilities and occurs both inside and outside of school. According to Leake, Burgstahler, and Izzo (2011), mentorship, either formal or informal, is desired by youth with disabilities as they embark and go through transition. Students with mentors have an increased social network that provides them with more people to learn about options for postsecondary education or work and career possibilities after high school. Specific social supports are provided by mentors and include motivation, cultural connections, and natural supports. Students with a disability who desire to become mentors to others with a disability need to strongly identify with their own disability in a positive manner (Forber-Pratt & Zape, 2017). For some

students, mentoring others like themselves and demonstrating goal attainment may be a motivation for creating a successful transition experience. Mentorship can occur in a variety of ways, such as engaging in self-advocacy and speaking out but also through maintaining their goals for independence and demonstrating that they can live a fulfilled, happy life (Forber-Pratt & Zape, 2017).

When transitioning into the world of work, it is helpful to receive guidance and support from someone who is well established in the social culture of the workplace and has an interest in the development of the mentee. Co-workers who may befriend and provide natural supports have long been recognized as an effective way to integrate people with disabilities into workplace cultures (Hagner & DiLeo, 1993; Szymanski & Parker, 1996). National organizations such as the American Association of People with Disabilities (AAPD) promote a Disability Mentoring Day, an event that aims to boost the workplace success of youth with disabilities by supporting their access to a diverse and engaged social network.

Youth may benefit from mentors who are familiar with diverse postsecondary education settings and will venture with them into exploring specific social opportunities. Mentors can assist students in learning about activities that might be of interest given their prior experiences, the array of social activities available, clues for determining whether a "welcoming" environment exists, pros and cons of revealing one's disability, and formal supports or accommodations one might need (Eisenman & Mancini, 2010). Within the context of mentoring, youth with disabilities can further develop their social skills, identify useful supports, and enlarge their social networks in ways that help them bridge school and postschool environments.

Conclusion

As youth with disabilities begin their transition from school to adult life, they also must begin to develop new social relationships that enhance the social capital they will need for success in the adult world. Beyond learning social skills that have relevance in postschool environments, they also must begin to identify and explore new forms of social supports in those environments. Mentors and other cultural brokers can facilitate the bonding and bridging needed to extend young people's networks of supportive relationships across environments. Further, youth can learn self-advocacy, problem solving, and other strategies that prepare them to take advantage of opportunities within their emerging adult networks and become self-determined, fully participating members of their communities.

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Self-Determination and Transition

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Promoting skills associated with self-determination and providing opportunities and supports for the expression of self-determination through policy and practice have been a major focus in the transition field over the past three decades (Shogren, Abery, et al., 2015). Enhanced self-determination during the transition period has been identified as a predictor of postschool success (Shogren, Wehmeyer, Palmer, Rifenbark, & Little, 2015; Test et al., 2009), and interventions to promote self-determination during secondary transition have been identified as evidence-based practices that enhance student outcomes (Burke, Raley, et al., in press; National Technical Assistance Center on Transition, 2017). However, despite over three decades of focus on self-determination as a key facilitator of more positive secondary and transition outcomes as well as a valued outcome in and of itself, adolescents with disabilities continue to experience significant disparities in their self-determination outcomes compared to their peers without disabilities (Shogren, Shaw, Raley, & Wehmeyer, 2018a). Further, students with more extensive support needs, including students with intellectual disability and autism spectrum disorder, continue to have significantly worse self-determination outcomes than their peers with other disability labels. Further, teachers and transition professionals continue to report a lack of knowledge of effective strategies to support the development of self-determination, without ongoing professional development (Bojanek, Raley, Shogren, & Lane, 2019). As such, there is a continued need for focus on self-determination in transition, particularly considering the changing landscape of secondary transition and postschool supports and services, with new models for promoting the development of self-determination forwarded, tested, and scaled to create ongoing opportunities to enable students to take ownership over designing their life trajectory and accessing effective opportunities and supports to achieve their vision (Wehmeyer et al., 2019).

What Is Self-Determination?

Self-determination began to receive attention in the disability field in the late 1980s and early 1990s in response to calls from advocates with disabilities in the disability civil rights movements, including the self-advocacy movement, for their right to be involved in decisions about their lives to be respected (Dybwad & Bersani, 1996; Wehmeyer, Bersani, & Gagne, 2000). "Nothing about us, without us," a mantra of the movement, characterized this zeitgeist. Coupled with these disability rights and self-advocacy movements was emerging data demonstrating the highly negative postschool outcomes of students with disabilities (Blackorby & Wagner, 1996). As such, promoting

self-determination began to receive attention as an issue that should be addressed in efforts to enhance transition outcomes. In 1988, the Office of Special Education and Rehabilitative Services (OSERS) launched an initiative to focus on self-determination, funding more than 26 model demonstration projects that focused on self-determination theory development, assessment, and intervention (Ward & Kohler, 1996). In describing the initiative, Ward (1988) referred to self-determination as both "the attitudes which lead people to define goals for themselves and the ability to take the initiative to achieve those goals" (p. 2).

Since this time, the field has significantly expanded theoretical frameworks for the development of self-determination (Wehmeyer, Abery, Mithaug, & Stancliffe, 2003), and multiple evidence-based practices exist to teach and create opportunities for the development of self-determination in the context of the transition to adulthood for adolescents with disabilities (Burke, Raley, et al., in press). Drawing from this research that refined understandings of the self-determination construct, Shogren et al. (2015) proposed Causal Agency Theory to describe the development of self-determination. Causal Agency Theory integrates both previous self-determination research and theory, as well as research and theory from other related fields including general and special education and positive and motivational psychology.

Causal Agency Theory defines self-determination as "a dispositional characteristic manifested as acting as the causal agent in one's life. Self-determined people (i.e., causal agents) act in service to freely chosen goals. Self-determined actions function to enable a person to be the causal agent is his or her life" (p. 258). A person who is a causal agent makes or causes things to happen in his or her life by setting and going after goals aligned to his or her interests, preferences, values, and visions. All people, including people with disabilities, develop self-determination when supports and opportunities are provided in inclusive social contexts. Self-determination, as a dispositional characteristic, develops over the lifespan, and adolescence is a critical phase for that development as young people have new and varied opportunities to explore interests, set goals, and test the conditions that support them to achieve their goals. As such, supports and opportunities to develop skills associated with self-determination are critical during the transition to adulthood (Shogren & Wehmeyer, 2017).

Causal Agency Theory describes three essential characteristics of self-determined action: (1) volitional action, (2) agentic action, and (4) action-control beliefs. Volitional action involves making self-initiated choices based on one's preferences and interests. People who act agentically engage in self-directed, self-regulated problem solving in service of a goal. They can act flexibly and navigate around barriers by identifying alternative pathways to get what they want and need. Finally, adaptive action-control beliefs involve a person feeling empowered and realizing ways they can effectively use their skills and capacities in supportive, inclusive contexts (Shogren, Wehmeyer, Palmer, Forber-Pratt, et al., 2015). Contextual factors (e.g., personal, family and community, and systems and policy factors) shape opportunities for the development and expression of self-determination, necessitating consideration of the implementation of interventions and support to teach skills associated with self-determination, such as self-advocacy, goal setting, problem-solving and decision-making skills, across supportive systems.

Causal Agency Theory provides a framework to assess, develop, implement, and evaluate interventions to promote self-determination. We will discuss assessments and interventions derived from Causal Agency Theory in later sections. However, it is first important to highlight what we have learned in the past 30 years about the impacts that promoting self-determination can have on transition outcomes to justify a continued focus on self-determination in transition.

Self-Determination and Transition Outcomes

As noted, self-determination was identified as a critical area to address in efforts to enhance the postschool outcomes of students with disability. Early research documented the relationship between

self-determination and postschool outcomes. For example, Wehmeyer and Schwartz (1997) measured the self-determination of 80 students with intellectual disability or learning disabilities in their final year of high school and then one year after high school. Students with higher self-determination scores when they left high school had consistently more positive outcomes, including expressing a preference to live outside the family home, having a savings or checking account, and being employed for pay one year after school. Employed youth in the high self-determination group also earned significantly more per hour than their peers in the low self-determination group. Wehmeyer and Palmer (2003) conducted a second follow-up study, examining the adult status of 94 young people with intellectual disability or learning disabilities one and three years after graduation. These data replicated Wehmeyer and Schwartz (1997) and found employed young adults scoring higher in self-determination made statistically significant advances in obtaining job benefits, including vacation and sick leave and health insurance.

Building on this research suggesting a relationship between self-determination and postschool outcomes, researchers have explored the impact of teaching and creating opportunities during transition planning. In an early meta-analysis of research on interventions to teach self-determination skills, Algozzine, Browder, Karvonen, Test, and Wood (2001) found evidence for the efficacy of instruction to promote component elements of self-determined behavior, including self-advocacy, goal setting and attainment, self-awareness, problem-solving skills, and decision-making skills. Cobb, Lehmann, Newman-Gonchar, and Alwell (2009) conducted a narrative meta-synthesis – a narrative synthesis of multiple meta-analytic studies – and suggested that across studies there was a consistent finding that promoting self-determination led to enhanced outcomes and that multicomponent interventions (e.g., those that targeted multiple self-determination skills in a comprehensive manner) were most effective. In the most recent meta-analysis of the self-determination literature, Burke, Raley, et al. (in press) found that ongoing research has been conducted on teaching skills associated with self-determination and that positive impacts on outcomes continue to be documented.

Overall, research has suggested that enhanced self-determination skills can lead to increase academic performance (Konrad, Fowler, Walker, Test, & Wood, 2007; Raley, Shogren, & McDonald, 2018b), attainment of academic (Agran, Blanchard, Hughes, & Wehmeyer, 2002; Shogren, Palmer, Wehmeyer, Williams-Diehm, & Little, 2012; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000) and transition (McGlashing-Johnson, Agran, Sitlington, Cavin, & Wehmeyer, 2003; Shogren, Burke, Antosh, et al., in press; Shogren et al., 2012; Wehmeyer, Palmer, et al., 2000; Woods & Martin, 2004) goals, and greater access to the general education curriculum (Agran, Wehmeyer, Cavin, & Palmer, 2008; Lee, Wehmeyer, Palmer, Soukup, & Little, 2008) for adolescents with disabilities in secondary school.

Research has also suggested a link between enhanced self-determination while youth are in school and postschool outcomes. In one of the few longitudinal studies examining the relationship of promoting self-determination in adolescents and longer-term early adulthood outcomes, Shogren, Wehmeyer, Palmer, Rifenbark, et al. (2015) followed students who had participated in a randomzied controlled trial on the efficacy of self-determination interventions (compared to a business-as-ususal control group; Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup, 2013) for two years postschool. Shogren and colleagues found self-determination status at the end of high school, which was impacted by exposure to self-determination interventions in secondary school, predicted significantly more positive employment outcomes, including increased wages, benefits, and opportunities for career development. The young adults also showed increased community participation outcomes, including access to social networks and supports, transportation, and other critical factors to successful employment and community participation. In essence, this study provided evidence that promoting self-determination while youth are in secondary school results in enhanced self-determination in early adulthood and that enhanced self-determination in early adulthood results in more positive transition outcomes. As such, there is a large and consistent body of research suggesting that – after

controlling for other factors – enhanced self–determination leads to more positive postschool out–comes, suggesting the need to continue working to advance efforts to promote enhanced student self–determination alongside efforts to enhance other skills and create more responsive systems and supports in the transition to adulthood.

Assessment and Self-Determination

Critical to examining self–determination outcomes is having valid tools that can be reliably used to measure self–determination status over time and as a function of changes in interventions and sup–ports. Early work on self–determination led to several assessments being developed including The Arc's Self–Determination Scale (Wehmeyer & Kelchner, 1995), the AIR Self–Determination Scale (Wolman, Campeau, Dubois, Mithaug, & Stolarski, 1994), and the Self–Determination Assessment Battery (Hoffman, Field, & Sawilowsky, 2004). Each of these have been utilized in research examin–ing the impact of interventions to promote self–determination.

However, given the introduction of Causal Agency Theory; the expansion of research in self–determination, disability, transition, education, positive psychology, and related fields; and emerging technological innovations, there was a need for new measures of self–determination that could be used both in research but also in practice to document self–determination outcomes and examine changes over time as a result of intervention and supports. The Self–Determination Inventory Sys–tem was developed to address this need. The Self–Determination Inventory System is an array of online assessments of self–determination aligned with Causal Agency Theory. These assessments include a Student Report version (SDI:SR for adolescents aged 13–22), a Parent/Teacher Report version (SDI:PTR, for parent and teacher proxy–report for adolescents aged 13–22), and an Adult Report version (SDI:AR; ages 18 and over). One unique feature of the SDI assessments is that they were validated with people with and without disabilities to enable comparative work on self–determination outcomes for youth and adults with and without disabilities to examine disparities in outcomes that emerge from a lack of supports and services. Another unique feature is the use of technological advances to deliver the questions and provide immediate feedback to users. Responses to the SDI assessments are collected via a customized online platform that incorporates features of universal design (e.g., items can be read aloud, definitions appear for challenging words, visual sup–ports for navigation are provided). The average reading level of items is 2.8, and responses to items are provided on a slider scale whereby respondents identify the degree to which they disagree or agree with a given statement, scored by the computer software between 0 and 99, rather than having to make distinctions between discrete response options (e.g., strongly disagree or somewhat disagree, as is the case with Likert scales). Researchers have found that using slider scales can reduce discrimina–tion errors, as discrete ratings are not required (Ahearn, 1997; Rausch & Zehetleitner, 2014), and can promote accessibility for people with cognitive disabilities (Raley, Shogren, Rifenbark, Anderson, & Shaw, in press). After completion of the scale, all survey takers as received an individualized report on their overall self–determination as well as a guide that they or their teachers, families, or other sup–ports can use to integrate SDI scores into ongoing instruction and supports.

Emerging research has suggested that the SDI assessments are valid tools to assess the self–determination of adolescents and adults with and without disabilities. Initial research was conducted on the SDI:SR, establishing the best set of 21 items to measure self–determination aligned with Causal Agency Theory in adolescents with and without disabilities (Shogren, Little, et al., in press) and the feasibility and importance of providing online, universally designed supports to assess the self–determination of adolescents with disabilities (Raley et al., in press). Researchers established that the same set of SDI:SR items could be used across adolescents with no disability, learning disabilities, intellectual disability, autism spectrum disorder, and other health impairments as well as in adults with

and without intellectual disability (Shogren, Rifenbark, & Hagiwara, 2019) but that overall differences in scores were based on disability, age, race/ethnicity, and other contextual factors (Shogren et al., 2018a; Shogren, Shaw, Raley, & Wehmeyer, 2018b). Disparities in self-determination outcomes exist and are influenced by disability, with youth and adults with autism spectrum disorder and intellectual disability scoring the lowest and with all young people with disabilities scoring lower than young people without disabilities. However, when considering the interaction of disability status and race/ethnicity, more complex patterns emerge, with diverse students with disabilities frequently scoring lower than their peers, suggesting there are ongoing issues that need to be targeted with regard to cultural competence self-determination instruction and supports (Shogren, 2011; Valenzuela & Martin, 2005). Further, socioeconomic status predicts variability in self-determination outcomes, highlighting the role of environmental factors and supports, particularly the lack of resources in schools and communities, as this may negatively affect self-determination (and other) outcomes.

Research has also examined similarities and differences in scores on the SDI:SR and the SDI:PTR, suggesting differences in perceptions of self-determination in teacher proxy-respondents and the need to support self-report to the degree feasible (Shogren, Anderson, Raley, & Hagiwara, in press). Ongoing research has also established the unique contributions of the self-determination construct above and beyond other positive psychological constructs (Shogren, Shaw, & Raley, in press), highlighting the role that understanding self-determination can play in transition assessment. And, increasingly, the SDI:SR is being adopted in research examining the impact of self-determination interventions in adolescents (Shogren, Burke, et al., 2018; Shogren, Hicks, et al., in press); an online data dashboard system has been created and adopted by researchers and schools/disability support organizations that allows for immediate reporting of scores to end users and aggregation and management of scores over time by projects and organizations.

Reliable, valid, and meaningful assessment tools are a critical part of promoting and enhancing self-determination as they allow for examination of disparities in self-determination outcomes that can be targeted through intervention and supports. There is clear and compelling evidence that students with disabilities are less likely to be self-determined than their peers without disabilities, but research has also suggested that if provided instruction to promote self-determination, they can become more self-determined and that enhanced self-determination is causally linked to more positive school and transition–related outcomes. The following sections introduce intervention strategies that can be used in transition and beyond to promote enhanced self-determination in young people with disabilities, as well as their peers without disabilities.

Interventions to Promote Self-Determination

There have emerged, over the past 30 years, numerous interventions, from curricular programs to instructional models, developed to promote self-determination. The National Technical Assistance Center on Transition (NTACT) identified evidence-based and research-based predictors of postschool outcomes in transition (see Chapter 4), and self-determination has been identified as a predictor of postschool education and employment outcomes. Further, various interventions that target enhanced self-determination skills have been identified as research-based or evidence-based interventions to enhance transition outcomes. Specific curricula and interventions that promote student involvement in the individualized education program (IEP) or transition planning meeting (e.g., the Self-Directed IEP) are reviewed in other chapters (see Chapter 9), and in this section, we will focus on one intervention, the Self-Determined Learning Model of Instruction (SDLMI), that is an evidence-based intervention to promote self-determination and other in-school and postschool outcomes for students with disabilities that has been evaluated both in transition planning and in inclusive academic instruction.

Self-Determined Learning Model of Instruction

Educators use a variety of teaching models, defined as "a plan or pattern that can be used to shape curriculums (long term courses of study), to design instructional materials, and to guide instruction in the classroom and other settings" (Joyce & Weil, 1980, p. 1). Different from a curriculum, a teaching model is derived from theories about human behavior, learning, or cognition and provides a framework that teachers can use to organize their instruction to enable students to achieve valued outcomes. The SDLMI (Shogren, Raley, Burke, & Wehmeyer, 2018) is a model of teaching aligned with Causal Agency Theory and the key skills associated with self-determination. It provides teachers with a means to engage students in setting goals related to the content they are learning by teaching, creating opportunities, and supporting self-regulated problem solving as students work toward self-directed goals. The SDLMI has been used with students with and without disabilities across a variety of contexts, including transition planning (Burke, Shogren, Antosh, LaPlante, & Masterson, in press; Shogren, Burke, et al., 2018; Shogren, Burke, Antosh, et al., in press) and inclusive general education core content classrooms (Raley, Shogren, & McDonald, 2018a; Raley et al., 2018b).

Implementation of the model consists of a three-phase instructional process. Each instructional phase presents a problem to be solved by the student. The student solves each problem by posing and answering a series of four Student Questions per phase that students learn, modify to make their own, and apply to reach self-selected goals. Each question is linked to a set of Teacher Objectives. Each instructional phase includes a list of Educational Supports that teachers can use to enable students to self-direct learning. In each instructional phase, the student is the primary agent for choices, decisions, and actions, even when eventual actions are teacher directed.

The Student Questions in the model are constructed to direct the student through a problem-solving sequence in each instructional phase. The solutions to the problems in each phase lead to the problem-solving sequence in the next phase. Teachers implementing the model teach students to solve a sequence of problems to construct a means-ends chain – a causal sequence – that moves them from where they are (an actual state of not having their needs and interests satisfied) to where they want to be (a goal state of having those needs and interests satisfied). Its function is to reduce or eliminate the discrepancy between what students want or need and what students currently have or know. That means-ends sequence is constructed by having students answer the questions that connect their needs and interests to their actions and results via goals and plans. To answer the questions in this sequence, students must regulate their own problem solving by setting goals to meet needs, constructing plans to meet goals, and adjusting actions to complete plans. Thus, each instructional phase poses a problem the student must solve (What is my goal? What is my plan? What have I learned?) by solving a series of problems posed by the questions in each phase. The four questions differ from phase to phase but represent identical steps in the problem-solving sequence. That is, students answering the questions must: (a) identify the problem, (b) identify potential solutions to the problem, (c) identify barriers to solving the problem, and (d) identify consequences of each solution. These steps are the fundamental steps in any problem-solving process, and they form the means-end problem-solving sequence represented by the Student Questions in each phase and enable the student to solve the problem posed in each instructional phase.

The Student Questions are written in first-person voice in a relatively simple format with the intention that they are the starting point for discussion between the teacher and the student. Some students will learn and use all 12 questions as they are written. Other students will need to have the questions rephrased to be more understandable. Still other students, due to the intensity of their instructional needs, may have the teacher paraphrase the questions for them. The first time a teacher uses the model with a student, the initial step in the implementation process is to read the question with or to the student, discuss what the question means, and then, if necessary, change the wording to enable that student to better understand the intent of the question. Such wording changes must,

however, be made such that the problem-solving intent of the question remains intact. The Teacher Objectives within the model are just that – the objectives a teacher will be trying to accomplish by implementing the model. In each instructional phase, the objectives are linked directly to the Student Questions. These objectives can be met by utilizing strategies provided in the Educational Supports section of the model. The Teacher Objectives provide, in essence, a road map to assist the teacher that enables the student to solve the problem stated in the student question.

The emphasis in the model on the use of instructional strategies and educational supports that are student directed provides another means of teaching students to teach themselves. As important as this is, however, not every instructional strategy implemented will be student directed. The purpose of any model of teaching is to promote student learning and growth. There are circumstances in which the most effective instructional method or strategy to achieve a particular educational outcome will be a teacher-directed strategy. Students who are considering what plan of action to implement to achieve a self-selected goal can recognize that teachers have expertise in instructional strategies and take full advantage of that expertise.

The fundamental purpose of any model of instruction is to promote student learning. Teachers use models of instruction to drive curriculum and assessment development and to design instructional methods, materials, and strategies, all with the intent of improving the quality of the instructional experience and, presumably, enhancing student achievement. Thus, the first requirement of any model of instruction is that teachers can use the model to "teach" students educationally valued skills or concepts. The Self-Determined Learning Model of Instruction has the added benefit of enhancing student self-determination.

A variety of supports for teachers implementing the SDLMI across instructional contexts have been developed, including a Teacher's Guide (Shogren, Raley, et al., 2018) and associated online tools and implementation supports, as well as supplemental materials specific to transition planning (Shogren & Burke, 2019a), implementation in inclusive classrooms (Shogren, Raley, & Burke, 2019), and supporting students with complex communication needs to meaningful access and engage the content of the SDLMI (Shogren & Burke, 2019b). Further, we have developed a SDLMI Coaching Model (Hagiwara, Shogren, Lane, Raley, & Smith, in press) that trains coaches to support teachers to engage in problem solving for how to deliver SDLMI instruction and embed opportunities to build self-determination in their instruction. Teacher coaching has been identified as an essential feature of effective professional development that supports teachers' abilities to translate knowledge and skills into classroom practice (Joyce & Showers, 2002). The importance of coaching in promoting fidelity of implementation of an effective innovation has been widely acknowledged within implementation science (Fixsen, Blase, Duda, Naoom, & Van Dyke, 2010). Coaching also plays a key role in ensuring teachers have the competencies to implement evidence-based practices as intended over time (Snyder, Hemmeter, & Fox, 2015).

As mentioned, the SDLMI has been identified as an evidence-based practice (National Technical Assistance Center on Transition, 2017), with multiple large-scale randomized trials targeting students with a wide range of disabilities in transition planning (Hagiwara, Shogren, & Leko, 2017). In one of the first large-scale studies of the SDLMI, Wehmeyer et al. (2012) conducted a group-randomized control trial (RCT) study of the efficacy of the SDLMI to promote the self-determination of over 300 high school students with disabilities in special education resource classrooms. Students in the treatment group showed significantly greater growth in their self-determination over a two-year period after they worked through the SDLMI two to three times per year during both years of intervention. Shogren et al. (2012) examined the impact of the SDLMI on access to the general education curriculum and found that students in the SDLMI treatment group (compared to the business-as-usual control group) attained greater access to the general education curriculum in inclusive, secondary classes after one year of instruction with the SDLMI even as SDLMI instruction occurred in resource classrooms. Further, students who engaged in the SDLMI achieved greater academic and

transition goals at a higher rate than students in the control group. More recent work has provided initial, promising evidence of using the SDLMI in inclusive, core content classes. Raley et al. (2018b) explored implementing the SDLMI with 34 students across two inclusive pre-algebra classes over an academic semester (approximately 16 weeks). Slight modifications were made to existing SDLMI materials to enable its use with all students in the pre-algebra classes (e.g., providing goal areas linked to the pre-algebra curriculum that students were able to select and individualize based on their self-identified targets for learning). The goals identified by students were consistent with the application of self-regulatory skills to enhance learning, as well as engagement and performance in mathematics class. Preliminary findings suggested that after one semester, students with and without disabilities showed slight increases in self-determination, particularly in autonomy. Further, over 90% of students across both pre-algebra classes achieved expected or higher levels of goal attainment on their self-selected goals. After using the SDLMI for just one semester, students felt positively about their progress and said, for example, "I understand word problems better," "I'm proud that I improved," and "It worked because I got my grades up." In a post-implementation semi-structured interview, the general education mathematics teacher also reported changes in student engagement and pre-/post-semester grades, particularly for students with disabilities. She shared, "They started to take notes more, and they tried the strategies that they came up with to improve their grades. And their grades improved – I'm so excited!"

This emerging research is important as it suggests the potential to think about self-determination from a tiered supports perspective (Shogren, Wehmeyer, & Lane, 2016), with universal self-determination instruction delivered to all students in inclusive classrooms and with more targeted supports for students with disabilities in transition planning devised to enable multiple opportunities for the use of self-determination skills, promoting generalization and the development of a sense of causal agency over multiple domains over one's life.

Conclusion

There is both compelling evidence as well as ongoing confirmation from advocates with disabilities that self-determination is a critical outcome as well as a predictor of success in school and postschool. More work is needed to scale up and support fidelity in the use of assessment and intervention practices in school contexts, particularly as research suggests a relationship between fidelity of implementation of interventions like the SDLMI, the supports that are provided for implementation, and student outcomes (Shogren, Burke, Anderson, et al., in press). This creates a critical need to identify effective supports for implementation, including training materials, online supports, and coaching tools and frameworks that can be scaled and individualized to meet contextual demands. Further, self-determination across the life course must be an ongoing area of focus. Researchers have established the importance of focusing on self-determination in early childhood and throughout elementary school (Palmer & Wehmeyer, 2003) as well as throughout postsecondary education (National Coordinating Center Accreditation Workgroup, 2016; Thoma & Getzel, 2005) and employment (Dean, Burke, Shogren, & Wehmeyer, 2017; Shogren, Gotto, et al., 2016). Additional research is needed to plan for supporting self-determination across the life course and better integrating research and practice focused on building to postschool outcomes (Shogren & Wittenburg, in press) to enable the outcomes identified in disability policy and targeted through transition supports.

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Work-Based Learning for Students With Disabilities

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According to the Individuals with Disabilities Education Improvement Act of 2004, the fundamental purpose of a free appropriate public education is to prepare youth with disabilities for "further education, employment, and independent living" (IDEA, 2004, Section 601(d)(1)(A)). Students with disabilities need comprehensive transition planning, structured instruction, individualized supports, and community-based experiences to adequately prepare them to transition into adult roles in the community. Work-based learning is a critical component of transition best practices and an effective tool for preparing youth for future employment options (Lee & Carter, 2012; Mazzotti et al., 2016)

The purpose of this chapter is to provide a context and framework for developing work-based learning in local schools and communities and to describe effective work-based learning models for youth with disabilities. Throughout the chapter, the umbrella term "work-based learning" is used to refer to a variety of work-based activities that connect students to work, build employability skills, and increase career options and opportunities.

What Do We Know About Work-Based Leaning?

Work-based learning is an educational approach or instructional methodology that uses the workplace to provide students with knowledge and skills, preparing them for future career opportunities (Workforce Innovation Technical Assistance Center, 2016). Exposing youth to work-based learning can engage young people in new ways and can support hands-on skill development. Work-based learning may vary in intensity, structure, and scope and can help increase awareness about careers, encourage the development of workplace skills, and build positive pathways from education to careers (Gardiner, 2016).

Access to Work for Youth with Disabilities

Obtaining and maintaining meaningful employment is an important goal for most adults in our society. Historically, young adults with disabilities have not achieved the same level of postschool employment success as their peers without disabilities (Johnson, Stodden, Emanuel, Luecking, & Mack, 2002). As such, the benefits accrued from having a stable, fulfilling job continue to be largely unrealized by people with disabilities (Kessler Foundation/National Organization on Disability, 2010; U.S. Bureau of Labor Statistics, 2018). For example, according to a 2018 Bureau of Labor Statistics (BLS) report describing labor force participation for people with disabilities, for working-age

(18 to 64) people with disabilities, only 19.1% reported that they were employed full or part-time, comparated to 65.9% of working-age people without disabilities, representing a gap of 46 percentage points (BLS, 2018). Data reported in the National Longitudinal Transition Study 2012 (NLTS 2012; for information on NLTS 2012 report, see Lipscomb et al., 2017a, 2017b) indicate that only 40% of secondary-age students receiving school-based special education services have had a paid work experience in the past year, compared with 50% of their peers who are not receiving special education services (Lipscomb et al., 2017a), suggesting an ongoing lack of access by students with disabilities to work-based learning opportunities that could enhance postschool employment options.

One of the most consistent predictors of postschool employment for students with disabilities is participation in work-based learning during high school (Dong, Fabian, & Luecking, 2016). Numerous studies have shown that students with disabilities who held paid jobs during their high school years are significantly more likely to be engaged in postschool employment than students who did not (Luecking & Wittenburg, 2009). In addition, research suggests that the impact of participation in work-based learning during high school holds true for both males and females (Fabian, 2007) and for youth both with and without disabilities (Georgiou, Espahbodi, & De Souza, 2012), highlighting the importance of work-based learning for all youth. Beyond high school, the early transition years can be particularly challenging for young adults with disabilities. Young adults with disabilities face unique challenges as they move from the structured environment of high school to postschool settings where the type and level of support are quite different. Programs that offer continued services beyond secondary schooling, including early work-based learning, have resulted in positive postschool employment outcomes (Lee & Carter, 2012; McDonnall & O'Mally, 2012).

Context and Considerations

A number of critical issues face education personnel who are striving to develop effective and sustainable work-based learning opportunities for youth with disabilities. Work-based learning options are influenced by and operate within the larger context of current educational policies, changing school system requirements, and other cultural and systemic barriers (Brand & Valent, 2013; Trainor, Lindstrom, Simon-Burroughs, Sorrells, & Martin, 2008). These complex challenges and contextual factors need to be taken into consideration in order to build successful work programs. Three of the most salient issues to consider include: (1) federal policies focused on transition to employment, (2) changing workplace demands, and (3) issues of equity and access.

Federal Education Policies

Current federal policies supporting career preparation and workplace readiness reflect an ongoing trend towards enhancing collaboration between the education and workforce sectors. These policies also reflect an increased emphasis on serving the school-to-work transition needs of students who face barriers in that transition, including out-of-school youth and those with disabilities. Two key federal policies provide important guidance for the implementation of work-based learning; the Every Student Succeeds Act of 2015 (ESSA) and the Workforce Innovation and Opportunity Act of 2014 (WIOA). Several provisions in ESSA underscore the importance of preparing youth for employment, and WIOA encourages a career pathways approach that integrates education and career development to foster skills that prepare youth to meet local labor market needs (Hossain & Bloom, 2015).

Workplace Demands

In addition to federal policies, special education and transition personnel need to be aware of the changing opportunities in the labor market. Although the U.S. economy is steadily recovering from

the Great Recession of 2007, many youth are facing high rates of unemployment, limiting their early exposure to work (Showalter & Spiker, 2016). Higher wage occupations typically require some type of technical or postsecondary training. To flourish in employment settings, young workers need to be flexible, adaptable, life-long learners who are prepared to find and hold a sequence of jobs over time. The average American now holds seven to ten different jobs between the ages of 18 and 30, and one in four young people have more than ten different jobs during that time period (U.S. Bureau of Labor Statistics, 2014). The key skills needed to navigate the changing job market include: flexibility, effective problem solving, communication, and, most importantly, *adaptability* to navigate today's careers.

Equity and Access

A third consideration in developing work-based learning is the critical need to provide equal access and ensure positive outcomes for youth with disabilities from historically marginalized and vulnerable groups (Gil-Kashiwabara, Hogansen, Geenen, Powers, & Powers, 2007; Trainor et al., 2008). Students with disabilities from culturally diverse backgrounds, young women, and youth from low-income families all face significant barriers to postschool employment and have not benefitted equally from participation in transition programs (Carter, Austin, & Trainor, 2012; Trainor et al., 2008).

A number of studies have documented that youth from culturally diverse groups have differing educational experiences and poorer postschool outcomes than their dominant culture peers (Fabian, 2007; Lipscomb et al., 2017b). For example, African American youth are more likely to be identified with an emotional or cognitive disability and less likely than European American youth to spend the majority of their school day in general education settings. Youth with disabilities from culturally diverse backgrounds also do not have the same in-school experiences as their peers from the dominant culture. The NLTS 2012 reports that Black or Hispanic youth with an individualized education program (IEP) were less likely to report having recent work experiences than students who were White, Asian, or another race (Lipscomb et al., 2017b).

Youth with disabilities from lower income households ($25,000 per year or less) also experience lower levels of engagement in postsecondary education and employment than those from higher income families. Students from lower income households are more likely than youth from higher income households to participate in low-skill, low-wage employment; earn *less* than $5.15 per hour (Wagner, Newman, Cameto, Levine, & Garza, 2006); and have lower expectations about the future (Lipscomb et al., 2017b). Blustein's 2002 study describing the role of social class in school-to-work transition also found that family socioeconomic status (SES) was an especially strong predictor of later access to career opportunities and options. In this study, youth from higher socioeconomic backgrounds often aspired to higher status/prestige occupations, were more likely to value work as a source of personal satisfaction, and had greater access to external supports in the employment preparation process (Blustein et al., 2002).

Finally, previous research has documented a number of gender differences in work-based learning opportunities and employment outcomes (Dong et al., 2016; Hogansen, Powers, Geenen, Gil-Kashiwabara, & Powers, 2008). A systematic review of literature exploring the role of gender in employment for youth with disabilities found that, overall, young men with disabilities were more likely to be employed than young women with disabilities after leaving high school (Lindsey, Cagliostro, Albarico, Srikanthan, & Mortaji, 2017). Females with disabilities are often not exposed to career-related learning experiences and are more likely to be funneled into gender stereotyped occupations than males with disabilities (Powers, Hogansen, Geenen, Powers, & Gil-Kahiwabara, 2008). The NLTS 2012 also reports that females are less likely than males to report taking college entrance exams or having recent paid work experience (Lipscomb et al., 2017b). Restricted opportunities for work-based learning and differences in career preparation and other training opportunities can result

in poor employment outcomes and low-wage jobs for young women with disabilities (Lindstrom, Harwick, Poppen & Doren, 2012; Lindsey et al., 2017).

A Framework to Build Capacity for Work-Based Learning

Given the numerous and complex challenges described here, it is clear that school personnel must tread carefully, think creatively, and work collaboratively to develop effective work-based learning opportunities for all students, including those with disabilities. Work-based learning models should be structured to fit within the current educational climate of inclusion, high academic standards, and increasing rigor while at the same time preparing youth to excel in highly competitive and changing workplaces. Employment and training needs for diverse youth, youth from low-income families, and young women should be addressed to increase access and equity in service delivery and outcomes.

Meeting the unique needs of individual youth, school systems, workforce development programs, and employers calls for a systemic approach, taking into consideration existing programs while striving to build and maintain partnerships within communities (Cahill, 2016; Luecking, 2009). While these systems must ideally also exist at the national and state levels, the emphasis of the framework described in the following is on school and community planning and implementation to increase availability and access to work-based learning opportunities. The four primary steps of the framework include: (1) develop a transition leadership team; (2) review existing opportunities and resources; (3) create and implement a data-based plan; and (4) evaluate outcomes and refocus efforts for continuous improvement (see Figure 15.1).

Step One: Develop a Transition Leadership Team

The first step to increase access to work-based learning is to identify and recruit key stakeholders to participate as members of a *transition leadership team* that will focus on the availability and accessibility of these opportunities; identify gaps in services; and develop, implement, and monitor a plan to address these gaps. Key stakeholders should include individuals who are invested in the implementation and outcomes of work-based learning, including both consumers and providers of these experiences, and individuals who have an influence on how resources such as time (e.g., human capital), money, and other materials are allocated. Membership might include one or more representatives from each of following stakeholder groups:

- Students with disabilities
- Families of students with disabilities
- Employers
- Special and general education teachers
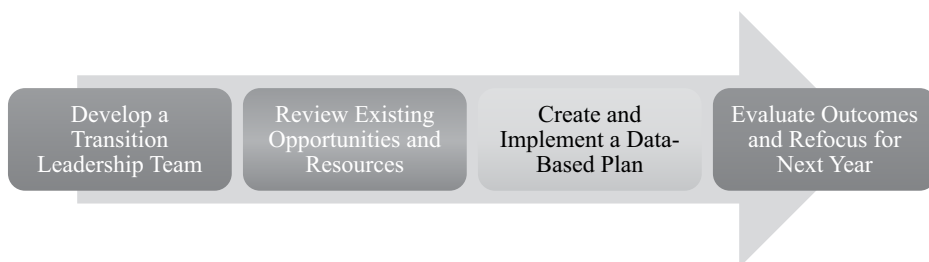
Figure 15.1   A Framework to Build Capacity for Work-Based Learning

- Career and technical educators
- School counselors and/or psychologists
- School administrators
- Representatives from higher education
- Division of vocational rehabilitation personnel
- Adult disability service providers
- Other community partners invested in postsecondary outcomes for students with disabilities

The transition leadership team should plan on meeting no fewer than four times during a given school year, and members of the team should be committed to accomplishing a number of goals and objectives between meetings. The first team meeting should take place within the first month of the school year, and follow-up meetings should be scheduled for roughly the third, fifth, and seventh months of the school year.

At the outset of the school year, the transition leadership team should identify a *team lead* whose responsibilities will include scheduling team meetings and setting agendas, facilitating the team problem solving process and promoting engagement, and maintaining meeting records, including an effective digital file management system that is accessible to team members and an email list to provide meeting summaries and updates and encourage active correspondence.

Step Two: Review Existing Opportunities and Resources

The second step of this framework and the first task of the transition leadership team is to work together to compile evidence and review existing work-based learning opportunities. In this stage, the transition leadership team should work together to compile a list of various types of work-based learning experiences (e.g., job shadowing, service learning, internships) available within their current context and should discuss the extent to which students, including those with disabilities, have access to and are participating in these opportunities. Teams that have participated in this process in the past have had success by developing a table that the team lead, or a designated note taker, can use to record the input from various team members. This summary table should list the work-based learning opportunities in rows, followed by columns for information about: (a) available *at all* within our context? (Y/N); (b) if yes, a description of the opportunities that are available; (c) a description of the population(s) of students who *are* participating in the opportunity, and why/how; and (d) a description of the population(s) of students who *are not* participating in the opportunity, and why.

Shortly after the first meeting, the team lead, or other volunteer, will document key discussion items and information in the table into a manageable (two- to five-page) document. It is essential that this summary include information on which types of work-based learning opportunities are and are not available and which students are and are not accessing these opportunities. This summary will be shared with the team before the second meeting to verify content and solicit feedback from members of the team or outside of the team to ensure accuracy of information. This documentation will serve as the team's basis for identifying and addressing gaps in work-based learning opportunities throughout the year.

Step Three: Create and Implement a Data-Based Plan

The third step in this framework is for the transition leadership team to develop and implement a plan that addresses the gaps identified through summarizing existing opportunities. During the second team meeting, the transition leadership team should begin this process by interpreting the results and identifying the goals and objectives they wish to work towards, followed by the implementation and monitoring of their plan.

3a: Interpret Results and Identify Gaps

In order to develop and implement a plan, the team should first review the summary of existing opportunities and identify between three to five gaps in opportunities that they would like to address. Using a series of reflection questions can guide the team in identifying their priorities. The reflection questions should start with a discussion of basic observations about the results of the summary (e.g., How would you describe the types of work-based learning opportunities that are or are not available?) and become increasingly analytical in their discussion (e.g., What factors such as age, gender, race or ethnicity, language, disability type, factors outside of school, etc. contribute to students not participating in work-based learning?) After discussing these reflection questions, the team lead should facilitate the team to identify three to five gaps in opportunities that they would like to focus on as a team. Examples that transition leadership teams have identified in the past include: (a) fewer young women are participating in paid work than young men; (b) students with the most significant disabilities are more likely to engage in service learning than any other kind of work-based learning; (c) students who are receiving the majority of their education within the general education classroom are less likely to participate in job shadowing opportunities than are the students who enrolled in a resource room for at least one period a day; (d) career and technical education opportunities that are focused on math and engineering have a disproportionately low number of students enrolled who are eligible to receive special education services; and (e) fewer Hispanic students with disabilities in our school are engaged in postsecondary training programs than students with disabilities from other racial/ethnic groups.

3b: Identify Goals and Objectives

The second step is to guide the team in the action planning process, developing specific goals for the year. In many cases, teams will not be able to address each of the gaps they have identified, so they must prioritize specific needs that are likely to improve student outcomes and that are attainable with the skills and resources of the team. Teams should begin by writing a goal that addresses the team's priority gap(s) for the year. We suggest that teams write goals that are specific, measurable, attainable, relevant and timely (or, S.M.A,R.T.; O'Neill, Conzemius, Commodore, 2005). An example goal might be: "During the current school year, we will increase the number of young women who are participating in paid work from 15 to 20." From there, teams should work to identify specific tasks that individuals within the team can take in order to achieve the goal, the person(s) responsible, and a specific timeline for when these tasks should be completed. For example: "Our special education teacher will identify five young women who are interested in obtaining paid work within the next nine months and learn more about their interest" and "Once students are identified, our career and technical education teacher will identify a possible job site for each student and reach out to a supervisor in that location about hiring a young women with a disability to help them meet a need."

To aid in the achievement of the overall goal, the team should then discuss possible roadblocks that may prevent them from meeting their goal and discuss strategies they may be able to use to overcome those roadblocks. Additionally, as teams are developing their goals, it can be important for them to provide an indication of what evidence they will have to demonstrate that their goal was met, as well as additional stakeholders and supports that may be needed in order for them to achieve their goal. At the end of the second meeting, the transition leadership team should have at least one goal along with a set of strategies identified.

3c: Plan Implementation and Progress Monitoring

After developing a plan, transition leadership teams should begin to carry out the activities needed to meet their goal(s). Using the example provided in the prior section, this might include the special

education teacher reviewing work-based learning participation of all young women with disabilities in their school and interviewing each of them to learn more about what kinds of jobs they might want and if they would be interested in having the school help facilitate a work-based learning opportunity for them. Once the special education teacher has identified several young women who are interested in obtaining paid work or participating in other work-based learning experiences, they would then meet with the career and technical educator to discuss possible placement options and begin reaching out to employers about hiring each student.

Step Four: Evaluate Outcomes and Refocus

The fourth step in this approach is for the transition leadership team to convene toward the end of the school year to review progress, celebrate their collaborative efforts, and establish a new challenge for increasing equity and access to work-based learning for all students, including those with disabilities. During this final meeting, teams should update the summary of work-based learning opportunities and document any changes made as a result of the process. The team should then work together to identify remaining gaps and challenge themselves to further increase the access and availability of work-based learning. Reviewing the results of the plan will lead to new priorities and new goals to focus on for the following year.

Using this four-step approach to building capacity for work-based learning experiences will support school personnel to move beyond the typical scenario of a single teacher in a single classroom placing a young person into work-based learning. Those placements certainly offer short-term rewards. However, in the long term, it is more beneficial to create a range of work-based learning options designed to build career skills and increase employment opportunities for all youth with disabilities. If continued each year, schools will engage in a continuous improvement process of reviewing, planning, implementing plans, and identifying new priorities.

Work-Based Learning Models

Work-based learning is an effective tool for preparing youth for future employment opportunities (Cahill, 2016; National Collaborative on Workforce and Disability, 2009). To reap these benefits, young people with disabilities need to participate in a range of structured options that include less intensive experiences (e.g., job shadowing), as well as more extensive longer-term training opportunities (e.g., internships, apprenticeships, postsecondary training). Early exploratory experiences can increase career awareness and help open up a range of possible options for all youth, including those from marginalized groups. More extensive training offers an ideal venue to prepare youth for high-wage, high-skill occupations. Work-based learning experiences may unfold quite differently for those students with disabilities who are earning a regular diploma than for students participating in a modified diploma or life skills curriculum. Some youth may engage in multiple internships or paid jobs while in high school while others who are accessing the general education curriculum will participate in work-based learning only as part of a postsecondary or vocational training program after high school.

In this section, we provide information about a variety of work-based learning models. The umbrella term "work-based learning" is used here to refer to a variety of activities that connect students to work, build employability skills, and increase career awareness. Table 15.1 provides definitions and benefits for ten different work-based learning models. Although they vary in intensity, scope, and duration, all these work-based learning experiences are designed to be *intentional* and *experiential* (Hamilton & Hamilton, 1997). Merely placing students into a work site does not constitute work-based learning; school staff must consider the purpose and the skills or learning goals to be demonstrated and provide clear support to address these goals. The work-based learning models

Table 15.1 Work-Based Learning Opportunities

Type	Definition	Purpose and Benefits
Job shadowing	Opportunity to observe or "shadow" a professional in a specific occupation	• Increase career awareness • Observe work environments and requirements
Service learning	Hands-on volunteer service projects in community settings, connected to academic content and skills	• Link academic skills to community settings • Increase personal and social development • Build citizenship and community engagement
School-based enterprise	Student-run businesses operated within a school setting	• Learn and practice hands on work and business skills • Create opportunities for student leadership • Provide goods or services to the school or community
Internship	Paid or unpaid placements in an established business setting for a predetermined time; supervision and training provided by school employee	• Develop and refine work habits and behaviors • Offer opportunity for structured feedback and supervision on the job
Paid employment	Standard job with public or private employer that may occur after school, on weekends, or in the summer	• Learn and practice general employability skills and work habits • Provide wages
Apprenticeship	Individualized pairing with experienced worker designed to teach occupational skills related to a specific trade	• Provide in-depth training in specific occupational skills (e.g., welding, electrician, etc.) • Meet competencies determined by industry • Lead to a certificate
Community college work programs	Postsecondary programs including cooperative work experience and short-term occupational skills training	• Offer hands on training in employment setting • Create access to higher wage employment options
Postsecondary programs for students with intellectual and developmental disabilities (IDD)	College or university programs that include students with IDD	• Gain social and academic skills • Enroll in career preparation courses or job training
Trade school	School that offers training to prepare for employment in a specific occupation (e.g., truck driving or beauty school)	• Lead to employment in specific career • Provide extensive skill training
Job Corps	Federally funded no-cost job training program for youth 16–24 years of age	• Provide employability and independent living skills training • Offer training in specific career area

Sources: Cease-Cook, Fowler, & Test, 2015; Federal Partners in Transition, 2015; Luecking, 2009.

in this chapter are presented in a continuum from less to more extensive; however, it is important to understand that students do not necessarily need to complete these activities in any prescribed order. This list of options is not a checklist to complete but instead a menu of possible choices. School staff need to provide the variety and intensity of options that will meet the individualized transition needs of each student (Federal Partners in Transition, 2015; Showalter & Spiker, 2016).

Job Shadowing

Job shadowing is a commonly used introductory work-based learning activity. A job shadow provides an opportunity for an individual student to spend an extended period of time (often a full work day or several days) with someone who is actually performing that job (Luecking, 2009). For example, a student with a disability who is interested in a medical career may spend a day at a hospital shadowing a certified nursing assistant or lab technician. Student activities are limited to observation as well as opportunities to interact and ask questions of an employer/host. Job shadowing helps introduce students to the expectations of various careers by allowing them to observe the daily routines, activities, and requirements of an occupation (Cease-Cook et al., 2015; Nevada Department of Education, 2018).

One important aspect of any job shadow experience is reflection. Once students have completed a job shadow, they should have an opportunity to debrief and describe what they learned through the experience. Specific questions (e.g., What was a typical day like for the individual in this career? Were there any job requirements or experiences that surprised you?) can be used to begin this reflection process. While job shadowing can potentially provide insights into possible career options after high school, these experiences can also help students gain insights about jobs they may *not* want to pursue, thus clarifying their career goals and interests. Job shadowing is an especially appropriate work-based learning option for students with limited access to job settings or those who may have only considered a restricted range of career options (Cease-Cook et al., 2015).

Service Learning

Service learning is another work-based learning option that can offer multiple benefits for youth with disabilities. Defined as "a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities" (National Commission on Service Learning (NCSL), 2002), service learning provides an opportunity for youth to participate in the community while gaining valuable teamwork and leadership skills. Typically, groups of students participate in service-learning projects, which are tied to academic coursework or competencies. Some high schools require service-learning hours as a condition of graduation while others may offer service learning as one component of existing academic or career-related classes (Federal Partners in Transition, 2015; Luecking, 2009).

Service learning has a number of unique characteristics (NCSL, 2002). First, service-learning projects are linked to the school curriculum and driven by specifically defined learning goals. For example, students in a science class may analyze water quality in a wetlands project while language arts students use writing and publishing skills to create flyers for a community event. Second, service-learning projects should be designed to meet a real need in the community. Third, service-learning projects should offer avenues for youth decision making and leadership. School staff can facilitate opportunities for students to be involved in designing, implementing, and evaluating all aspects of the projects. Finally, service learning also includes reflection and analysis, which may take place through classroom discussions or more formal written assignments that help students link academics with applied work (NCSL, 2002; O'Connor, 2009).

School-Based Enterprises

School-based enterprises are student-operated businesses that produce goods or services as part of an ongoing school program. For example, students may operate a food services cart or work in a small manufacturing company based in a high school. These school-based business ventures can provide an ideal opportunity to teach work skills to students with disabilities in a supervised setting prior to entering a more intensive internship or paid job in a community setting (Lindstrom, Benz, & Johnson, 1997; Larson, 2011). In addition, school-based enterprises can provide opportunities in some communities that may not have the resources available for students to gain work experience in the private sector. School-based enterprises can be utilized to fill this void for hands-on training as well as provide a supplement to traditional classroom instruction (Nevada Department of Education, 2018).

School-based enterprises offer a variety of experiences for students and a range of services to consumers. These enterprises also provide students with opportunities to develop a more in-depth understanding of specific occupations and the requirements of operating a business. As important, these school-based enterprises provide an opportunity for students to learn transferable skills for any job (e.g., attendance, social skills), even if the specific enterprise is unrelated to the student's post-school career goal. Ideally, students can be involved in all aspects of the business and will rotate among the various positions and tasks involved in the designated business venture (Kentucky Office of Career and Technical Education, 2009). Although businesses can be created to fit any niche or need, many high schools have developed retail, service, or manufacturing enterprises. These enterprises can:

- Be created in urban or rural communities
- Provide a training site that is easily accessible for students
- Offer a range of goods or services that are needed in the community
- Generate profits to help support student wages or other program needs
- Teach valuable work and business skills (Larson, 2011; Lindstrom et al., 1997)

Internships

Internships are paid or unpaid placements in community employment settings that provide students with longer-term, structured job experiences in an established business setting (Cahill, 2016). These internships are dependent on successful partnerships with community employers and can also be enhanced by collaboration with local agencies such as vocational rehabilitation or other federal job training programs. Structured internships also offer a mechanism for placing young women, youth from low-income families, and youth from diverse groups into on-the-job experiences that may lead to higher-wage employment over time (Fabian, 2007; Showalter & Spiker, 2016).

Students may be placed into any number of internships settings, based on career goals, strengths, and interests (Cease-Cook et al., 2015). Depending on the nature of the job, students can complete internships ranging from several weeks to a full academic year. Supervision and monitoring are provided by school staff in cooperation with the employer, and the cooperating business has no obligation to hire the student at the conclusion of the internship (Cahill, 2016; Luecking, 2009).

Internships focus on learning and practicing employment skills in applied settings. Prior to an internship, teachers or other school staff should develop a written training agreement that outlines the expectations for the internship, which can be used to monitor student performance on the job. There are several key characteristics of successful internship programs, including:

- Students are carefully screened and evaluated before placement.
- Programs use a systematic planned approach to build interpersonal and employability skills necessary for success.

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- Clear guidelines and procedures exist for the evaluation of student interns, remediation of work-related problems, and transfer or termination.
- Students are under the supervision of a certified, trained educator as required by state law and district policy.
- Employers are recognized and celebrated for their contributions (Luecking, 2009).

Paid Employment

Paid employment in local community settings can provide another venue for youth with disabilities to gain work experience and build employability skills. These paid jobs may occur after school or on the weekends and are not typically connected to school programs or academic goals (Luecking, 2009). Although they do not offer the same structure and support as internships or apprenticeships, typical "first jobs" such as fast food, childcare, or other service industry jobs can still offer some important lessons for students with disabilities, including personal and social competence, reliability, responsiveness to supervision, customer relations, and other basic work habits (Lindstrom, Hirano, McCarthy, & Alverson, 2014).

Summer jobs provide another often underutilized work experience option. Working in the summer has several advantages. Many communities have numerous short-term work opportunities that open up during the summer season. Unlike work experience during the school year, summer jobs do not compete with academic coursework requirements or extracurricular commitments, and students may have more flexibility and availability to commit to these activities (Carter, Sweeden, & Trainor, 2009). For many students with disabilities, summer work can provide an important training ground for specific occupational and social skills while engaging them in productive activities.

Apprenticeships

Apprenticeships are one of the most elaborate and intensive types of work-based learning (Showalter & Spiker, 2016). An apprenticeship pairs a novice worker with a highly skilled employee for the purpose of learning a specific trade such as carpentry, electrical contracting, or plumbing. Although apprentices are paid for their work, the focus is on building skills and attaining specific trade competencies. All apprenticeship programs must meet federally approved standards and be registered with the Bureau of Apprenticeship and Training, U.S. Department of Labor, or a local state apprenticeship agency or council.

Minimum requirements vary by industry area, but most apprenticeship programs require applicants to be at least 18 years of age and have a high school diploma or GED certificate. Some occupations may also require completion of specific subjects such as algebra, blueprint reading, or related shop work. The apprenticeship can last for two to five years depending on the requirements of the chosen industry. Apprentices attend related classroom training along with on-the-job training experience. Like all aspects of an apprenticeship, the training requirements vary according to the standards of the industry. Typically programs require approximately 144 hours of school per year (e.g., one or two evenings per week during the academic school year). The credits earned in an apprenticeship can often be applied toward an associate degree at a community college. Although apprenticeships are not commonly available to high school students, these experiences can offer skill development and a clear path to higher-wage post- school employment options (Cease-Cook et al., 2015).

Community College Programs

Community colleges can provide multiple options for skill building that involve hands-on learning and intensive work-based learning experiences. Because of their mission to serve the local

community, open enrollment policies, low cost, and flexible scheduling, community colleges offer an underutilized option for student with disabilities interested in pursuing further training (Flannery, Yovanoff, Benz, & McGrath-Kato, 2008). Cooperative work experience and short-term occupational training are two examples of work-based learning that are open to any students who choose to enroll in community college. Additionally, there are college programs focused on supporting students with intellectual and developmental disabilities (IDD).

Cooperative Work Experience

Cooperative Work Experience (CWE) programs, located on community college campuses, were developed to build a bridge from college to career by providing work-based learning opportunities. Typically, students are able to earn credit while working full- or part-time in jobs related to their college program.

Students in CWE gain hands-on learning and an understanding of employer expectations. Benefits include opportunities to:

- Explore jobs and careers related to their area of college studies
- Improve professional confidence and job skills
- Gain experience to put on their resume
- Earn academic credit toward graduation
- Earn wages to help pay college expenses
- Make valuable employer contacts and networking in a field of interest
- Increase opportunities for a full-time job after graduation

Short-Term Training Certificate Programs

Short-term skills training programs are available in most community colleges. These programs by design meet employer required competencies and provide the learner with greater earning potential. These programs are designed to provide individuals with the specific competencies and technical skills necessary for high-skill, high-wage employment, as well as basic academic competencies and transferable or "soft skills" such as problem solving, communications, and teamwork (Cahill, 2016), and have increased employment outcomes for students with disabilities (Flannery, Benz, Yovanoff, Kato, & Lindstrom, 2011). These competency-based training programs result in students learning practical occupational skills at their own pace through hands-on training. In many certificate programs, the student is placed on a training site in his or her career area for up to 40 hours per week. An individualized curriculum based on skills needed for the job is developed by the college staff and the training site supervisor and monitored by the college staff (Flannery et al., 2008). These short-term programs are also often embedded in longer-term credential programs, allowing for a career pathway approach.

Postsecondary Education for Students With Intellectual and Developmental Disabilities

Students with IDD have gained access to postsecondary education in part due to federal funding through the Higher Education Opportunity Act (2008). These specific postsecondary education programs are at community colleges as well as universities and colleges (Grigal, Hart, & Weir, 2012). Programs are designed for the students to gain social and academic skills to enhance independence and self-sufficiency (Griffin, McMillan, & Hodapp, 2010). Many of these programs also include career development and work experience as a component of their program (Grigal et al., 2012). Students in

these programs take career-specific courses, work on career preparation (e.g., job interviews, resumes, career assessment), and/or complete paid or unpaid on-the-job training on or off campus.

Vocational or Trade Schools

A vocational or trade school is an educational setting that focuses on skills needed to perform a specific occupation. Admissions requirements vary, but the majority of vocational schools require students to have completed either a high school diploma or GED. Trade schools can prepare students for positions such as beautician, truck driver, medical technician, automotive repairperson, or heavy equipment operator. After graduating from a trade school, an individual should be able to immediately enter the job market and receive a high rate of compensation. Most trade schools require a six-month to two-year time commitment. Students leave the trade school certified and eligible to take any state administered tests needed for the occupation. Many trade schools receive assistance from the government so that they can offer housing, childcare, nutrition education, and other options to disadvantaged students, usually for free or at a minimal price (www.learnhowtobecome.org/vocational-trade-schools/).

Job Corps

Job Corps is a no-cost education and vocational training program funded by Congress and administered by the U.S. Department of Labor. The purpose of Job Corps is to provide employability and independent living skills to disadvantaged youth and to place them in meaningful jobs or further education. Job Corps is available to individuals 16 through 24 years of age. Besides career training, the Job Corps offers GED programs, health and dental care, and a basic living allowance. There are over 100 Job Corps centers nationally that provide training in specific career areas, including: automotive and machine repair, construction, finance and business services, health care, hospitality, information technology, manufacturing, and renewable resources. Job Corps provides both classroom and practical learning experiences that integrate a set of core competencies in academic, vocational, and employability skills and social competence (U.S. Department of Labor, 2017).

Final Thoughts

Work-based learning offers important avenues for hands-on learning and exposure to the realities of work. These benefits are well documented in the transition literature and have been reinforced by practitioners in the field (Mazzotti et al., 2016; National Collaboration on Workforce and Disability, 2009) In order to successfully prepare for the transition from high school to adult roles in the community, students with disabilities need multiple opportunities over time to explore career options and gain work skills. Education personnel should work closely with key stakeholders to explore, design, and coordinate a variety of structured work-based learning opportunities. The strategies and examples presented in this chapter will help expose young people to a variety of options and opportunities and prepare them for an array of meaningful future employment opportunities.

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School Completion and Adolescent Transition Education

Larry Kortering

Youth with disabilities have a difficult time completing high school, which, in turn, limits their opportunities for a productive adulthood, including the pursuit of a college education or employment with livable wages and benefits. For example, the Annual Report (2018) of the Office of Special Education Programs (OSEP), based upon state reported data for 2014–2015, showed that nearly 400,000 youth age 14 to 21 exited school but that from these students, 16% left as "official" dropouts. In addition, the states of Connecticut, Maine, Kansas, Iowa, Arkansas, Arizona, Minnesota, and Missouri all report completion rates over 80% while the Bureau of Indian Affairs (BIA), Utah, Virginia, South Carolina, Texas, Nevada, Mississippi, Louisiana, and Washington, D.C., all report rates under 60%. When including other school exiters, districts reported that 26% were school transfers and 10% transferred out of special education. These categories may contain additional school dropouts. Among those exited as known "dropouts," the rates varied by disability, including, for example, 35% for students with emotional disturbance to 17% to 18% for students with other health impairment, intellectual disability, and specific learning disability.

There are positives to be noted. Schifter (2012) reported on data from the National Longitudinal Transition Study-2 (NLTS-2) that the overall school completion rate for students with disabilities is above 72%. On another positive note, the overall rate of school completion by students with disabilities, using data from OSEP annual reports, shows improvement of nearly 23% since 2006. The level of school completion has an impact on individuals and on society. From an individual perspective, school completion affects opportunities to become a productive adult. For instance, Census Bureau data showed that the typical "employed" dropout earned $25,500 per year as compared to $35,500 for the typical employed high school graduate, $38,000 for someone with some college, and $58,750 for someone with a bachelor's degree (see http://dropoutprevention.org/resources/statistics/). Over 45 years of adult employment, the respective lifetime earning differences range from a difference of $450,000 (no high school degree versus a high school graduate) to $1,500,000 (no high school degree versus a college graduate) (Torpey, 2018). These statistics were for the "employed" dropouts who participated in census data collection, and, generally, their measured employment rate was just over half that of school completers. A related statistic shows that an "employed" dropout requires about 11 years to find employment for two or more years at the same or a related job, compared to 5 and 2 years for the average high school or college graduate, respectively (Yates, 2005). Further, the typical dropout is 63 times more likely to spend time in prison than someone who completes a four-year college degree (Sum, Khatiwadw, McLaughlin, & Palma, 2009).

On a related point, Moretti (2005) demonstrated that a single year of additional schooling reduces the odds of imprisonment by 10% for Caucasian youth and 37% for African American youth. Another national data source showed that, on average, some 144,000 youth offenders are in "prison or related facilities and some 40% to 70% of these youth have been classified as having a disability" (Snyder & Sickmund, 2006). Aside from a general understanding of how school completion affects an individual, an overview of general social costs seems in order.

Consider, for instance, that high school dropouts are "very likely" to become juvenile delinquents and experience time in prison (Neely & Griffin-Williams, 2013) at an annual expense of over $22,600 (Stephan, 2003), well above the annual cost of educating a student with a disability. In an earlier study, Cohen (1998) estimated that the United States spent $1 to $1.5 million for each youth who embarked on a life of criminal activity. Today this estimate would be much higher and does not consider the monetary impact crime has on victims.

Health care presents another social cost, with the Alliance for Excellent Education (Muenning, 2006) calculating $13,706 in lifetime Medicaid costs for the typical dropout. If you consider the estimated 1.2 million dropouts each year, this cost becomes a staggering $17 billion (Muenning, 2006). Similarly, Muenning (2006) noted that dropouts represent 25% and 28% of all state Medicaid recipients and uninsured citizens, respectively, while college graduates account for 1% and 6%, respectively. Finally, the lost tax revenue associated with dropping out of school is even more compelling. Rouse (2007) reported national data that showed the average dropout in 2004 paid $1,302 in federal tax revenues, or less than half and a third of that paid by a high school graduate ($3,085) and a college graduate ($5,954), respectively. Of course, this annual figure would need to be multiplied by the years of employment. One might also consider the corresponding impact on Social Security and state tax returns. In summary, Levin and Belfield (2007) put it best by documenting that the average graduate will generate $139,100 more in taxes across his or her lifetime than a peer who drops out.

A final consideration relative to school completion is that existing special education services represent a final opportunity for the vast majority of youth to secure education and training to set them up for a productive adulthood. For instance, more than 45% of all dropouts without disabilities eventually earn a high school diploma or its equivalent (e.g., GED) within eight years of initially leaving school (U.S. Department of Education, 2004), but there is no indication that this is the case for youth with disabilities who drop out, as national data for GED completion are unavailable for that population. But, given the increasing rigor and limited proportion of accommodations provided for the GED (General Education Test Service, 2009), it seems reasonable to assume they have a much lower success rate. Furthermore, youth with disabilities who drop out seldom connect with adult services like vocational rehabilitation, and when they do, they have poorer outcomes (see Honeycut, Martin, & Wittenburg, 2017). In a practical sense, leaving an individual educational program (IEP) supposedly tailored to one's unique needs without completing school puts one at a serious disadvantage in a competitive and education-driven workforce.

The need for interventions that improve school completion rates for youth with disabilities is compelling. It is in the best interest of every educator, parent, future student, and taxpayer that we improve this rate. Accordingly, this chapter provides an overview of what we have learned about students who drop out, discusses a unique conceptualization to view school completion that can guide future interventions, and reviews nine guiding principles. The chapter concludes with a look at emerging issues affecting future efforts to improve school completion rates.

Research on Factors Affecting School Completion

The research on youth with disabilities who drop out is limited and somewhat dated relative to the amount of research on youth who drop out from general education. Nonetheless, a review of existing research is needed to set the foundation to guide interventions that help students to complete high

school. Accordingly, the following section highlights research that is instructive in understanding school completion. This research is put into one of three areas: descriptive and comparative studies, student perceptions of school completion, and intervention research.

Descriptive and Comparative Studies

Descriptive and comparative studies help us better understand key features of youth with disabilities and the environment that may affect school completion. In an early study, Seidal and Vaughn (1991) found non-completers with specific learning disabilities (SLD) perceived a higher rate of social alienation in school relative to SLD peers who graduated from a large metropolitan school district. A study of urban students with high-incidence disabilities (i.e., SLD, emotional and behavioral disorders, or mild intellectual disability) showed that students who had not graduated (n = 462) averaged three times as many school-initiated transfers and ten times as many school releases than did peers who had graduated (n = 291) (Blackorby, Edgar, & Kortering, 1991). This comparative study also showed non-completers tended to be minority (62% vs. 50%), identified as having emotional and behavioral disorders (EBD) (18% vs. 8%), and came from a non-intact family (33% vs. 20%). In contrast, the groups were comparable across measures of grade at referral, IQ (full scale and verbal and performance subscales), gender, and reason for referral. Another comparison of urban youth with SLD included 100 graduates and 113 non-completers. This study found that a statistical procedure using just three pieces of data, including school-initiated transfers (50% higher for non-completers), number of previous releases from school (nearly 300% higher), and family intactness (20% less likely), classified individuals into one of two groups with 73% accuracy (Kortering, Haring, & Klockars, 1992). Other variables – including family socioeconomic status (SES), reading ability, and student ethnicity – showed little if any differences between the groups.

In a study of urban youth with EBD who had graduated (n = 22) or dropped out from high school (n = 81), the two groups were comparable on measures of information at referral (i.e., age, grade level, full-scale IQ, family intactness, reason and source for referral), gender, and race (Kortering & Blackorby, 1992). Significant differences again emerged for school history, with non-completers having more than five times as many school-initiated transfers and previous releases from school as a dropout and 50% more changes in service placements (e.g., moved to a self-contained setting). Finally, Karpinski, Neubert, and Graham (1992) interviewed rural youth with high-incidence disabilities who had graduated (n = 52) or dropped from school (n = 34). They found the groups to be comparable in grades at referral and enrollment in one or more vocational course, but dropouts had a much higher rate of absenteeism in their final year (34 and 24 days, respectively) and lower rates of working during high school (59% vs. 90%, respectively). The dropouts reported leaving school due to discipline problems (32%), academic problems (24%), boredom (12%), and pregnancy (12%), a pattern sharply different from that reported by the school officials (attendance – 38%, employment – 15%, personal choice – 15%, and no reason – 32%).

Reschley and Christenson (2006) also documented a connection between measures of school engagement and school completion. This study used data from the National Educational Longitudinal Study, which included parent-identified students with SLD or EBD. The resulting data showed that after controlling for socioeconomic status, grade retention, and test scores, student engagement variables (including measures of attendance, behavior, skipping, preparation, extracurricular participation, and homework) were significant predictors of school completion. Another study involving interviews with 45 school completers and 31 non-completers, all identified as SLD, yielded surprising results. Specifically, no significant differences emerged when comparing the groups relative to intelligence and achievement measures or their self-reported levels of satisfaction with their reading skills, behavior in school, self-worth, and teachers (Bear, Kortering, & Braziel, 2006). Finally, Mellard and Patterson (2008) studied 311 adult education learners, 90 (29%) of whom were identified

as SLD. Using a structured interview along with various assessments, they found the SLD group had significantly lower levels of reading ability, suggesting a need for concentrated instruction to prepare them for adult literacy programs.

Student Perspectives of School Completion

Research involving the perceptions of school completion from the perspective of youth with disabilities is an emerging focus. The idea is that youth, as consumers of services, have insight into the school completion process. Lichtenstein (1993) was among the first researchers to provide information to help us better understand the process of leaving high school without completing from the perspective of actual students. His qualitative study, spanning two years of contact with four youth identified as having an SLD, highlighted how they eventually decided that "further academic efforts would be anxiety provoking and humiliating" (p. 340). Noticeably absent in their educational program was participation in activities or services that might have kept them in school, including formal vocational assessments (especially given the role employment played in their lives), the IEP process, and the involvement of adult services.

Kortering and Braziel (1999a) interviewed 44 dropouts from a rural and small-city setting who had been identified as having a high-incidence disability. Two-thirds of these former students reported that changes would have helped them stay in school. The top changes were "teachers improving their attitude and relationships with students" and the "students themselves improving their own attitude and behavior." In a second study involving student interviews, Kortering and Braziel (1999b) sought to understand school completion through conversations with a group of 185 ninth and tenth graders with high-incidence disabilities; 100 (54%) students felt a school-based change would help them stay in school, with the dominant themes being more individual academic or personal assistance, changes in school rules relating to discipline, putting students in classes they saw as more relevant and enjoyable, and improved teacher attitudes toward students. Personal changes that would help them stay in school came from 133 (72%) of the students, with half reporting a need to improve their work habits and grades and another 20% suggesting a change in their own attitude. Another series of interviews with 33 students identified with EBD found that 64% reported a school-based change falling into one of three themes (i.e., putting a student in elective classes like Reserve Officer Training Cadets or vocational courses, offering more learning and behavior support, and changing disciplinary rules), and 48% suggested changes they needed to make, with the dominant theme being their behavior in school. Dunn, Chambers, and Rabren (2004) used data from a postschool survey to compare 228 non-completers and 228 completers with a high-incidence disability. Their study found that those who dropped out reported not being prepared for life after school, not having access to a helpful person while in school, and not having had a helpful class. These were keys to distinguishing between the two groups.

Intervention-Based Research

Intervention-based research on school completion includes a pair of literature reviews and investigations of the Check & Connect model. Cobb, Sample, Alwell, and Johns (2006) used a systematic review of scientifically based studies to identify cognitive behavioral interventions as a promising intervention for reducing problem behavior (e.g., aggressive behavior, off-task behavior) associated with school completion. Their study, examining 25 years of research, identified 16 examples of evidence supporting the use of these interventions, with half the studies taking place in traditional public school settings. All of the interventions involved some aspect of cognitive behavioral training, often including a formal curriculum adapted to meet the unique needs of the setting. Test and his colleagues (2009) used Kohler's Taxonomy (Kohler, 1996) to categorize their review of the research involving evidence-based practices that show promise for enhancing school-completion rates. Their review yielded 11

articles, including two experimental studies involving the Check & Connect model (Sinclair, Christenson, Evelo, & Hurley, 1998; Sinclair, Christenson, & Thurlow, 2005), offering recommendations for promising practices falling into one or more of the following categories: student-focused planning (e.g., student involvement in their IEP), student development (e.g., life skills instruction, helping students find jobs during high school), interagency collaboration (e.g., potential employers, developing interagency agreements), family involvement (e.g., supporting families with referrals to community agencies), and program structures (e.g., vocational and community-based programming).

The Check & Connect model, as implemented by Sinclair and her colleagues, offers one approach to improve school completion for students with disabilities. Their first study (Sinclair et al., 1998) examined the impact of a sustained school-engagement procedure (later referred to as Check & Connect) on 94 seventh and eighth graders identified as EBD in an urban district. Upon entering high school, researchers split the group into a control group and a treatment group. The treatment group received ongoing contact with an adult who monitored student engagement in school (the "check" component) and provided connections to help the student stay in school (the "connect" component). In terms of impact, measures of school performance (e.g., enrollment at the end of school year, completed course assignments, credits earned) were significantly higher for those participating in the treatment condition. In contrast, no differences emerged on measures of school identification (e.g., perceptions of the importance of school) and teacher ratings of student academic competence and level of problem behavior.

In a second study involving 144 youth identified as EBD in an urban setting, Sinclair and colleagues (2005) examined the impact of key "check" and "connect" components, including routine monitoring of student engagement, individualized and timely interventions, relationship-building activities, following transferring students, problem-solving sessions, prevailing message that someone at school cared about their success (persistence plus), and efforts to promote school affiliation. As for impact, treatment participants were less likely to drop out of school than their control group peers after four (39% vs. 58%) and five years (42% vs. 94%). Less clear were eventual school-completion outcomes given student mobility in and out of and between schools and the fact that more than a third of treatment participants were still in some form of schooling at the end of five years. More recently, van der Steeg, Elk, and Webbink (2015) provided intensive coaching similar to Check & Connect for 16- to 20-year-old Dutch students in a postsecondary vocational program. After two years, their results showed a decreased dropout rate of about 40% after one year, although after two years the drop was a marginal 1%.

In summary, the previous research involving school completion and youth with disabilities, while limited, suggests three key patterns. First, a consistent finding is the negative impact of "educational mobility" as youth who fail to complete high school tend to change schools and settings while dropping in and out of school. This feature is a dominant trait that distinguishes between completers and non-completers. Second, the initial referral of students with disabilities to special education often predicts, based on measures of academic achievement or school behavior, future difficulty fulfilling the academic and social demands of school, which become even greater at the high school level. Interestingly, the limited data suggests that in terms of the academic "tools for success" (e.g., measures of intelligence and achievement), those who have graduated are on par with those who do not complete school. Third, educators can and do modify school settings so as to have an impact on one's likelihood for being graduated from school. This feature holds considerable promise for interventions that keep more youth in school.

Learning and School Engagement: A Key to School Completion

In contrast to a traditional focus on dropping out of school after the fact or "fixing" students in some way (Kortering & Christenson, 2009), the construct of learning and school engagement affords

a proactive approach that focuses on modifying school settings. Engaging youth with disabilities in learning and school, as defined by Christenson and her colleagues (Appleton, Christenson, & Furlong, 2008), includes a two-prong approach: "1) helping students acquire the skills to meet the demands of the high school environment and 2) creating relationships with students to facilitate their active involvement in school and learning" (Kortering & Christenson, 2009, p. 7).

Learning and School Engagement as a Construct

The earlier work of Finn (1989) and the existing research on school completion for youth with disabilities set the stage for a re-visioning of the school-completion process. Finn suggested two models to explain why students fail to complete high school: frustration-self-esteem and participation-identification. Both these models help us better understand the importance of engaging students in learning and school. For instance, previous research has chronicled the frustration and self-esteem issues endured by youth with disabilities, including academic failure (Murray, 2003), grade retention (Reschley & Christenson, 2006), alienation (Seidal & Vaughn, 1991), and frustrating relationships with teachers (Kortering & Braziel, 1999a, 1999b). Likewise, researchers have established the importance of helping students with disabilities to participate in and, in turn, identify with their high school. For example, research shows that youth demonstrate improved test scores, grades, and graduation rates when they engage in after-school activities (Yell, Losinsky, & Katsiyannis, 2014) and, specifically, high school sports (Kleitman & Marsh, 2002; Mahoney & Cairns, 1997).

The construct of student engagement, focusing on learning and the school itself, includes four interrelated subtypes (Sinclair et al., 2005). The first subtype is academic engagement as represented by such indices as time on task and credits earned. A second subtype involves behavioral engagement, including attendance, participating in extracurricular activities, disciplinary issues, and overall preparation for classes. As an example of engaging students with extracurricular school activities, at least one study suggests a positive impact that extends past high school completion to postsecondary education completion (Palmer, Elliott, & Cheatum, 2017). Cognitive and psychological engagement are the third and fourth subtypes, respectively. The former refers to students who see their high school education as relevant to their future and, in turn, their goal setting, self-regulatory behavior, and autonomy. The latter entails one's relationships with teachers and peers, which contributes to a sense of belonging. In combination, these subtypes provide points of emphasis for interventions that help youth complete high school. As these areas of emphasis are targeted, Kortering and Christenson (2009) highlighted the need to focus on "facilitators" or alterable contextual features that influence one's engagement in school and learning. These facilitators of engagement range from informal behaviors of teachers as they interact with students to formal school polices affecting discipline and attendance.

A final aspect of using engagement as a construct to better understand school completion is that it offers a natural evolution of the IEP process to incorporate strategies and activities that facilitate a youth's engagement in school and learning. In other words, engagement becomes an effective topic for meeting the IEP goals and objectives that target standards for graduation, remediation of deficits, and postsecondary ambitions. These features of engagement blend with self-determination and empowerment by turning a focus to setting features and strategies that help youth take on an active role in their learning and school environment.

Core Elements for Interventions

The idea behind "core elements," depicted in Figure 16.1, is that they are universal for any middle or high school setting. They can be infused into any existing or emerging approach to engage youth in learning and school. An appreciation for the elements begins with three assumptions. First,
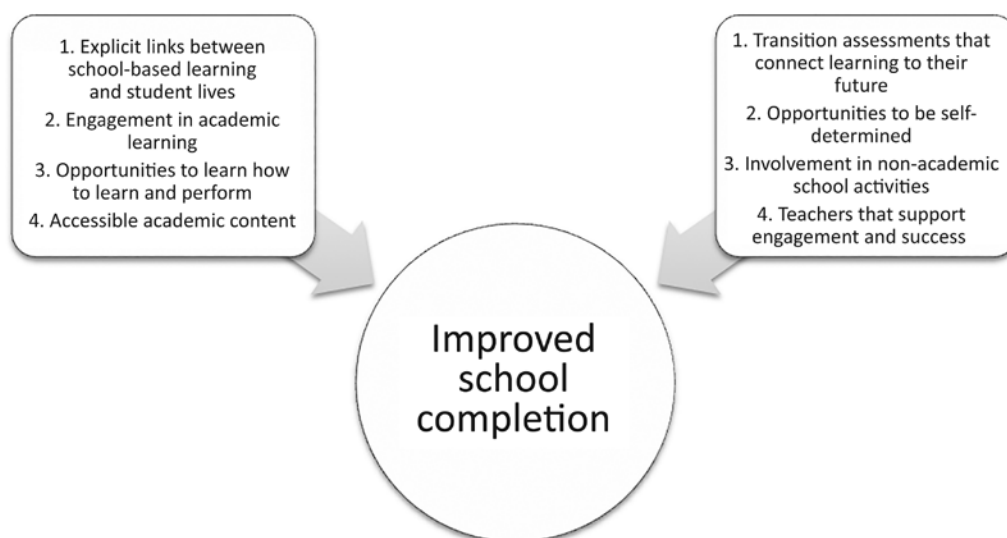
Figure 16.1   Elements of School Completion

as ninth and tenth graders, the period during which most students drop out (Kortering & Braziel, 1999a, 1999b; 2002), nearly all these youth report a strong motivation to get a high school education (Kortering, Braziel, & Tompkins, 2002; Kortering, deBettencourt, & Braziel, 2005). They make the connection between a high school education and an improvement in their opportunities as an adult. This motivation shows that a high school education has incredible value, even in the face of the academic and social challenges they may endure as students. Second, we see youth as having an important role to play in their completion of high school (Bridgeland, Dilulio, & Morrison, 2006; Kortering & Braziel, 1999a, 1999b, 2002). Their role includes having the option to walk away from their "special educational opportunity." Their perspective, while influencing their thoughts and actions in school, is central to engagement. Third, the ambition behind the original passage of P.L. 94–142 (the Education for All Handicapped Children Act) was that truly "special" education programs would prepare these youth for being productive taxpayers (U.S. States Congress and Administration, 1973). This ambition is more pronounced given that today's taxpayers fully expect special education to prepare youth for a productive adulthood. To best achieve this objective, we must prepare youth to succeed in tomorrow's labor market, characterized as increasingly knowledge-based, complex, and competitive (Binder & Bound, 2019). A "meaningful education" in the sense of having the knowledge and skill set required in postsecondary settings and careers with suitable wages, promotion potential, and benefits lies in general education classrooms. With these assumptions in mind, the following elements set the stage for engaging youth along two interrelated dimensions: helping youth meet the demands of the school environment and providing access to relationships that engage youth in school and learning.

Meeting the Academic Demands of High School

In an era of high-stakes testing and accountability, youth with disabilities face pressure to meet challenging academic demands. These demands, inclusive of various content exams (e.g., End of Course, or EOC, exams for academic classes) and general competency evaluations (e.g., exit exams), raise the standards that must be met for high school graduation (Thurlow, Cormier, & Vang, 2009; Zhang, 2009).

Youth struggle to pass these standards, leading to dropping out as a likely option. For illustration, Zhang, Katsiyannis, and Kortering (2007) found that youth with high-incidence disabilities passed EOC exams, a requirement for graduation, at less than half the rate of their general education peers. This trend was over a four-year period on one state's EOC exams in Algebra, Biology, English 1, and Economics.

Explicit Links Between School-Based Learning and Students' Lives

Youth consistently suggest seeing limited relevance in what they do in high school (Willingham, 2009), and youth with disabilities are no different in this regard (Kortering & Braziel, 1999a, 1999b; Higgins, Boone, & Lovitt, 2002). Cushman (2003) made this point by using youth voices to document their need to understand why they need to know what we are trying to teach them and their requests that educators do a better job at connecting learning to the lives of their students. Other evidence includes the alarming *Silent Epidemic* report, which chronicles similar suggestions from a national sample of school dropouts (Bridgeland et al., 2006).

School efforts to connect learning to the lives of students begin with an understanding of them as well as the academic content. This includes knowing about their interests, ambitions, learning styles, and life outside of school. For example, a young woman identified as having a SLD demonstrates an interest and talent in working as a carpenter. This understanding then offers her algebra teacher a unique opportunity – connecting algebraic concepts to the field of carpentry. Another example would be the young woman with a SLD who shows an established interest in social careers or those involving working with and for others in some way. This student would perform best in classroom settings allowing work with her peers in a cooperative learning-type structure and would be an ideal candidate for service-learning activities. Other local efforts might include the regular use of student feedback (e.g., interviews, online surveys) to establish information on how youth perceive school in terms of meeting their needs, specific courses, and ideas for improvement (Kortering & Braziel, 1999a, 1999b; Kortering et al., 2005). This feedback provides an evidence base for contemplating general and specific school improvement driven by a better understanding of students.

Engagement in Academic Learning

Csikszentmihalyi and Larson (1984) conducted an intriguing study that demonstrated that engaged youth enjoy what they are doing while being more successful at it. The downside is that this engagement seldom happens while youth are in their academic classes. This earlier work finds support in research by Lan and Lanthier (2003) and Black (2003), which again showed how high school students are often dissatisfied with school and unmotivated to engage in traditional learning activities. A similar thread runs through Wagner's (2008) report on why our schools are failing to teach children what they need to learn.

In contrast to a lack of engagement, Moses (2001) illustrated how even the most challenging academic content can be structured in a local setting to engage youth; in this case with inner-city youth participating in the Algebra Project. He documented how algebra content becomes engaging by having youth access real-life and hands-on experiences. Other practical ideas for engaging youth in academic learning include recognition that today's youth live in a world of engaging media and most will undoubtedly be in a work environment driven by technology. This suggests adopting educational technology and related tools to replace more traditional lecture formats (Foreman, 2003).

Opportunities to Learn How to Learn and Perform

Opportunities that help youth learn how to learn and demonstrate their learning, to perform if you will, would seem a natural response to the demands of the high school general education classroom

(Schumaker & Deshler, 2005). These opportunities become especially compelling given the limited academic achievement levels that characterize youth with disabilities, especially in reading (Saenz & Fuchs, 2002) and math (Kortering et al., 2005), along with their limited knowledge of learning strategies (Chen et al., 2009; deBettencourt & Sabornie, 2008).

In terms of the local classroom, Chen et al. (2009) suggested that youth need "instruction involving specific learning strategies that help them comprehend, compose, study, and learn" (p. 158). They further call for this instruction to involve general education teachers who are well versed in their subject's content. In addition, traditional approaches like after-school tutoring programs (see e.g., Houck, Pulvers, & Deshler, 2001), strategy instruction (see Boyle & Wsihaar, 2002; Fontana, Scruggs, & Mastropieri, 2007; Lenz, Adams, Bulgren, Pouliot, & Laraux, 2007), and test-taking interventions (Lancaster, Schumaker, Lancaster, & Deshler, 2009) warrant consideration. The evolving learning technologies and digital learning environments also demand attention to effective assessments of their technology–related proficiency and opportunities to learn about these technologies (Parker & Banejee, 2007). An intriguing development in learning how to learn involves technology-based tools that help youth offset difficulties in reading (Marino, 2009) and performance (Maccini, Gagnon, & Hughes, 2002). Other examples include pending innovations related to specific tools like NimbleTools (Russell, Hoffman, & Higgins, 2009) and more generic ones like eText (Anderson-Inman, 2009; Izzo, Yurick, & McArell, 2009).

Accessible Academic Content

The high school environment remains dominated by the "Stand and Deliver" model, assigning and reading a text as the dominant forms of instruction. In contrast, the concept of universal design for learning (UDL) suggests improving the accessibility of academic content by adhering to three principles: multiple means of representation of content; multiple options for student expression and control; and multiple means for engagement and motivation (Rose & Meyer, 2002). UDL as a concept for content-area teaching holds promise as evidenced in a study of student perceptions of algebra and biology interventions using UDL.[1] In this study, students participating in UDL interventions expressed higher levels of satisfaction, including more than 90% reporting a desire to have their teachers use more of these interventions, as well as engagement in comparison to their other academic classes (Kortering, McClannon, & Braziel, 2009).

Relationships That Foster Engagement

A rigorous meta-analysis of the research demonstrates that supportive interactions between teachers and students moderate the challenges and failures youth endure in high school (Boster & Strom, 2007). These interactions are the foundation for relationships characterized by adults who listen to youth, communicate a sense of caring, and promote the youth's involvement in their education. In the academic classroom, these relationships prove especially important for youth who struggle. Helping these youth persist in the face of daily academic and corresponding struggles they face in and outside the classroom is central to fostering their interest and, it is hoped, some level of enthusiasm for school.

Transition Assessments That Connect School to Their Future

The most important motivation youth report for being in school relates to the concept of personal development (Kortering & Konold, 2005; Kortering, Konold, & Glutting, 1998). This motivation, defined as a perception that education prepares students for a productive adulthood, is a key to engagement. Helping youth understand their talents and limitations enhances their motivation for

personal development by linking what they do in school to their future ambitions, which begins to foster their positive relationships with others. This process also provides educators with insight to better understand student success and failure in school, including why specific students experience difficulty with certain classroom structures, teacher personalities, and academic content.

At the local level, an ongoing transition assessment process begins with an initial background survey on factors influencing a youth's skill development and interests, including work and educational histories of family members, perceptions of school, and general ambitions (Kortering, Braziel, & Sitlington, 2010). Next, a basic interest inventory followed by a formal assessment of a youth's preferences, including learning styles, is appropriate. Based on a youth's established interest, turn to a general (i.e., measuring several areas) or specific (i.e., measuring a single area) aptitude test to evaluate a student's actual (as opposed to self-reported) level of talent in an expressed area or areas of interest. For example, a young man showing an established interest in mechanical occupations would benefit from a test of his mechanical skills. Finally, the recent Indicator 13 language mandates that IEPs for students age 16 and up include an age-appropriate transition assessment that provides a basis for appropriate postsecondary goals and identifying the supports necessary for helping students achieve those goals.

Opportunities to Be Self-Determined

Self-determination has a long-established history in special education. Relating to school completion, Zhang and Law (2005) use a review of the literature to connect interventions focusing on self-determination and improved outcomes associated with school completion. Similarly, Eisenman (2007) reinforced this connection with the suggestion that interventions to promote self-determination provide a foundation for school completion as youth begin to take an active role in their education while pursing educational goals based on their strengths and interests. Finally, Murray and Naranjo (2008) found that a strong sense of self-determination was a consistent theme to help explain school completion among a sample of high-risk urban youth with an SLD.

As adults we can relate to the concept that when we have some level of self-determination over what we do in life and work, we tend to be more engaged and successful. Youth are no different and often complain about the lack of freedom they experience while in high school (Cushman, 2003). Local school-based opportunities for developing the behaviors necessary for self-determination and empowerment range from formal curricula like the Steps to Self-Determination to the simple deployment of opportunity structures that allow youth control over their learning (e.g., providing options for learning, choosing which set of problems to do, options for demonstrating their learning of key content). Finally, simply asking youth about what they want to learn and improve at in school offers a starting point to incorporating their goals into the IEP process (Agran & Hughes, 2008).

Involvement in Non-Academic School Activities

Research has demonstrated that youth engaged in the non-academic side of schooling, including participation in athletics, musical groups like band or choir, school groups like Reserve Officer Training Cadets, and other activities, are more likely to complete high school. The influence of this element stems from giving students an opportunity to be affiliated with the school while doing something that does not involve success with academic performance, a feature these youth have probably struggled with for the duration of their schooling. Such involvement also affords youth an opportunity for more positive teacher/student relationships as something other than academic learning becomes the focus of their interaction (Finn, 1989).

In terms of one's local high school, non-academic school activities range from team sports, including being a manager or a participant, and service-learning opportunities to joining various

school clubs or groups. As students enter the ninth grade, one can begin to identify potential means for engagement. These activities then serve important social and educational functions (Ream & Rumburger, 2008), including facilitating a sense of belonging or school membership (Finn, 2006).

Teachers Who Support Engagement and Success

Last, and most important, engaging youth in learning and school is facilitated by having access to a caring educator, someone who helps students persist in school. Research on the Check & Connect model for school completion clearly documents the importance of relationships that promote engagement in school and learning (see Anderson, Christenson, Sinclair, & Lehr, 2004). Similarly, Murray and Naranjo (2008) found that teachers who conveyed a sense of caring while providing ongoing involvement and support, instrumental support, and a powerful presence in the classroom were key to the school-completion process for at-risk youth with a SLD.

At the local school level, Price (2007), drawing on his experience with the military and its training of incoming recruits and cadets, suggested that young people who struggle in school often yearn for access to an adult they see as valuing them and believing in their potential for success. Along with a sense of valuing and believing in youth, key features of a relationship that proves support for students include listening to them, dedicating time for problem solving, and celebrating their successes (Mihalas, Morse, Allsop, & McHatton, 2009).

Conclusion

This chapter provides a conceptualization of school completion relative to the holding power of engaging youth in learning and school. This conceptualization reflects on previous models of school completion and incorporates the emerging research on student engagement. Central to this chapter is the idea that we *need* a disruption in existing services so as to offer programs that actually meet the most important need of youth with disabilities and, thus, keep them in school. Far too many programs and IEPs, while supposedly tailored to meet students' unique needs, fail to engage students. A lack of effective action leaves these former students without access to a decent wage in a work world where 85% of current jobs and more than 90% of the fastest-growing jobs are projected to require a postsecondary education (Wagner, 2008), a scenario likely to undermine the future for all of us.

Note

1. The Center for Applied Special Technology (www.cast.org) provides a variety of resources related to UDL and content accessibility in the local high school classroom, including online training modules, archived resources, and various teacher tools. Another specific example of making content more accessible via UDL is the Virtual History Museum for teaching social studies (Bouck, Courtad, Heutsche, Okolo, & Englert., 2009). The museum offers a free web-based environment for learning about history, including interactive exhibits, artifacts, and activities (see www.vhm.msu.edu). Other examples include the National Instructional Media Accessibility Standards, with digitized formats for textbooks and the ever-changing field of simulated learning that use interactive online tools (Cavanaugh et al., 2009) and gaming technology to help students to better understand academic content (Gee, 2003).

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Assistive Technology in the Transition Education Process

Karen B. Patterson and Terence Cavanaugh

There was a time when assistive and adaptive technologies, both with and without the use of computers, were new phenomena. However, that is no longer the case. Over the last several decades, assistive technology has been utilized to improve real-world problems. For example, Dove (2012) noted that it is difficult for many people to fathom the idea of preparing a meal without the use of a microwave, driving a vehicle without utilizing a global positioning system (GPS), or communicating without using a wireless smartphone. Today, bills can be paid by an electronic funds transfer (EFT) while online shopping and Internet access are common daily occurrences that we have increasingly grown to rely upon (Dove, 2012).

Advances in modern technology have dramatically changed the way many people, especially people with disabilities, live. It has provided scaffolding to enhance learning into many classroom settings (Cobb, 2011). Assistive technology (AT) is primarily designed to allow people with disabilities access to information. With the use of AT and adaptive technologies, computers can become eyes, ears, voices, and hands for many people. Special education services in U.S. public schools provide resources such as AT and AT services to students receiving special education services. Many consider the use of the AT to be the great leveler or equalizer for students with disabilities (Flippo, Inge, & Barcus, 1995).

Essentially, assistive technology is a tool that provides access and promotes independence for individuals with disabilities across all facets of life. Assistive technology is defined as: "any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities." An assistive technology service is defined as: "any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device" (20 U.S.C. § Chapter 33, Section 1401, p. 250).

The breadth of the legal definition of AT and AT services allows for a wide array of devices and services, as long as these devices and services improve functionality. AT tools can make a significant difference for students with disabilities in educational, employment, home, and community settings because AT and AT services provide access to information and activities that otherwise could be inaccessible. In an educational setting, AT has the potential to promote independence, increase participation in educational activities, and simultaneously advance academic standing for students with disabilities. Through the use of AT devices, many students with disabilities can decrease their isolation and become active participants in classrooms. Further, students who are not physically present in the learning environment can still participate fully through the use of these devices.

Educational technology is instrumental in solving instructional and performance problems when combined with other concepts like the application of research, learning theories, emergent technology, and psychology. This interdisciplinary overlap is known as Assistive Educational Technology (AET). AET is the theory and practice of design, development, utilization, management, and evaluation of processes and resources that are used to increase, maintain, or improve functional capabilities of individuals for learning (Cavanaugh, 2000a). The complexity and importance of AET cannot be overemphasized as students and their transition teams develop the transition segments of individualized education programs (IEPs). Students must practice using AT and AT services; therefore, the middle school and high school years should be used to refine their needs as they practice using AT and AT services.

The use of AT is typically individualized and tailored for the uniquely personal needs of the student. Subsequently, many AT and AT services intervention studies use single-subject research designs and include small numbers of study participants; research-based practices regarding the use of AT are limited as research results may not be generalizable to other settings and individuals. This scenario may contribute to the concern voiced by experts in the field about the dearth of AT research (Campbell, Milbourne, Dugan, & Wilcox, 2006; Salminen, 2008). For example, the National Center for Technology Innovation, during the AT Outcomes Summit, identified one of the challenges concerning the integration of technology into general practice as the absence of an AT outcomes research base to steer policy (National Center for Technology Innovation, 2005).

Legislation and Assistive Technology

Federal requirements and support for AT began with Section 504 of the Rehabilitation Act of 1973. The passage of this legislation is significant because it impacts *all* students with disabilities, even students who are not eligible for special education services and do not have IEPs. This legislation is important to students who, although they may not have an IEP, are entitled to educational accommodations, including AT and AT services, to access educational opportunities (Dell, Newton, & Petroff, 2008; Copenhaver, Mountain Plains Regional Resource Center, funded by the U.S. Department of Education, Office of Special Education Programs, 2004).

In 1975, the Education for All Handicapped Children Act (EHA) began the process of (a) ensuring equal access for children with disabilities, (b) funding educational opportunities and programs from which many students had been excluded, and (c) identifying assistive devices and services to support students' education.

Although the Individuals with Disabilities Education Improvement Act 2004 (IDEIA, commonly referred to as IDEA) is the most recent reauthorization of the federal law that regulates the education of students with disabilities in P–12 settings, it was the 1997 reauthorization of IDEA that changed the role of AT. This reauthorization clearly defined AT and required consideration of the specialized AT needs of every student receiving special education services. This reauthorization of IDEA in 1997 also adopted the definition of AT established by the Technology-Related Assistance for Individuals with Disabilities Act of 1988 (Tech Act). The Tech Act was passed by Congress to provide funding for the development of consumer information and training programs for individuals with disabilities. Consequently, this led to increases in the number of students and a broader range of disability categories that were considered for technology-related services.

IDEA regulations have significantly impacted the responsibilities of schools when considering a student's AT needs. While each case is individualized, AT is generally considered if it will increase student participation in the free and appropriate public education guaranteed by IDEA and if it can help maintain students in their least restrictive environment. Furthermore, this technology can extend from school to home if a need is determined. The federal legislations described in Table 17.1 have all impacted the use of computers/technology in education and transition to adulthood.

Table 17.1 Laws Impacting Assistive Technology

Law	Date	Content That Applies to Assistive Technology
Rehabilitation Act 93–112	1973	Reasonable accommodations and least restrictive environment (LRE) were mandated in federally funded employment and higher education; AT devices and services were required.
Vocational Rehabilitation Act, Section 504	1973	AT can be used as an accommodation to enhance student participation in school activities.
Education for All Handicapped Children Act (EHA) 94–142	1975	Reasonable accommodations and LRE were extended to all school-age children and IEPs mandated; AT played a major role in gaining access to educational programs.
Preschool and Infant/Toddler Program – amendments to EHA	1986	Reasonable accommodations and LRE were extended to children from ages three to five; expanded emphasis on educationally related assistive technologies.
Technology-Related Assistance for Individuals with Disabilities Act (Tech Act) 100–407	1988	First federal legislation directly related to assistive technology defined AT devices and services and stressed consumer-driven systems and systems changes.
Individuals with Disabilities Education Act (IDEA) 101–496	1990 and 1997	Specifically defined assistive technology devices and services as well as delineated how they apply to education and transition services; reauthorization required AT needs be considered in an IEP.
Assistive Technology Act ATA 105–394	1998	(Re-authorization of the Tech Act) Under Title I in the new ATA, states and funded territories are required to conduct the following activities: 1. Support a public awareness program designed to provide information related to the availability and benefits of assistive technology devices and assistive technology services. 2. Promote interagency coordination that improves access to assistive technology devices and services for individuals of all ages with disabilities. 3. Provide technical assistance and training, including the development and implementation of laws, regulations, policies, practices, procedures, or organizational structures that promote access to assistive technology devices and services. 4. Provide outreach support to statewide community-based organizations that provide assistive devices or services to individuals with disabilities or assist individuals in using assistive technology devices and services, including focusing on individuals from underrepresented and rural populations.

Assistive Technology and the Individualized Education Program

The IEP is a written document developed for any child with a disability who is eligible for services. This document is important for children with disabilities, their educators, and other stakeholders, including people who may be responsible for providing or paying for AT and AT services.

IEPs must reflect scientifically based instructional practices, cognitive behavioral interventions, and early intervention services, as appropriate. The IEP must also include plans for the use of AT.

Decisions about the use of technology should be made in collaboration with the team that develops the student's IEP. Moreover, IDEA amendments require that AT devices and services be considered on an individualize basis as the use of AT or services to achieve success is based on each student's needs. The IDEA statements concerning the need and application of AT require that the IEP team ask a series of questions about AT devices and/or services. For example:

- Will AT enable the student to meet the goals set for the education program that cannot be met because of his/her disability?
- Does the student need assistive technology to be involved in the general curriculum, including participation in state and district wide assessments?
- Does the student need AT for augmentative communication?
- Does the student need to use the device at home or in the community to achieve the goals of the IEP?

If the answer to any of the these questions is yes, then needed AT devices and/or services must be provided to the student (Florida Department of Education, 2000).

IEPs, Assistive Technology, and Transition

A transition plan must be included in all IEPs for students at age 16 or for younger students if appropriate. Transition services must include: instruction, community experiences, development of employment, and other postschool adult-living objectives (Kirk, Gallagher, Coleman, & Anastasiow, 2012). However, as students prepare to transition to postsecondary educational settings, it is important to note that the AT currently being used by the student will not automatically transfer to the new setting. This news is often a surprising fact to the user, parents, and other personnel who may assume AT devices or services will transition with the individual. Careful attention and planning are required across the lifespan of individuals with disabilities, and the area of transition is critical. Behnke and Bowser (2010) identified six best practices identified by the Quality Indicators in Assistive Technology (QIAT Consortium, 2005) as characteristics of exemplary transition planning for AT:

1. Transition plans address AT needs of the student, including the roles and training needs of team members, subsequent steps in AT use, and follow-up after transition takes place.
2. Transition planning empowers the student using AT to participate in the transition planning process at a level appropriate to age and ability.
3. Advocacy related to AT use is recognized as critical and planned for by the teams involved in the transition.
4. AT requirements in the receiving environment (e.g., environmental requirements, skill demands, and needed support) are identified during the transition planning process by representatives from both the sending and receiving environments.
5. Transition planning for AT proceeds according to an individualized timeline with clear action steps and specific target dates identified.
6. Transition plans address specific equipment, training, and funding issues such as transfer or acquisition of AT, manuals, and provisions for ongoing maintenance and technical support.

AT can be applied in many situations within the school, classroom, employment, community, and other educational or personal settings as students transition to postsecondary education. Among the areas of application are existence (necessary to sustain life), communication (oral and written expression, as well as visual and auditory reception and social interaction), positioning (body support), mobility (navigation), physical education (adaptive materials that enable participation in physical activities),

and environmental interaction (activities associated with daily living) (Poel, 2007). While these areas are all part of AT, their functions and the way in which they are implemented vary considerably.

For example, some AT tools may be more appropriate accommodations for students in the middle and secondary grade levels because of the educational focus and the goals and objectives identified on the IEP. As students transition to postsecondary adult settings, the focus should broaden to include other aspects of daily living, necessitating the needs for other tools (U.S. Department of Education's Office of Special Education Programs, 2009) that could include:

Computer Access

- Alternative mouse and/or keyboard
- Narration tool for voice output
- Speech recognition software

Classroom Interaction and Lecture

- Sign language interpreter
- Note-taking assistant or other note-taking tools
- FM amplification or captioning system

Personal Organization

- Talking watch
- Scheduling software
- Phone/pager reminder service/software

Studying/Learning

- Graphic organizer software
- Digital recorder
- Computer files provided by professor

Test Taking

- Extended time or oral testing
- Low-distraction testing environment
- Use of computer for testing

Mathematics

- Talking or large key calculator
- High-contrast graph paper or geoboard
- Visual graphing software

Reading

- Audio book or digital text version for text-to-speech
- Large-print, Braille material, or computer Braille display
- Screen magnifier

Writing

- Computer or portable word processor
- Electronic spell checker and dictionary
- Speech recognition software

Assistive Technology Classification, Resources, and Support

When AT needs are being considered, one must evaluate the environment, the individual, and the characteristics and levels of the technology being incorporated (Lee, 2008). While it is common for many to think of AT as being sophisticated, complicated, and computer driven, that is not always the case. Assistive technology can be classified as low, middle, or high tech (Kirk et al., 2012).

- Low-tech devices are usually easy to use, have low cost, and typically do not require a power source. Devices may include non-electronic devices like pencil grips, adaptive spoon handles, and picture boards.
- Middle-tech devices are also easy to operate but do typically require a power source. Examples include things like audio books, word-processing computers, and tape recorders.
- High-tech devices are usually complex and programmable. They are typically specifically designed to support an individual's needs and may include speech recognition software, electronic communication devices, and mobility technologies for guiding wheelchairs.

Examples of the application of technology could range from having a voice input word processor (high tech) to using an adapted pencil grip (low tech) to assist a student in writing (Dell et al., 2008).

Along with considering the level of the technology needed, one must also consider how AT devices or services could be applied into the classroom environment. Consideration should be given to whether a device is *personally*, *developmentally*, or *instructionally* necessary when needs are determined (RESNA, 2000). Personally necessary items are devices that are used by an individual to effectively interact with his or her environment; personally necessary items are not typically shared (RESNA, 2000). Developmentally necessary devices and/or services may be shared among individuals; these devices help to meet an educational need based on a developmental delay (RESNA, 2000). Last, instructionally necessary devices and/or services are ones that have modified the instructional process to promote user success (RESNA, 2000).

The following are examples of the range of AT categories that are frequently considered when planning for an individual's needs (RESNA, 2000):

Aids for Daily Living/Self-Care

Aids to improve self-help skills and encourage independence in activities such as cooking, eating, dressing, toileting, and home maintenance. Examples include: modified utensils.

Communication/Augmentative Communication

Electronic and non–electronic devices that enhance communication skills for persons who are semi-intelligible or non–verbal. Examples include: communication board/book with pictures/objects/letters/words, eye gaze board/frame, voice output device, and devices with speech synthesis for typing.

Computer Access

Devices that enable persons with disabilities to use a computer. Examples include: input and output devices (voice, Braille), alternative access aids (headsticks, light pointers), modified or alternative keyboards, switches, and special software.

Environmental Controls

Electronic systems that enable someone without mobility to control various devices such as appliances, electronic aids, and security systems in her or his room, home, or other surroundings.

Computer-Based Instruction

Computer-based instruction can directly provide instruction or can allow alternatives ways of responding. Examples of direct instruction include instructional software and distance learning; alternative responding software provides tools for written expression, spelling, and calculation.

Instructional Material Aids

Tools that can substitute for or assist with instructional classroom applications; subcategories can include composing written materials, reading, math, learning, and studying. Examples include: handwriting tools, audiotape players, Braille displays, print magnifiers, and calculators.

Leisure-Time or Recreational Adaptations

Structural adaptations to promote participation in cultural events and leisure-time activities for individuals with disabilities. Examples include: use of battery interrupters and switches to operate devices; universal cuff to hold crayons, markers, paint brush; adaptive sporting equipment; and drawing or graphic programs on a computer.

Mobility Aids

Vehicles used to increase personal mobility. Examples include: manual and electric wheelchairs, mobile bases for custom chairs, walkers, three-wheel scooters, scooters, walkers, modifications of vans for travel, and canes used by pedestrians who are blind or have low vision.

Prosthetics and Orthotics Replacements

Substitution or augmentation of missing or malfunctioning body parts with artificial limbs or other orthotic aids (splints, braces, etc.).

Seating and Positioning Aids

Aids that assist people in maintaining body alignment and control so they can perform a range of daily tasks. Examples include: adapted seating, standing tables, seat belts, braces, transfer aids, cushions and wedges to maintain posture, and devices for trunk alignment.

Sensory Aids (Visual Aids/Assistive Listening)

Devices for people who are blind, have low vision, or are hard of hearing. Examples include: talking electronic device/software to pronounce challenging words, scanner with OCR and

auditory output, audio books, close captioning, light or audio warnings, and personal amplification systems.

Effect of Support

The use of AT devices promotes independence, self-confidence, freedom, and meaningful participation in daily activities. With advances in the technology, AT devices are no longer confined to any one setting. So individuals with disabilities can make seamless transitions across settings without losing existence, communication, positioning, mobility, physical education, and/or environmental interaction. Such transitions are only possible, however, with adequate AT resources and support.

Several states provide technological assistance to users of AT devices. For example, Florida Alliance for Assistive Services and Technology and Oregon's Statewide Assistive Technology Program provide information and referrals about devices and services to individuals with disabilities. Some states also have AT libraries that can provide short-term device loans, device demonstrations, device exchange and recycling programs, and funding resources for AT. A list of state organizations that provide such services is available from the RESNA Catalyst Project (see www.resnaprojects.org/scripts/contacts.pl).

Assistive Technology and Transition to Postsecondary Education

The attainment of postsecondary education has been shown to improve the chances for meaningful employment, increased vocational options, and better lifetime earnings (Heward, 2003). The National Center for the Study of Postsecondary Education Supports (2000) recommended: (a) students have opportunities during secondary education to understand themselves and their disability in relation to needed services and supports and (b) secondary programs develop models of assistance that are individualized to meet the needs of the student with a disability in the postsecondary setting.

The manner in which AT is managed may change as the student moves from the PK–12 arena to a postsecondary education setting. As discussed before, the AT and AT services students receive under IDEA are entitlements; in other words, students receive AT and AT services as accommodations mandated by their IEPs. In postsecondary settings, these same AT and AT services must be requested by the adult student, the need must be documented by a licensed professional, and services must be approved by the disability service office at the postsecondary education institution.

While a substantial body of literature currently exists within the field of special education that describes the importance of technology in elementary and secondary curriculum (Blackhurst & MacArthur, 1986; Smith, 2000), the research at the postsecondary level tends to be less comprehensive and limited to specific aspects or applications of technology (Michaels, Prezant, Morabito, & Jackson, 2002). Effective and appropriate implementation of technology will require that colleges and universities develop comprehensive and systematic plans for AT services and delivery (Raskind & Higgins, 1998). However, when 977 postsecondary institutions were surveyed, less than 50% reported that they had a policy or an institution-wide planning process for the purchase of and use of new technology. Of those institutions with policies in place, only half reported they consider the needs of students with disabilities and/or that they would request input from the Office for Students with Disabilities before making technology decisions (U.S. Department of Education, 1999; Michaels et al., 2002). As indicated by the Tech Act, AT promotes individuals to:

- Have greater control over their own lives
- Participate in and contribute more fully to activities in their home, school, and work environments and in their communities
- Interact to a great extent with nondisabled individuals
- Otherwise benefit from opportunities that are taken for granted by individuals who do not have disabilities

When the appropriate AT is carefully aligned with the necessary environment modifications and the needs of an individual, the likelihood exists for improvement in the overall quality of life for individuals. However, certain barriers exist when moving from secondary education to post-secondary education that could be prevented with careful attention to AT instruction and infra-structure, transition practices, and self-determination. For example, Houchins (2001) identified the following barriers: lack of early transition planning by high schools; insufficient AT training in high schools; lack of collaboration between high school and postsecondary institutions; lack of AT assessment/evaluation; insufficient AT training in high schools for students; postsecondary faculty unaware of AT; high schools lacking knowledge of AT; lack of follow-up once the student has AT equipment; postsecondary faculty unaware of general adaptations; and rural areas with limited services. The following statement emphatically underscores the importance of the effective and efficient use of AT in meeting the needs of individuals with disabilities: "AT is a life-span issue. Whether the individual is in a secondary, postsecondary, or adulthood setting, AT can significantly alter their quality of life. To negate the AT needs of individuals disabilities at any stage in their lives, is to deny them of their dignity, independence, self-determination, and potentially their very existence" (Houchins, 2001, p. 85).

Michaels et al. (2002) had the following recommendations for improving the access and delivery of AT and instructional technology (IT) services to students with disabilities in postsecondary edu-cational environments:

1. The actual achievement of AT access, training, awareness, and usage must be brought into closer alignment with the perceived importance.
2. There is a need for administrative, programmatic, and fiscal support and collaboration to address the limited availability of AT on college campuses as well as the high costs associated with rapid changes and upgrades.
3. Access to IT must be considered more frequently and by the entire college community.
4. Providing full access to both AT and IT services requires the consideration of technology needs across academic programs and departments.

While colleges and universities are required to provide auxiliary aids and services at no cost to the student as a reasonable accommodation, they are not required to provide individualized or requested AT directly to the student. Auxiliary aids and services refer to the devices and services that allow the student with disabilities to function within the institution's environment. It is also acceptable for a higher educational institution to provide a different technology product from the one originally requested by the student. Table 17.2 shows examples of obligations under the Americans with Dis-abilities Act (ADA) for higher educational institutions and students with disabilities.

Table 17.2 College and Student Obligations under the ADA

College Obligations under the ADA	*Student Obligations under the ADA*
Ensure that qualified applicants and students have access to the college's programs.	Self-identify if she/he has a disability (by following the specific college's stated policies and procedures); provide appropriate documentation of disability.
Provide reasonable accommodations for the student's documented disabilities.	Request specific accommodation(s).
Demonstrate a good faith effort to provide the student with meaningful access.	Follow the agreed-upon procedures for using accommodations.

Assistive Technology and the Transition to Employment

The transition from secondary or postsecondary education and the transition from secondary education or postsecondary education to employment is rarely without its challenges. Students with disabilities, especially students who rely on AT, face even greater challenges than the average job seeker due to the stigma associated with their disability and their need for workplace supports; employment is a domain that exhibits a visibly wide gap between the general population and people with disabilities (Johnson, Stodden, Emanuel, Luecking, & Mack, 2002). AT can be a tool to reduce this gap if all stakeholders (individuals, families, teachers, employers, etc.) are made aware of the technology available to students with disabilities and potential employers (Burgstahler, 2003).

Use of AT in preparation for employment is a critical discussion for many students to have with their families, agencies, and school personnel. Several studies have indicated that use of AT is directly related to employment outcomes. McDonnall and Crudden (2009) reported that use of AT, along with work experience and self-determination, were associated with higher employment rates for transition-age youth who were blind or had low vision. In another study, parents of high school students with disabilities believed their sons or daughters who used AT were 1.5 times more likely to eventually have a paid job than were parents of students who did not use AT (Kelly, 2011).

Assistive Technology Devices, sometimes known as ATDs, can facilitate the performance of the tasks that students want to complete, thus giving the student confidence and authentic connection to positive employment experiences (Scherer, Elias, & Weider, 2010). For example, Burke and colleagues (2010) used a performance cue system consisting of an iPhone application that was adapted to teach social-vocational skills to six young adults with autism spectrum disorder. Five of the adults reached expectations using the cue system, results that have implications for future study in other employment settings. Scherer et al. (2010) used ATDs to assist people with traumatic brain injury with short-term memory and executive skills. By using ATDs to help structure daily routines, appointments, and tasks, they reported that participants had an enhanced quality of life and higher employment performance.

Employers are not always familiar with AT. For example, in a study on the perceptions of employers to hiring individuals with disabilities, employers stated, "we do not have experience in this area" or "it (applying advanced technology to employment of people with disabilities) has not become important" (Greenan, Wu, & Black, 2002, p. 32). Those employers who were aware of AT were reluctant to use it in their business or even hire an individual who required AT due to the perceived high cost of the technology and/or cost to implement the technology (Greenan et al., 2002). This resistance against AT due to cost is another example of lack of awareness on the part of the general population. Although the cost of AT falls to individuals or business, there is funding available to both groups to defer some or all of the costs. If the need for AT is medically related, Medicare is a good resource for locating funding (see www.medicare.gov); if the need for AT is more of a lifestyle issue, every state has a vocational rehabilitation agency that is designed to help individuals with disabilities meet their employment goals (see www.askearn.org/state-vocational-rehabilitation-agencies/)

Despite concerns about costs and other barriers to hiring people who use AT, employers do report that they recognize the function of assistive technology used for the employment of individuals with disabilities and the importance of employment for individuals with disabilities and communities. In addition, they were willing to provide employment opportunities and relevant contributions to them whenever applicants' job skills matched certain positions. (Greenan et al., 2002). For employers that already provide accommodations like alternative trainings or job restructuring to nondisabled employees for the sake of employee productivity, utilizing AT is not that big of a leap (Luecking & Mooney, 2002). This leap must be facilitated by practices at the start of the transition from education to employment process; however, the connection between educational institutions

and the business sector must be strengthened with an exchange of knowledge and recognition of mutual benefits (Burgstahler, 2003). Students with disabilities must also be involved in all stages of AT selection and application so they develop the self-advocacy skills needed to retain AT in the workplace and elsewhere (Burgstahler, 2003).

As students, families, and professionals incorporate ATDs into transition planning, they must be cognizant of the purposes and ultimate outcomes that any assistive devices offer, namely performance and communication. Murphy (2009) cautioned that using AT in work environments, especially augmentative and alternative communication, is about human communication and performance enhancement, rather than the specific technology itself.

Assistive Technology Professional Development and Ethical Considerations

An important consideration is for school leaders to provide and participate in effective professional development opportunities so that school personnel understand the role of AT in helping students with disabilities be effective and successful learners. Meaningful, standards-based professional development should be connected to how AT is utilized to promote successful learning outcomes within the general education curriculum (Dyal, Carpenter, & Wright, 2009). Another important consideration refers to the ethical conduct of school personnel within all aspects of operating a school. Individuals with disabilities are protected under special laws because of historical illegal and unethical treatment of persons with disabilities (Dyal et al., 2009). Additionally, students with disabilities remain vulnerable to mistreatment even within the school environment (Dyal et al., 2009). Therefore, all school personnel must understand and practice ethical codes of behavior.

Future Directions

The world is changing around us. This change will provide technology access for a greater number of people with disabilities to live meaningful lives. With the increase in options, information, and needs, several challenges are inherent. However, the need still exists for students to be self-advocates as they transition to postsecondary settings, for greater collaboration with families and professionals, and for a stronger focus on developing or restructuring a seamless service-delivery system that guarantees access.

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Middle School Transition Education Planning and Services

Kendra Williams-Diehm and Malarie Deardorff

The educational needs of students between elementary and high school, otherwise known as middle school, are unique. In fact, the concept of middle school emphasizes that children have progressed beyond elementary school but are not ready for the demands of high school (Alexander, 1995). Student needs in middle school are unique due to the onset of puberty and the impacts on cognitive, social, and emotional needs (Armstrong, 2006); it is also during this time that students are entering adolescence and navigating the formation of their identities (Brinthaupt & Lipka, 2012). Middle school students need more supports to "learn how to learn." This, coupled with their developmental status, creates a unique window in which students are receptive to adult feedback and guidance (Hansen & Jessop, 2017). While students are forming their identity and making cognitive and social strides, middle school provides the optimal opportunity to influence adolescents' growing self-determination and establish the framework for transition (Palmer, 2010). Teachers and students in middle school need resources geared to their unique educational needs to build capacity for the high school years.

Middle school students are typically aged 10–15 or in the sixth through eighth grades As noted, during this time, students experience numerous changes, including physical, cognitive, developmental, and social/emotional changes. Physical changes include puberty, with body development and growth, while cognitive changes include expanded cognitive capabilities, self-esteem, and self-confidence. Finally, and possibly most importantly, social/emotional changes include increased understanding of their own unique attributes and group membership. Where does transition planning fit into this? Planning for these changes and the transition into high school and then beyond can help overcome barriers and ease challenges all students encounter, especially students with disabilities. Ironically, IDEA (2004) does not mandate transition planning to begin until age 16, despite research clearly identifying this process must start earlier (Papay, Unger, Williams-Diehm, & Mitchell, 2015; Palmer, 2010) and the suggestion that age 16 is too late (Weidenthal & Kochhar-Bryant, 2007). The 2004 update to IDEA actually shifted the required transition age back to 16 from 14, the age required in the IDEA 1997 regulations (Turnbull, Huerta, & Stowe, 2009). However, several states have proactively introduced legislation that requires transition services by age 14 (41% of U.S. states and territories), with additional states requiring transition to begin even earlier (the state with lowest age requirement is 13) (Suk, Martin, McConnell, & Biles, 2019). This means that many students have completed transition plans during middle school. For this reason, middle school can be a key time to begin targeting skills necessary for employment and community participation in adulthood

(Repetto, 2012). Middle school transition planning not only encompasses planning for postsecond-ary life but also aids in the transition to high school.

For the purpose of this chapter, we will refer to transition skills that develop in middle school in preparation for high school success as early transition skills. Although educators identify the need for younger students to set and achieve goals, self-advocate, and problem solve, there is a dearth of research on interventions or practices for younger students focused on early transition skills. The early transition skill set should include both future/transition planning and the development of skills associated with self-determination. Transition instruction must involve the development of skills that support young people to move toward postsecondary goals and shift from acting primarily as a child and student (in school) to acting as a self-directed young adult in postschool activities (IDEA, 2004). Earlier support for transition will better prepare middle school students for life after high school and give them more time to build needed skills to move seamlessly into young adulthood after the completion of high school.

The Changing Middle School Student

Early adolescence is truly a time of rapid change, and, in fact, the physical body actually experiences the same level of rapid change that occurred during infancy (Conklin, 2014; Manning & Bucher, 2012). For example, bone growth far surpasses muscle growth during early adolescence, and these "growing pains" are genuine and cause a significant need for middle school students to move and stretch. The stomach also grows to an adult size, and the increased stomach size coupled with accel-erated growth creates a need for increased food and calories. Unfortunately, these changes are not as predictable as during infancy. During infancy, one can predict within a few months' time when major milestones (i.e., sitting up, crawling, walking) occur. During adolescence, this is only predict-able within a few years at best (i.e., puberty). Because the pre-frontal cortex is not fully developed, certain expectations (i.e., impulse control, abstract reasoning) may not be realistic (Wormeli, 2004). On average, girls experience these changes prior to boys, which is why girls often convey a higher level of physical maturity in middle school. Typically, by the time children are 16 (i.e., high school aged), this period of rampant development is finished.

Not only are physical changes rampant, but intellectual development is as well (Jackson & Davis, 2000) and can be "fraught with vulnerability and risk" (p. 2). Middle school students are curious and testing their own independence. They are children one day, playing in the backyard on swings, and true teenagers the next. In fact, it is during middle school that students often realize that adults do not, in fact, know everything and can even potentially be wrong (Wormeli, 2004). This concept can be difficult for some young people, who do not know how to process an adult being incorrect. Lack of success in middle school is strongly correlated with overall predictors of school failure, such as course failure, absenteeism, and future dropout (Balfanz, 2009). One of the most important changes that occurs in middle school is the ability to think and plan long-term, which allows transition plan-ning to be effective (Repetto, Webb, Neubert, & Curran, 2006). This development is synonymous with the shift from concrete to abstract thinking. Middle school students are constantly shifting who they are in an attempt to figure out who they want to be (Newman & Newman, 2001). These changes can add to the turmoil of middle school in that one day students may want to be compliant students who follow the rules, followed by the next day in which they want to push the limits and test boundaries.

What Teachers Know About Transition in Middle School

As could be expected, when teachers believe they understand transition, they are more effective in teaching transition (Benitez, Morningstar, & Frey, 2009). A 2003 position paper of the Council for

Exceptional Children's Division on Career Development and Transition (DCDT) warned that the United States' secondary special education teaching force lacks meaningful knowledge about transition education, leading to too few educators implementing meaningful transition education practices (Blalock et al., 2003). Ongoing research suggests teachers have failed to become more confident in their ability to both write and implement effective postsecondary transition plans (Heffernan, 2012). In fact, many of today's special educators did not learn about transition education in pre-service programs (Williams-Diehm, Rowe, Johnson & Guilmeus, 2018) and lack fundamental transition planning and education skills (NTACT State Planning Institute, 2018). Morningstar and Clark (2003) suggested that "special educators nationally are poorly prepared to deliver transition services" (p. 230).

Benitez et al. (2009) examined teachers' feelings of competence related to transition education. The researchers found teachers reported feeling between somewhat prepared to unprepared in transition competencies, with most teachers only feeling prepared enough to participate in transition planning but not in other areas such as instruction. A strong correlation existed between teachers who felt more satisfied with their training in transition and their provision of instruction in transition to their students. Li, Bassett, and Hutchinson (2009) attributed the lack of either pre-service or in-service training to less time spent on transition instruction. Other researchers have identified lack of preparation as a barrier to providing transition services for all students, regardless of age (Benitez et al., 2009; Blalock et al., 2003). The combination of secondary teachers not understanding transition instruction and the physical, social, and cognitive changes occurring in middle school students can lead to a lack of supports for critical skills for later life success during this period. Thus, it is important to educate middle school special educators on transition planning practices and the importance of those practices.

Transition Planning for Middle School

Transition planning in middle school should not just focus on the transition components within the individualized education program (IEP) – it must be integrated into the full middle school experience. Because success in middle school has been linked to success in high school (Balfanz, 2009) and success in high school is linked to success in adult life (Tangney, Baumeister, & Boone, 2004), strong transition programs need to be developed to ensure success in middle school, leading to success in high school and adulthood. Key components of transition in middle school should focus on (a) transition planning to promote success in middle school, (b) transition planning to promote successful transition to high school, and (c) formal transition planning and the IEP.

Transition Planning for Success in Middle School

Academically, the purpose of middle school is to continue to build the educational foundation and prepare students for high school. Ideally, students have mastered reading skills and basic math skills. They have an elementary knowledge of how things work, both from a scientific and a world perspective. Middle school provides opportunities to more deeply discuss concepts and get students to think independently. Further, this is a critical time for building social skills and relationships. When students are provided supports to establish relationships in middle school with friends and teachers, they are more likely to experience success in high school and beyond (Roybal, Thornton, & Usinger, 2014). Burton (2005) found that the process of moving from elementary school to middle school was filled with anxiety and stress for students with disabilities. "Some students find the move between schools so difficult that they 'unlearn' skills and content, beginning a potential spiral toward being retained or even dropping out" (Andrews & Bishop, 2012, p. 1).

The majority of middle schools have some sort of supports in place to help students adjust. This includes activities that occur while students are still in elementary, such as touring the middle school

campus, parent informational nights/orientations, and opportunities for elementary students to interact with current first-year middle school students (Koppang, 2004). Wormeli (2011) provided the following five guidelines for helping ensure elementary to middle school transitions are successful: (1) understanding students' concerns about belonging, (2) empathizing with students, (3) understanding the characteristics of the age group, (4) focusing on the positive, and (5) building hope.

Transition Planning for Success in High School

Ironically, the move from middle school to high school can be just as traumatic as the move from elementary to middle school (Letrello & Miles, 2003). Therefore, a major focus of transition planning in middle school must include the skills that result in positive and successful high school experiences. When this process is positive, students can thrive under new freedoms and additional specialized coursework in high school (Akos & Galassi, 2004). However, if unsuccessful, then low self-esteem, course failure, and discipline can all become a concern (Cohen & Smerdon, 2009). Therefore, teachers of middle school students should prepare students for the expectations of high school (Ellerbrock, Denmon, Owens, & Lindstrom, 2015).

A successful model of transition to high school must include supports for students to gradually transition to the expectations of a high school setting (Cauley & Jovanovich, 2006) and should occur between the final year of middle school and the first year of high school (Anderson, Jacobs, Schramm, & Splitt-Gerber, 2000). These activities are similar to those of the elementary to middle school transition and should include activities like a campus tour (Cauley & Jovanovich, 2006), allowing students time to interact with current high school students (Letrello & Miles, 2003), and making sure students are aware of and ready for the shift in academic expectations in high school (Ellerbrock & Kiefer, 2010). Important considerations when making the transition to high school include mapping out a complete course sequence to determine that all graduation requirements will be met and that students are successfully meeting their individual academic goals (i.e., advanced vs. minimum requirements).

Course of Study for High School

States have different requirements for high school diplomas or certificates, and the discussion around these requirements should start prior to high school for students with disabilities, just as it does for students without disabilities. Individuals with a high school diploma are more likely to be employed and make more money than those without diplomas (Bureau of Labor Statistics, 2017). In addition, employers are more willing to hire individuals with diplomas rather than certificates of attendance or participation (Hartwig & Sitlington, 2008). This relates to transition planning in middle school when students are deciding on courses of study in middle and high school. For a student with disabilities who is planning on attending college after high school, conversations about what academic courses are needed in order to graduate with a high school diploma need to occur prior to entering high school. This relates to the course of study in the transition plan. In this area of transition planning, the IEP team decides the courses students will take in middle school and high school while keeping in mind student preferences and interests indicated on transition assessments.

Supports for High School

It is also important to plan the type of supports students will need to access the general education curriculum. This relates to the least restrictive environment component of the IEP. Spending more time in general education is a positive predictor of postsecondary outcomes (Mazzotti et al., 2016). Planning for time in general education is beneficial for students with disabilities – *how* the time is spent in general education is a question for the IEP team.

Transition Planning Within the Middle School IEP

Although the actual IEP pages may look identical, transition planning in younger grades, like middle school, can be slightly different than high school; however, beginning with transition assessment is the best way to start the transition planning process regardless of the student's age. There are several transition assessments geared toward younger students and a few other assessments for general transition planning appropriate for middle school students. These assessment results should guide the development of transition plans at any age. As with any educational decision, assessment should drive decision making; this is no different for transition planning (Martin & McConnell, 2017). IEP teams should rely on assessment results to make transition decisions, including to inform goal setting related to social/emotional skills, adaptive behavior, employment preferences and skills, academic performance, and non-academic behaviors. Transition assessments will yield important and necessary results for transition planning (Neubert & Leconte, 2013)

Transition Assessments

There are several transition assessments appropriate for middle school age students. For employment, the Employment Support Indicators (Moss, 1997), Employability Life Skills (ages 6–13; Weaver & DeLuca, n.d.), and O★NET Career Interest Profiler (National Center for O★Net Development, n.d.) are options. Transition assessments focusing on postsecondary education/training geared toward middle school ages include the AIR Self-Determination Scale (Wolman, Campeau, Dubois, Mithaug, & Stolarski, 1994) and Self-Determination–Inventory (ages 13–22; Shogren, Wehmeyer, Little et al., 2017). The Transition Assessment and Goal Generator (TAGG; Martin, Hennessey, McConnell, Terry, & Willis, 2015) is normed for ages 14–21, so it may also be appropriate for some middle school students. Last, independent living skills can be assessed with adaptive skills assessments (e.g. Adaptive Behavior Assessment System II; Harrison & Oakland, 2015). These are just a few suggestions – there are numerous transition assessments! For a list of middle school appropriate transition assessments, see Table 18.1.

Academic and Education

Academic performance becomes more pertinent in the middle school and high school years. Academic skills are important to postsecondary outcomes, and student performance in academics is usually a key focus of supports in many IEPs and can inform the transition planning process. We want to caution, however, that research also indicates focusing too heavily on academic achievement can stifle the career exploration of middle school students (Burkins, Yaris, & Hoffmann-Thompson, 2016). Academic skills are not the only component that leads to being prepared for college and careers after high school (ACT, 2009). A focus on students' interests, preferences, and strengths, rather than academic achievement, can be useful in middle school. Using academic interest measures can also help facilitate course-of-study decisions. Planning the course of study is particularly important in the middle school years as the courses students take in middle school often shape the courses they take in high school. For example, if a student does not plan on taking algebra until ninth grade, it is likely he or she will not take calculus while in high school.

Academic performance goals are important to postsecondary training and education options. Many colleges have specific entrance requirements, like GPA, attendance records, diploma or certificates of completion, and ACT/SAT score minimums. Current academic performance may indicate the need for additional supports like ACT/SAT preparation courses, specialized accommodations and supports in courses, and assistive technology. Some colleges across the United States have postsecondary programs for students with more significant support needs (i.e., thinkcollege.net) and create opportunities for students to attend college campuses and take college courses. Such programs,

Table 18.1 List of Transition Assessments for Middle School Aged Students

Assessment	Transition Area	Age Range	Other Information
AIR Self-Determination Scale (Wolman et al., 1994)	Education/training	Kindergarten to high school	Third/fourth grade reading level
Career Clusters Interest Survey (Oklahoma Department of Career and Technology, 2005**)**	Employment	Secondary age youth	Self-scoring may be difficult for younger students
Wisconsin's Career Interest Questionnaire (Wisconsin Technical Colleges, 2019**)**	Employment	Secondary age youth	Student report
O*Net Interest Profiler (National Center for O*Net Development, n.d.**)**	Employment	Secondary age youth	Uses pictures to help distinguish like/ dislike rating scale
SDI-SR (Shogren, **Wehmeyer** et al., 2017**)**	Education/training	Ages 13–22	Student report
Employability Life Skills Inventory (Weaver & DeLuca, n.d.**)**	Education/training, employment, and independent living	Two versions: ages 6–13, 14–21	Parent and educator forms
Casey Life Skills Upper Elementary/Jr. High Assessments (Casey Family Programs, 2017**)**	Independent living Education/training	Upper elementary and jr. high versions available	Print or online versions
Life Skills Inventory (Washington State Department of Social and Health Services, 2000**)**	Life skills	Authors suggest the assessment should be used when students are 15/16; however, some categories may be appropriate to use as an assessment for younger students	IEP team (including student) provide information for this checklist
Adaptive Behavior Assessment System (ABAS; Harrison & Oakland, 2015**)**	Independent living	Ages 5–21	Assesses daily living skills

however, still have entrance requirements. Common academic requirements for such programs might include reading, writing, and calculation skills (Grigal, Hart, & Weir, 2012; Papay & Bambara, 2011). Therefore, considering these requirements during transition planning is recommended. Meaningful assessment of current levels of academic performance should inform the IEP team of areas of need and the requirement for individualized accommodations, supports, and possibly assistive technology to help students to be more successful in their academic subjects.

Career and Education Awareness/Exploration

Career and college education awareness and exploration should begin in middle school (Castellano, Stringfield, & Stone, 2002). In fact, a main priority of education in the United States is college and career readiness (Brand, Valent, & Danielson, 2013). While differences in the definition and purpose of college and career readiness exist, the focus should not be solely on academic skills and college-bound students (Brand et al., 2013). Other critical skills related to self-determination, participation,

and social–emotional learning play a significant role in college and career readiness and are discussed later in this chapter.

Middle school offers opportunities to explore unknown career fields and further education options. Many middle schoolers with disabilities may lack the necessary supports or opportunities outside of school to explore higher education and career areas (Madaus, Grigal, & Hughes, 2014). While many middle school students believe they will attend postsecondary education environments, many students with disabilities do not go on to apply, attend, or complete programs (Lipscomb et al., 2017; Newman, Wagner, Cameto, & Knokey, 2009). ACT (2009) found less than 20% of eighth grade students were on a trajectory to complete college-level work upon graduation from high school. ACT (2009) also noted two academic behaviors were more predictive of future postsecondary success – study habits and academic discipline – providing specific skills to focus on for annual transition goals in middle and high school.

Sadly, teachers often think middle school age students are too young to discuss postsecondary goals (Weidenthal & Kochhar-Bryant, 2007). However, middle school students are capable of expressing their goals for after high school – and even if they are unable to articulate specific goals, this provides opportunities for special educators and the IEP team to help students explore their postsecondary options. ACT (2009) suggested educational systems focus on "college and career readiness by the end of eighth grade to maximize the benefits of high school" (p. 40).

Grigal, Cooney, and Hart (2019) identified several facilitators to middle school students' engagement in the development of skills associated with college and career readiness: availability of resources, time devoted to college and career readiness skills instruction, and the capacity of teachers to provide individualized and engaging lessons devoted to career and college exploration. Using online transition assessment platforms can provide avenues for exploring careers. The O★Net interest profiler (National Center for O★Net Development, n.d.), and several other career interest surveys online, like Wisconsin Technical College's Career Interest Questionnaire (Wisconsin Technical Colleges, 2019), provide a list of jobs within career interest areas and links to videos and information on those specific jobs. Information provided includes education and training requirements. Some sites, like Texas Career Check (The Labor Market & Career Information Department of the Texas Workforce Commission, n.d.), include information on salaries, certifications or degree programs, and skills/abilities needed to perform job duties.

Exploring degree and certification programs can lead to discussions and ongoing planning for college and continuing education. There are a variety of postsecondary education options for students to begin considering in middle school. Using career interest results helps students begin to understand the needed education and training for specific careers. O★Net (National Center for O★Net Development, n.d.) provides the option to explore a career based upon the amount of education the student considers appropriate for them, which could lead to better understanding the connection between career choices and educational qualifications.

Another way to facilitate college exploration is by using an online college search engine. The College Board search platform (Big Future; The College Board, 2019) allows students and IEP teams to explore colleges based upon designated preferences. The search engine filters colleges based on selected preferences and provides a list of higher education institutions. Using these online transition planning strategies can be connected to many state curriculum standards related to research, and this enables special educators to build career and college exploration to assignments linked to other academic standards.

Self-Determination

Higher levels of self-determination in adolescents with disabilities have been linked with more positive employment outcomes and transition into the community (Shogren, Wehmeyer, Palmer,

Rifenbark, & Little, 2015; Wehmeyer & Palmer, 2003), as well as more positive quality of life and life satisfaction (Lachapelle et al., 2005; Shogren, Lopez, Wehmeyer, Little, & Pressgrove, 2006). Self-determination develops over the lifespan, and supports and opportunities for self-determination must begin prior to high school (Palmer et al., 2013). Causal Agency Theory (Shogren, Wehmeyer, Palmer, Forber-Pratt, Little, & Lopez, 2015) describes self-determined actions as (a) volitional (autonomy, choice making, decision making, and self-initiation), (b) agentic (self-regulated, self-directed pathways, thinking in terms of goal and problems), and (c) driven by action–control beliefs (psychological empowerment, self-awareness, and self-knowledge). Self-determination as causal agency provides a theoretical perspective to organize self-determination instruction for students with disabilities at the secondary level (Alwell & Cobb, 2006; Wehman, 2012); however, promoting self-determination skills for younger students is less common. But educators are becoming increasingly aware that many skills associated with self-determination do not suddenly appear in the high school years; students must be provided the time, opportunity, and supports and accommodations for these characteristics to evolve (Shogren & Turnbull, 2006). Self-determination development requires an opportunity to practice the skills delineated in Causal Agency Theory. Thus, repeated experiences of causal agency result in enhanced self-determination (Shogren, Wehmeyer, & Palmer, 2017).

Evidence suggests instruction in self-determination has both direct and indirect impacts on motivation (Shogren, Plotner, Palmer, Wehmeyer, & Paek, 2014), elements of cognition, problem solving (Wehmeyer, 2014), self-regulation, and engagement (Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup, 2013). These component elements (problem solving, self-regulation, choice making, decision making, goal setting, planning skills, self-awareness, self-evaluation, self-advocacy, and goal attainment) support motivation to achieve (Wehmeyer, 2006). If students are self-determined, they are more able to plan for the future and make progress on academic and transition goals (Wehmeyer, Palmer, Lee, Williams-Diehm, & Shogren, 2011). By limiting the focus on promoting self-determination to high school, educators are missing the opportunity to promote early transition skills and infuse self-determined principles, such as disability awareness, problem solving, goal setting, and self-advocacy, earlier (Papay et al., 2015).

Goal setting and attainment has been referred to as a central component of self-determination (Martin & Williams-Diehm, 2013). After all, to truly be the causal agent in one's life, one must be able to articulate what is valued, create a plan to get there, and evaluate whether that plan was successful. Goal setting and attainment is one of the more researched components of self-determination for students in middle school and draws on emerging abstract and long-term thinking skills (Shilts, Horowitz, & Townsend, 2004), which develop into adolescence. One interesting aspect of goal setting is the process and type of goals that are set and how these change through the middle school to high school years. Williams-Diehm, Palmer, Lee, and Schroer (2010) found significant differences in the types of goals set by middle school and high school students with disabilities. First, students in middle school were more apt to set academic goals as opposed to non-academic goals. This is more likely a result of the shifting focus to postsecondary life, which occurs in high school, coupled with a constant academic focus in middle school. Another possibility is the shifting focus from concrete to abstract thought, which occurs in adolescence (Shilts et al., 2004). Second, students in middle school were more apt to set product versus process goals. This refers to the notion that students are not setting extremely specific goals, such as making targeted grades or achieving targeted outcomes, but rather more open-ended goals, such as improving academics or classroom behavior (Williams-Diehm et al., 2010).

Life Skills/Social Skills

In addition to academic and self-determination skills, other "soft skills" are just as important. Soft skills are defined as the interpersonal skills that allow individuals to work and get along with others

(Lippman, Ryberg, Carney, & Moore, 2015). Examples of soft skills include appropriate language for the audience and showing up on time (i.e., getting to class on time). Employers have identified soft skills as even more important than academic and hard skills specific to jobs (Casner-Lotto & Barrington, 2006), and people with disabilities have been identified as having a disadvantage because their soft skills sometimes do not match those of their peers without disabilities (Lindsay et al., 2014). The following seven soft skills were identified by middle school teachers as vital to teach: (1) integrity, (2) communication, (3) courtesy, (4) responsibility, (5) professionalism, (6) flexibility, and (7) teamwork (Greene, 2016). These skills can easily be developed in both core content and elective coursework in middle schools. Teachers can, and should, hold students to high standards and discuss what these skills look like in both classroom and real-life situations. Having open conversations with students coupled with explicit guidelines of behavior can help students practice and develop a repertoire of such skills. The more middle school teachers focus on these areas, the more prepared students will be for high school and beyond.

Involvement in the IEP

Students are required to be invited to their IEP when they reach transition age by federal mandates in IDEA (2004). However, there are differences in merely attending the IEP meeting and being an active participant in the IEP meeting (Martin, Marshall, Maxson, & Jerman, 1996; Martin et al., 2006; Martin & Williams-Diehm, 2013). Student involvement in the IEP is a predictor of positive postsecondary outcomes in education and employment (Burnes, Martin, Terry, Hennessey, & McConnell, 2018; McConnell et al., 2013). According to Lipscomb et al. (2017), about 69% of youth attend their IEP meetings; however, 10% or less actually provided input in their IEP meetings. For those students with more significant disabilities, participation was even lower (between 25%–42%) in IEP meetings (Lipscomb et al., 2017). Teachers play a valuable role in helping students to be actively involved in their IEP meetings. In fact, students who are involved in their IEP meetings are more likely to understand their disability's impact on their school performance (Mason, McGahee-Kovac, Johnson, & Stillerman, 2002). Active student participation in the IEP also leads to meetings becoming more student-centered, providing opportunities for students to use self-determination skills. Further, IEP teams solved problems more collaboratively (Danneker & Bottge, 2009).

Active participation in IEP meetings does not happen overnight and should be cultivated over the student's secondary school career, beginning in middle school. Eisenman, Chamberlin, and McGahee-Kovac (2005) recommended starting with small steps to help students participate in their IEP meetings. Teachers can use a curriculum or parts of curriculum to teach students to be actively involved in the IEP process, like Whose Future Is It Anyway? (Wehmeyer et al., 2004) and the Self-Directed IEP, part of the ChoiceMaker curriculum (Martin, Huber-Marshall, Maxson, & Jerman, 1996), during middle school. Some positive results of using the Self-Directed IEP with middle school students were (a) increased student participation in meetings by starting and leading their meeting, (b) increased knowledge of the IEP process, and (c) increased positive perceptions of the IEP process (Martin et al., 2006). The Self-Directed IEP and Whose Future Is It Anyway? are reviewed in detail later in the chapter.

Outside Service Providers

It is always recommended to include and involve adult service providers early (Landmark, Ju, & Zhang, 2010). Although many programs do not target services for students in middle school grades, learning about service providers is still critical during this time. Many providers have waiting lists that can last upwards of 10 years, meaning that if students want services upon completing high school (estimated age 18–22), they must get on waiting lists by middle school. However, effective educators

cannot link students and families with adult service providers unless they themselves are knowledge-able about adult service providers. This has been long cited as a failure of transition planning in IEPs (Hasazi, Furney, & Destefano, 1999; Johnson & Sharpe, 2000). The more teachers can do to learn about local and state adult service providers and follow steps to increase interagency collaboration, the more successful partnerships can be established (Meadows, Davies, & Beamish, 2014).

Creating a Middle School Transition Services Plan

Using the strategies discussed prior, middle school special educators can create appropriate transition plans for their middle school students to aid in the transition to high school and postsecondary environments. The following sections elaborate on how to aforementioned strategies can be implemented, using a student, Elizabeth, as an example of how this might look in practice.

Elizabeth is a seventh grade middle school student with a learning disability in reading. She is engaged in numerous extracurricular activities, including band, pom squad, and choir. Her advanced math abilities enable her to take higher-level math courses in middle school; however, she has significant support needs related to reading, particularly in comparison with her age peers.

After gathering transition assessment results and discussing them with the student, the transition planning team can begin drafting a present level of performance statement including the student's strengths, limitations, preferences, and interests. Students and other IEP team members can provide valuable information for this section as well. The present levels of performance information facilitate the creation of the postsecondary goals, annual transition goals, coordinated activities, and a course of study.

Elizabeth took the career clusters interest survey and the AIR Self-Determination Scale. The career clusters interest survey identified finance as her top career cluster choice followed by business, management, and administration. The AIR Self-Determination Scale indicated Elizabeth scored lower in her opportunities for self-determination than her capacities, indicating she needs more opportunities to express and use self-determination skills at home and school.

Identifying Postsecondary Goals

Transition assessment results such as those from a career interest survey can provide avenues for postsecondary goals. Conversations with the student and using information provided by family members and IEP team members also help shape the postsecondary goals. Postsecondary goals should focus on what the student will be doing *after* high school. This can seem like a long time away from middle school, and many teachers worry about students changing their mind – which is fine! These goals should change and be updated year to year.

While it may be tempting to provide vague or to-be-determined postsecondary goals for students in middle school, it is not appropriate and could result in a denial of free and appropriate public education (FAPE; Prince, Plotner, & Yell, 2014). However, middle school postsecondary goals do not need to be highly specific. For example, an overall career cluster area can be used as a general guide to create the postsecondary goal. *Elizabeth may have a goal like: After high school, Elizabeth will work in the finance industry*. This could also serve as facilitator to create a postsecondary goal for education/training. *After high school, Elizabeth will attend community college to obtain an associate degree in finance.* Thus, the career clusters interest survey provides a guide to create postsecondary goals for employment and education. Of course, student input in these goals is critical. But middle school students may be unfamiliar with the concept of postsecondary goals and how to develop them, which provides teachers with an opportunity to help students learn about postsecondary goals and create them for their transition plans.

Creating Annual Transition Goals

Annual transition goals should be based on transition assessments as well, like the AIR Self-Determination Scale (Wolman et al., 1994), the Self-Determination Inventory (Shogren, Wehmeyer et al., 2017), or the Life Skills Inventory (Washington State Department of Social and Health Services, 2000) (see Table 18.1). While students are in middle school, there are opportunities to create goals to increase career awareness and exploration since students may be less familiar with career fields. *To build on Elizabeth's postsecondary goals – Elizabeth's career clusters indicated she preferred careers in the finance area; however, Elizabeth lacks awareness of specific jobs in the finance area. This creates a great opportunity for an annual transition goal to explore careers in the finance area.* Keep in mind annual transition goals must include (a) condition, (b) behavior, and (c) criterion. *Elizabeth's goal might say: After exploring careers in the finance area using an online platform, Elizabeth will create a PowerPoint presentation explaining her top three job choices with at least ten slides and 90% accuracy as noted on a teacher-created rubric.* This goal requires more than just using the Internet to explore jobs by requiring her to create a presentation using technology and explain her preferences. Elizabeth's annual transition goal relates explicitly to her postsecondary goal – it is important annual transition goals are linked to postsecondary goals.

Creating Coordinated Activities or Transition Services

Coordinated activities or transition services should build upon the existing postsecondary goal and annual transition goal for the transition area. A good resource for planning for coordinated activities is the *Coordinated Set of Needed Activities/Strategies Examples* (O'Leary & Collson, 2002). *Since Elizabeth's postsecondary goal and annual transition goal relate to finance and career awareness, the coordinated activity should correlate with those goals. For example: Elizabeth will meet with current employees who work in the finance career area, or Elizabeth will participate in a career awareness program.* These activities do not have to be the responsibility of the teacher but can depend on other IEP team members, like parents, general educators, or adult service providers. *Notice Elizabeth's coordinated activity relates to her postsecondary goal and annual transition goal – focusing on building her career awareness to help her achieve her postsecondary employment goal.*

Course of Study

The course of study was previously discussed in the academic and education section. Identified student preferences and interests gleaned from the transition assessments inform course of study decisions as well. Elizabeth's career interest area of finance and her present level of academic performance provide an outline for her course of study. Elizabeth and her family plan for her to attend a college environment as noted in her postsecondary education goal. The IEP team needs to keep in mind that she will need to take courses to obtain a high school diploma and be prepared for college-level coursework. Diploma requirements differ by state but generally include a specific number of English, math, social studies, and science courses. This should be worked into the course of study first, then the team can consider electives and other course options for Elizabeth.

Elizabeth's math skills will allow her to take algebra in eighth grade, setting a path to take more advanced math courses in high school. At this time, the IEP team is unsure of the best supports to continue to build Elizabeth's reading skills, and she may plan to participate in the general education classroom with resource support as needed and perhaps additional, supplemental instruction. Elective courses in high school are another area to consider during middle school. Elizabeth's engagement in choir, pom squad, and band may lead to decisions for other electives. In addition, her interest in finance careers may warrant additional math, business, or computer courses to plan for in high school.

Available Materials to Support Early Transition

Most information and materials developed to support transition planning were not created for the specific needs of middle school students and teachers. In fact, the majority of information and materials target high school populations. However, current interventions for middle school grades emphasize IEP preparation (Martin, Marshall, & Sale, 2004), advocating during meetings (Test & Neale, 2004), and other strategies to promote self–determination including goal setting and goal attainment (Williams–Diehm et al., 2010).

Student Involvement in the IEP

Two distinct curriculum packages have shown evidence to support student involvement in the educational planning process. These are Whose Future Is It Anyway? (Wehmeyer et al., 2004) and the Self-Directed IEP, part of the ChoiceMaker curriculum (Martin et al., 1996). Whose Future Is It Anyway? is a curriculum that focuses on a student-directed transition planning process. It prepares students for their IEP meeting and promotes self-determination skills; it includes 36 full lessons organized into six sections. The entire curriculum has been used with success with middle school students (Lee, Wehmeyer, Palmer, Williams–Diehm, Davies, & Stock, 2011).

One important aspect of Whose Future Is It Anyway? is the amount of research to support its use. Whose Future Is It Anyway? is considered a research-based practice for students with diverse disability labels (i.e., learning disability, intellectual disability) (Wehmeyer et al., 2013), has been successfully implemented with multiple age groups (both middle school and high school), and has shown positive impacts on self-determination skills (Lee et al., 2010; Wehmeyer et al., 2013) across multiple settings, including private schools (Lyons & Williams–Diehm, 2019). Whose Future Is It Anyway? has also been delivered via technology (Lee et al., 2010, 2011) as well as in traditional print versions. Key components to be taught include (a) having self-awareness and disability awareness, (b) decision making about transition-related outcomes, (c) identifying and securing community resources to support transition services, (d) writing and evaluating goals and objectives, (e) communicating effectiveness in small groups, and (f) developing skills to become an effective team member, leader, or self-advocate (NTACT, 2017a).

The Self-Directed IEP is also identified by the National Technical Assistance Center on Transition (NTACT) as an evidence-based practice. It has shown efficacy with middle school and high school students with diverse disability labels (i.e., learning disability, intellectual disability) (Allen, Smith, Test, Flowers, & Wood, 2001; Martin et al., 1996; Martin et al., 2006) and has been successful with multiple age groups (both middle school and high school) in enhancing student involvement in the IEP. In addition, the Self-Directed IEP has also shown success when delivered via a computer-assisted platform (Kelley, Bartholomew, & Test, 2011). The complete lesson package has four instructional units and includes a teacher manual, student workbook, and two videos. The curriculum is based on explicitly teaching students an 11-step process to lead their own IEP meeting: (1) begin meeting by stating purpose, (2) introduce everyone, (3) review past goals and performance, (4) ask for others' feedback, (5) state your school and transition goals, (6) ask questions, (7) deal with differences of opinion, (8) state the support you will need, (9) summarize your goals, (10) close meeting, and (11) work on IEP goals all year (NTACT, 2017a).

Student Goal Setting and Acquisition

As mentioned previously, goal setting and attainment is a critical component of self-determination (Martin & Williams–Diehm, 2013). Two tools have shown effectiveness with goal setting, although only one has been used at the middle school level. These are the Self-Directed Learning Model of

Instruction (SDLMI) (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000) and the ChoiceMaker: Take Action (Martin, Martin, & Osmani, 2014) curriculum. Both tools are, in essence, a guided goal-setting process. The SDLMI is perhaps one of the most researched interventions available to promote self-determination among students with disabilities. An evidence-based practice as identified by NTACT (2016), the SDLMI has been successful with students with diverse disability labels (i.e., learning disability, autism spectrum disorder, intellectual disability, emotional and behavioral disabilities) ages 10–20. The SDLMI is composed of three phases: (1) set a goal, (2) take action, and (3) adjust the goal or plan. A complete manual exists to support teacher implementation in diverse classroom and instructional contexts (Shogren, Raley, Burke, & Wehmeyer, 2019).

One of the most versatile aspects of the SDLMI is the ability to address academic, employment, community living, and personal goals (Agran, Wehmeyer, Cavin, & Palmer, 2008, 2010; Kim & Park, 2012; Lee, Wehmeyer, Palmer, Soukup, & Little, 2008; Shogren, Palmer, Wehmeyer, Williams-Diehm, & Little, 2012; Wehmeyer, Shogren, Palmer, Williams-Diehm, Little, & Boulton, 2013). Studies have used the SDLMI and targeted elementary (Kleinert, Harrison, Mills, Dueppen, & Trailor, 2014; Palmer & Wehmeyer, 2003), middle school (Lee et al., 2011; Williams-Diehm et al., 2010), high school (Shogren et al., 2012), and even postsecondary education settings.

Take Action is part of the complete ChoiceMaker curriculum (Martin, Marshall, Maxson, & Jerman, 1999). Successful individuals set goals and work to attain them; however, individuals with disabilities often need extra assistance in this area. This is where Take Action can build skills. Through a six-component process, students are explicitly taught how to plan goals, act on goals, and evaluate their actions. There is even a follow-up process that discusses how to build upon the success of completing a short-term goal and continuing this success into completion of a long-term goal. Martin et al. (2014) found clear success with setting short-term goals based upon annual transition goals. If students completed short-term goals, they experienced a higher rate of long-term annual transition goal completion. Additional research is needed on Take Action to help move this promising practice (NTACT, 2018) to a research-based or evidence-based practice.

Additional Curricular Suggestions

Additional lesson packages and curriculum have shown promise with students with disabilities at the middle school level. These are discussed briefly. The first is the Brigance Transition Skills Inventory (Curriculum Associates, Inc., 2010). The lessons and activities in the Brigance Transition Skills Inventory are targeted for secondary students (middle and high school) and are based on transition outcomes, including postsecondary education, community participation, and community living (Curriculum Associates, Inc., 2010). Second, the Essentials for Living Curriculum (Data Makes the Difference, LLC, 2019) is designed for students with extensive support needs disabilities to teach functional life skills and is based on strategies of applied behavior analysis. Third, the Self-Advocacy Strategy (Van Reusen, Bos, Schumaker, & Deshler, 2007) is an easy-to-implement strategy to help promote student advocacy during IEP meetings. A direct relation was found between students who learned this strategy and their quality of participation during educational meetings (Test & Neale, 2004). Finally, the GO 4 IT . . . NOW! strategy has also shown promise in helping students identify and write IEP goals and objectives at the middle school level. It includes a six-step mnemonic to guide students through the process of writing IEP and transition goals (Konrad & Test, 2007).

There are additional ways to begin to involve middle school students in their IEP and transition planning. "One-pagers" provide a graphic organizer for students to input personal information about themselves for a variety of uses. The specific information included on a "one-pager" can vary depending on the individual or goal. For example, ImDetermined.org has a one-pager format (imdetermined.org, 2018) that allows students to express their preferences and needs using a pre-made graphic organizer. Students can write, draw, or cut out pictures to represent their preferences.

Students' one-pagers can be brought to the IEP meeting where students use the one-pager during the IEP discussions to express themselves. In addition, the one-pager provides a great way for students to express their preferences to a myriad of teachers in middle school. Another quick way to start small with student involvement skills is to use the Transition Bell Ringers (formerly the Me! Bell Ringers; Lingo, Williams-Diehm, Martin, & McConnell, 2018). There are two versions available, original and fundamental, and both teach important self-advocacy, self-awareness, and student involvement skills in ten-minute mini lessons using a free PowerPoint presentation. This resource uses simplified language and an accessible reading level, making them ideal to use with middle school students.

Conclusion

There are multiple things to consider when planning transition services for students in middle school. It is critical to ensure appropriate educational planning and planning for the transition from elementary to middle school and from middle school to high school are occurring. This chapter has briefly introduced the most salient factors necessary for transition planning for students in middle school. The primary considerations include (a) supporting students to successfully transition into middle school, (b) establishing a solid first transition plan as part of the IEP, and (c) supporting students to successfully transition out of middle school (i.e., high school). Middle schools can provide the solid foundation of a well-written transition plan that can guide students throughout their entire high school process. If teachers promote these three fundamental steps, they will have set their students on a trajectory for future success. Middle school is crucial due to the impact of establishing future planning (Repetto, 2012).

The transition field needs to closely examine the materials and available resources to promote transition planning in middle schools. Burton (2005) specifically stated that there is a need for targeted and specifically designed programs to help middle school students with disabilities. Until targeted materials, curricula, lesson packages, and assessments are tailored to the developmental level of middle school students, the field will be unable to fully provide transition services during this critical period. Too many current studies simply include students in middle school but are not designed specifically for the needs of middle school students. Targeted research at the middle school level is essential in order to promote appropriate transition planning for this age group.

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19

Integrating College and Career Readiness into Transition Education

Allison Lombardi, Jessica Monahan, and Mary E. Morningstar

College and career readiness (CCR) has gained traction over the past two decades through federal policy initiatives and educational research efforts. While the field lacks a clear definition of CCR, there is consensus that CCR includes the academic and non-academic skills that are necessary for individuals to be successful in postsecondary education and employment (Conley, 2010; Farrington et al., 2012; Morningstar, Lombardi, Fowler, & Test, 2017). Policy initiatives suggest that youth with and without disabilities must be college and career ready in order to be prepared to engage in adult life (Mishkind, 2014). Yet not all students, specifically students with disabilities who receive special education services, sufficiently meet this goal. As many as 75% of all secondary students lack the necessary academic preparation to enroll and succeed in credit-bearing postsecondary courses (ACT, 2012; Camara, 2013).

Furthermore, students with disabilities may be the least ready to transition to college and careers (Sanford et al., 2011). Students with disabilities are less prepared to be competitively employed than their peers without disabilities as evidenced by lower rates of paid work experience in high school and poorer employment outcomes once they have entered into young adulthood (Lipscomb et al., 2017; Newman et al., 2011). Additionally, mounting evidence suggests that secondary students with disabilities have substantially lower outcomes related to CCR than their peers without disabilities including: (a) greater course failure and higher dropout rates (Doren, Murray, & Gau, 2014); (b) fewer opportunities to receive academically rigorous curricula (Gregg, 2007); and (c) limited use of critical thinking skills (Lombardi, Kowitt, & Staples, 2015). Together, such findings demonstrate a persistent problem that points to the need for high schools to adequately prioritize CCR preparation and ensure sufficient opportunities are offered schoolwide to *all* students, including those with disabilities. At the same time, secondary special and transition educators are responsible to ensure transition services are aligned with schoolwide CCR to ensure students with disabilities can access CCR opportunities.

In this chapter, we provide an overview of relevant legislation that propelled CCR to the policy forefront and influenced how secondary educators prioritize and support students. In addition, we describe the development of a specific organizing framework of CCR relevant for students with disabilities. Finally, we share relevant and ongoing research building upon the CCR framework by developing schoolwide student and teacher measures for general and special education. Ultimately, we believe such measures will support how transition educators can align transition planning and services with broader schoolwide CCR initiatives.

Role of College and Career Readiness in Education Policies

Three pieces of education legislation have led to the growing emphasis on CCR: (a) the Individuals with Disabilities Education Improvement Act of 2004 (IDEA, 2004); (b) the Every Student Succeeds Act of 2015 (ESSA, 2015) and (c) the Strengthening Career and Technical Education for the 21st Century Act (commonly referred to as Perkins V). In this section, we will summarize each piece of legislation and discuss the impact on CCR.

IDEA (2004) reauthorized Public Law 94–142, originally enacted in 1975, that protects the educational rights of children with disabilities by ensuring a free appropriate public education (FAPE). Over the years, and through several amendments, IDEA has authorized additional requirements schools must adhere to in order to ensure all students are receiving FAPE. One such requirement has been specific language associated with the provision of transition services defined by IDEA (2004) as a coordinated set of activities that are aimed at improving the postsecondary outcomes for youth with disabilities, with a specific focus on postsecondary education or training, employment, and independent living (IDEA, 2004). The first part of this definition, "coordinated set of activities," suggests transition services should not be provided in isolation from the typical educational services offered within secondary schools. Prior to the student turning 16 years old, special educators are required to develop comprehensive transition planning procedures that take into account the student's strengths, interests, preferences, and support needs when identifying a long-term and measurable postschool goal. This measurable postschool goal is to be designed based upon age-appropriate transition assessments. Given IDEA mandating coordination of educational services, special educators are strongly encouraged to collaborate with other key educators and personnel in middle and high schools to support individual students in reaching their postschool goals – using the vernacular of general education, becoming college and career ready.

In 2015, ESSA reauthorized the Elementary and Secondary Education Act (ESEA) of 1965. The main focus of ESEA (1965) was to create equal education opportunities to all students with a specific focus on children living in poverty (ESEA, 1965). In prior reauthorizations, CCR policy and practice initiatives emerged largely linked to the increased focus on the Common Core State Standards, also known as the College and Career Readiness Standards (National Governors Association & Council of Chief State School Officers, 2010), which increased the focus on preparing students to succeed in postsecondary settings. ESSA outlines a number of provisions that require schools to provide *all* students, including traditionally underserved populations like students with disabilities, a high-quality education that leads to college and career readiness (Malin, Bragg, & Hackmann, 2017).

Most recently, in 2018, Perkins V was signed into law as a reauthorization of the Career and Technical Education Act of 2006. The goal of the original Perkins legislation was to improve the skill development for students in career and technical education (CTE). The reauthorization requires the use of federal funds to prepare all students for careers, expanding the scope to include all students not just those enrolled in CTE programs or courses. The law also adds a specific emphasis on special populations that are "chronically unemployed or underemployed," which may include individuals with disabilities (Advance CTE, 2018, p. 2). Perkins V has a specific focus on increasing student readiness for both college and careers through strengthening partnerships between secondary and postsecondary settings (Perkins V, 2018). These relationships are created through initiatives like the "credit transfer agreement," which encourages secondary and postsecondary institutions to create formal agreements with regard to students earning college credits while still enrolled in high school (Advance CTE, 2018).

In summary, there is a clear focus across these three major educational laws to develop and support students for successful postsecondary outcomes, specifically postsecondary education and employment (Monahan et al., under review). Given the common purposes of these education laws, it is

important to explore the implications of CCR for transition services in secondary special education and mechanisms to create inclusive CCR opportunities.

Secondary Transition Education and College and Career Readiness

Research has consistently established that students with disabilities experience more negative outcomes during the transition from high school to adulthood as compared to their same-age peers without disabilities (Lipscomb et al., 2017). Despite evidence identifying school-related factors that impact student achievement and progress toward graduation, students with disabilities remain unprepared for success in postsecondary educational settings, integrated employment, and inclusive adult lives (Newman et al., 2011). This pervasive problem suggests that schools may not be implementing and prioritizing CCR for *all* students. In this respect, aligning transition services with broader schoolwide efforts in CCR for students will inevitably impact students with disabilities by exposing them to the same opportunities as their peers without disabilities.

Postschool Outcomes for Students With Disabilities

Data from the United States Department of Education (2018) indicates that students with disabilities represent 13% of students in the United States, with only about 66% of this population graduating from high school with a regular diploma. Further, this graduation rate is substantially lower than the graduation rate for students without disabilities (84%; United States Department of Education, 2017). And disparities in postschool outcomes do not stop at the school door. Postschool outcomes for youth with disabilities also lag well behind peers without disabilities. Since 1990, the National Longitudinal Transition Studies (NLTS) have provided a national picture of in-school and postschool education, employment, and community living outcomes for students with disabilities (Newman et al., 2011; Wagner, Blackorby, Cameto, Hebbeler, & Newman, 1993; Wagner, Newman, & Cameto, 2004). The most recent findings from the NLTS 2012 continue to report students with disabilities are more likely to face poorer health, functional, and community living outcomes than peers without disabilities (Lipscomb et al., 2017). Students with disabilities are less likely to attain and maintain integrated employment or pursue postsecondary educational experiences that will prepare them for quality jobs and careers (Newman et al., 2011). Additionally, individuals with disabilities are significantly more likely to be unemployed during adulthood and fail to receive supports to ensure their persistence during secondary school and transition to postschool employment (Kraus, Lauer, Coleman, & Houtenville, 2018). Therefore, emphasizing and identifying the skills needed to be college and career ready while in high school is imperative to ensure that students with disabilities are prepared for postschool life.

In-School Predictors of Postschool Outcomes and CCR

Currently, there are 20 evidence-based in-school predictors of positive postschool outcomes for secondary students with disabilities (Mazzotti et al., 2016; Test, Mazzotti, et al., 2009). Of the 20 predictors, there are several specific to CCR, including: inclusion in general education, high school diploma status, and youth autonomy/decision making. Specifically, research indicates that students with disabilities who have opportunities to enroll in academic coursework in general education are more likely to achieve positive employment, education, and independent living outcomes (Baer et al., 2003; Lombardi, Doren, Gau & Lindstrom, 2013). Additionally, students with disabilities who are learning in general education settings for 80% or more of their school day are more likely to achieve positive postsecondary outcomes (Rojewski, Lee, & Gregg, 2015). Along with inclusive educational experiences, students who have opportunities to earn a regular high school diploma are

more likely to be employed and enrolled in postsecondary education (Wagner, Newman, & Javitz, 2014). Finally, non-academic skills and experiences (e.g., youth autonomy/decision making) are significant predictors of positive postschool outcomes associated with employment and postsecondary education (Berry, Ward, & Caplan, 2012; Doren, Gau, & Lindstrom, 2012). When students have the opportunity to engage in activities to build autonomy and make decisions about career interests, school-related learning, and long-range plans for college and careers, they are more likely to experience positive outcomes (Test, Mazzotti, et al., 2009). The emerging research associated with evidence-based transition practices points to critical alignment of transition services within school-wide efforts of CCR.

CCR Delivered via MTSS

Preparing students for graduation has long been a priority of U.S. high schools; however, over the past decade, this focus has shifted from high school graduation to promoting students' successful entry into postsecondary education and the workforce (Dougherty & Lombardi, 2016; Fowler et al., 2014; United States Department of Education, 2018). As such, high school educators face the challenge of prioritizing academic and non-academic factors as well as ensuring students experience personalizing learning meeting their individual strengths, interests, preferences, and needs. In many respects, improving postsecondary outcomes for youth with disabilities requires engaging all secondary staff, including general and special educators, through schoolwide efforts.

One potential approach to engaging all school staff and thus fostering schoolwide support is through multi-tiered systems of support (MTSS). MTSS provides a comprehensive system of supports for students through a three-tiered approach. Tier 1 includes universal supports to all students, while Tiers 2 and 3 provide a greater intensity of support for students who are not responding to Tier 1 and thus need more intense intervention. While the expansion of MTSS within secondary schools has targeted primarily academic and behavioral interventions, embedding CCR within MTSS offers an opportunity to merge academic, behavioral, and non-academic factors supporting *all* students to complete high school and be prepared for the rigors and challenges of postsecondary education and the workforce (Morningstar, Lombardi, & Test, 2018). However, research indicates the need for careful consideration of contextual and systems factors impacting both adolescent learners and the structural dynamics of secondary schools, especially when considering merging CCR with MTSS and inclusive transition services (Flannery, Frank, Kato, Doren, & Fenning, 2013; Morningstar et al., 2018).

Relevance to Transition Services

Similar to the emergence of CCR policy and research, the IDEA transition planning and service requirements under IDEA (2004) have promoted strategies supporting transitions to postschool education and training, employment, and community living. Secondary special education and transition researchers have advanced a wide array of evidence-based interventions that facilitate positive postschool outcomes among students with disabilities (c.f., Test, Fowler, et al., 2009). Unfortunately, rather than supporting a convergence of CCR and transition practices, educational policies and practices at best are parallel efforts and, at worst, lead to conflicting and contradictory efforts (Morningstar et al., 2012). For example, career education, work-based experiences, social-emotional development, and behavioral interventions often are developed separately for youth with and without disabilities (Dougherty & Lombardi, 2016).

In addition, the research examining career-focused programs and classes, like CTE, largely excludes students with disabilities (SWD), specifically students with severe disabilities (Lombardi, Dougherty, & Monahan, 2018). We know that students with severe disabilities benefit from learning

in the general education classroom (Hudson, Browder, & Wood, 2013), and given that the majority of youth with high-incidence disabilities are primarily served within general education (McLeskey, et al., 2012), embedding transition services within broader schoolwide CCR is critical. Improving postschool outcomes for youth requires engaging all secondary staff across content areas, including general and special educators.

College and Career Readiness Is Academic and Non-Academic

Initial CCR policy and practice initiatives resulted from efforts that reified the Common Core State Standards (National Governors Association & Council of Chief State School Officers, 2010). It is important to clarify that Common Core emphasized CCR predominantly through an academic lens, focusing specifically on academic standards. Researchers, however, recognize that CCR goes beyond core academics to essential non-academic skills (e.g., social, behavioral, adolescent engagement), as well as essential contextual factors influencing student motivation and school engagement (Conley, 2010; Farrington et al., 2012; Krauss, Pittman, & Johnson, 2016).

Implementing and adhering to CCR requires operationalizing systematic data collection and ongoing analysis and progress monitoring of both academic and non-academic skills. Adequate data collection systems that are in place and utilized are more likely to lead to educational success; however, there are no systematic methods currently available for measuring CCR (Welch et al., 2017). This is partially due to competing but overlapping CCR frameworks and models (e.g., Conley, 2010; Farrington et al., 2012; Morningstar, Lombardi et al., 2017). Therefore, it can be difficult to determine the most relevant and essential indicators and competencies associated with CCR. Most states define and measure CCR predominantly using high school academic indicators (e.g., grades, GPA, academic coursework, state and college placement assessments). Yet researchers agree that numerous multifaceted skills are non-academic by definition (American Institutes for Research, 2014; Conley, 2010; Farrington et al., 2012), with some evidence of critical non-academic skills influencing academic achievement (Duckworth, Peterson, Matthews, & Kelly, 2007; Lombardi et al., 2015; West et al., 2016), such as soft skills and contextual experiences in high school and postsecondary settings (Nagaoka et al., 2015; Gates et al., 2016; Welch et al., 2017). There is growing consensus that academic and non-academic skills should be included in the theoretical construct of CCR; hence, it is critical to measure both. Some drawbacks to current models include the overemphasis on academic indicators, a predominant focus on college readiness with the exclusion of careers, and, of particular concern, lack of attention to youth from marginalized groups (Castro, 2013; Mayes & Hines, 2014).

An Organizing Framework of CCR

As with all instructional decision making, it is important to consider existing evidence for identifying and adopting a CCR framework. In a systematic literature review, Monahan and colleagues (under review) identified levels of empirical support for existing CCR frameworks and found two with supporting evidence. One framework (Conley, 2010) includes four domains, or "keys," focused on academic and non-academic skills: key cognitive strategies, key learning skills and techniques, key content knowledge, and key transition knowledge and skills. While this framework is empirically supported (see Leonard, 2013; Lombardi, Conley, Seburn & Downs, 2013; Lombardi, Seburn, & Conley, 2011), it does not address the specific needs of students with disabilities.

The second framework focuses specifically on students with disabilities. Building on the education and psychology literature, Morningstar, Lombardi, and colleagues (2017) constructed a six-domain organizing framework of CCR that emphasizes both academic and non-academic skills: (1) academic engagement – which takes place in the classroom and with in-school supports to foster

productive academic behavior, (2) mindsets – includes concepts of sense of belonging, growth mindsets, and perseverance, (3) learning processes – includes study strategies and skills that facilitate access to content, (4) critical thinking – or the process of problem solving, researching a solution, and then communicating that solution back to an audience, (5) interpersonal engagement – incorporating communication and interactions with oneself, others, adults, and the broader community, and (6) transition competencies – early planning activities related to career search and exploration, understanding of college and workplace expectations, and adult living and community engagement. Conceptual definitions for each domain were developed from a review of educational research and theory encompassing general education, psychology, and special education literature (Morningstar, Lombardi, et al., 2017).

The definitions were validated for youth with disabilities through a series of focus groups with a purposive sample of state agency leaders with expertise in transition education, dropout prevention, and college and career policy systems. Participants examined and critiqued the definitions to construe saliency of the framework with state educational policies. The aim of this research was to better understand how professionals were likely to support and implement CCR initiatives within their state. Their perceptions were essential in confirming a CCR framework operationalized for youth with disabilities. The focus groups were iterative in that participants were provided a draft of the original CCR definitions to review; using a specified questioning routine, they were asked to respond to key questions associated with defining and operationalizing CCR within states. Prior to subsequent focus groups, changes and enhancements to the CCR framework were made, with new participants confirming changes and guiding ongoing enhancements and elaborations. The results affirmed the importance of the six organizing CCR domains and provided substantial clarifications and additions within each domain.

Empirical Support for Measuring Student CCR

As mentioned previously, this organizing CCR framework has initial evidence to support its use. Specifically, three studies were identified: (1) a study that focused on one of the six domains, critical thinking (Lombardi et al., 2015); (2) a study confirming the six domains for students with significant cognitive disabilities (Morningstar, Zagona, Uyanik, Xie, & Mahal, 2017); and (3) a study where a compilation of existing instruments was used to validate the framework through statistical analyses (Lombardi, Freeman, & Rifenbark, 2018). Next, we describe these three studies in detail.

Prior to the creation of the six-domain framework, Lombardi et al. (2015) measured critical thinking (later identified as a domain in the CCR framework) and found a correlation between students' perceived critical thinking skills and GPA, providing evidence for its inclusion in the framework. While this study only focused on critical thinking, it was an important contribution with regard to measuring student perceptions of their own CCR and then examining the relationship between those self-reported perceptions and achievement, measured by the observed variable GPA. A notable study finding was that students with disabilities had a much weaker correlation between self-perceptions of critical thinking and GPA than their peers without disabilities.

As part of a three-stage Delphi study, Morningstar, Zagona, and colleagues (2017) conducted focus groups with national experts to first determine if the CCR framework aligned with the support needs among students with significant disabilities. Findings indicated that the experts believed the original six domains remained relevant. However, these experts noted with considerable detail unique descriptions of specific skills, along with additional supports and opportunities needed, to enable students with significant support needs to engage in learning activities. For example, critical skills associated with communication emerged across all six domains, and specific supports were identified that were needed to promote access to necessary modes of communication and opportunities to learn essential skills in inclusive settings (Morningstar, Zagona et al., 2017).

Lombardi et al. (2018) examined whether or not the six domains emerged as measurable and unique constructs. This study was critical in that it advanced the research using quantitative approaches. Results suggested that the constructs could be measured in the same way across students with and without disabilities but suggested a two- rather than six-factor solution: (1) CCR skills (e.g., academic engagement, critical learning processes, mindset) and (2) transition knowledge (e.g., skills specific to planning and acting toward college and careers). As such, these results distinguished the domain of transition competencies as a separate construct whereas the other five domains of CCR were found to statistically overlap significantly enough that the authors were not able to justify creating separate constructs. Due to this overlap, CCR was conceptualized as consisting of fewer constructs, with many initial indictors merged into a second overall construct, CCR skills. For example, there were high correlations between items measuring critical thinking and learning processes skills. In the end, the researchers determined the remaining two constructs represented process-oriented skills spanning disciplines that can be taught in secondary classrooms to support students to access content (e.g., study skills, problem solving, precision, and accuracy). However, more work is needed to consider if (a) the pre-existing measures in the study did not adequately address all six domains and indicators, in other words, some indicators were better measured than others, and (2) given that all measures were pre-existing and not necessarily meant to be combined as an overall measure of CCR, if different measures would produce different results.

Considering these three studies, the CCR framework now has five proposed domains: (1) academic engagement, (2) process-oriented skills, which includes critical thinking and learning processes as both facilitate access to and engagement in content areas, (3) interpersonal engagement, (4) ownership of learning, and (5) transition competencies. The definitions of the five domains are provided in Table 19.1.

The five constructs are depicted in Figure 19.1, which shows four constructs in equal size that neatly fit within the CCR academic and non-academic context and then transition competencies

Table 19.1 Five Domains of College and Career Readiness

Domain	Definition
Academic engagement	The acquisition of academic content through interacting and engaging with the material, including cognitive and behavioral skills that students need to successfully engage with academics. These skills may include attendance, homework completion, active participation in class, and less observable skills like making connections between content in different courses.
Process-oriented skills	These skills may include test taking, studying, and time management, as well as critical thinking skills such as formulating problems, hypothesizing solutions, collecting evidence, analyzing the evidence, and communicating findings. These skills span across content areas.
Interpersonal engagement	These are social skills with an emphasis on interactions with other individuals as well as understanding within themselves. Students with these skills show responsibility and adaptability across educational and non-educational settings, collaborate with peers, have an awareness of how others may be feeling or perceiving situations, and feel a sense of belonging with the school.
Ownership of learning	This entails sense of belonging, growth mindset, ownership of learning, and perseverance, specifically that all students have the ability to take academic risks and understand the importance of the growth that comes from making mistakes.
Transition competencies	These skills focus on projects and activities that facilitate competency in employment, postsecondary education, and independent living, with a focus on understanding shifting cultures and responsibilities within each unique setting.
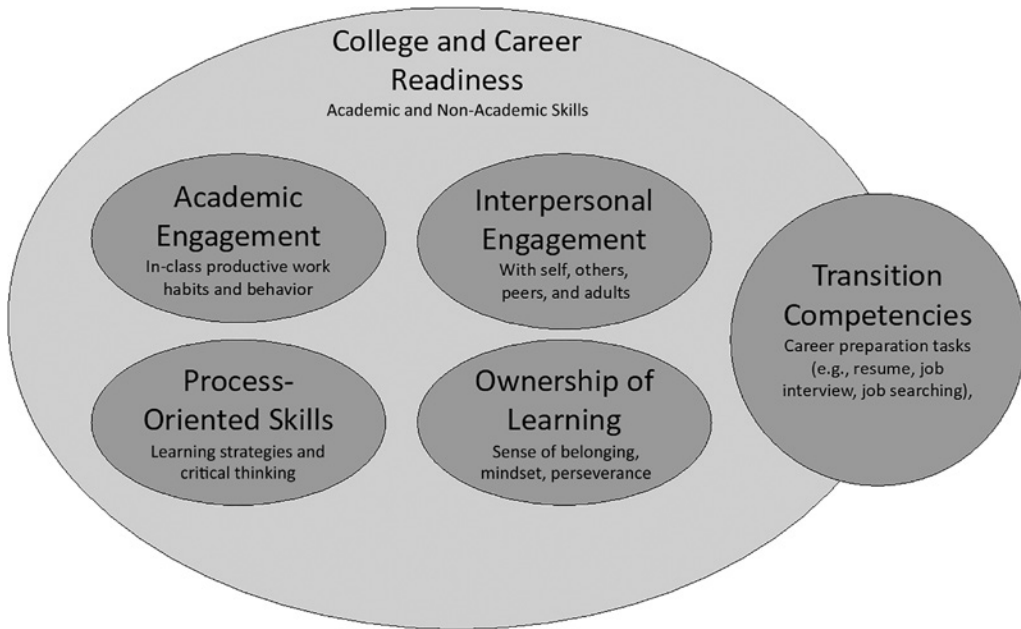
Figure 19.1   Visual Depiction of Five CCR Domains

situated only partly within the space. This visual depiction is deliberate and represents the current status in measuring these constructs, showing that we have stronger validity evidence that transition competencies is a unique construct and more work remains in disentangling the other CCR constructs of academic engagement, process–oriented skills, interpersonal engagement, and ownership of learning. These five constructs will be incorporated into a proposed assessment framework to be developed through a new federally funded measurement study focusing on a measure of student perceptions of CCR to examine the relationship between these constructs with school academic and behavioral data (Institute of Educational Sciences, 2019). As such, we will continue measurement work to refine the CCR constructs.

Using the CCR Framework in Practice

It is unfortunate that many of the CCR factors identified as essential for success are currently not systematically measured in secondary schools. Educators may already implement instructional strategies in general and special education classrooms that promote CCR to some extent (Monahan, Lombardi, & Madaus, 2018) and perhaps in certain domains over others; however, little is known about the extent of this implementation. It is important, therefore, to first map current classroom activities and assessment onto the CCR domains (Lombardi, Morningstar, & Kern, 2018). This strategy can help secondary educators consider all three tiers of MTSS – as described previously – and identify strengths was well as gaps in addressing and promoting CCR for all students in order to prioritize schoolwide systems for both instruction as well as data–based decision making. Table 19.2 exemplifies mapping the CCR framework to identify evidence-based instructional strategies easily incorporated into the classroom. The following section will highlight a few strategies that may be used within each tier in order to embed CCR strategies into the classroom. Please note, not all domains are addressed (for a more comprehensive review, see Monahan et al., 2018).

Table 19.2 CCR Domain Definitions and Suggested Instructional Strategies

Domain	Definition	Instructional Strategies
Academic engagement	In-class productive work habits and behaviors	Write standards-based individualized education program (IEP) goals.
		Utilize guided notes to teach academic content.
Ownership of learning	Sense of belonging, mindset, perseverance	Create a trusting and safe classroom environment.
		Allow failure and help students reflect and improve.
		Foster an ownership of learning.
Process-oriented skills	Learning strategies and critical thinking	Utilize the Self-Regulated Strategy Development technique.
		Encourage multiple means of expression.
		Hold classroom debates using graphic organizers.
Interpersonal engagement	With self, others, peers, and adults	Create opportunities for collaboration and reflection.
		Promote adaptability within the classroom.
Transition competencies	Career preparation tasks (e.g., resume, job interview, job searching)	College and career readiness student goal tracker.

Source: Adapted from Monahan et al. (2018). Promoting college and career readiness: Practical strategies for the classroom. *TEACHING Exceptional Children*. Advance online publication. doi: 10.1177/0040059918802579

Academic Supports by Tier

Tier 1 supports are useful for all students, including those with disabilities. A simple example of a CCR strategy that would be appropriate for Tier 1 is the use of guided notes. Guided notes are a common evidence-based instructional strategy that supports academic engagement for all students (Stringfellow & Miller, 2005). Additionally, when educators encourage their students to use strategies such as backward planning to establish a study schedule, they are supporting learning processes skills (Monahan et al., 2018). Backward planning involves using a calendar or planner, identifying important dates like tests or assignment due dates, and working backward from that date to create a study schedule (Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013). Using this strategy with students in small groups, with monitoring and specific feedback, could be a Tier 2 support (Lombardi et al., 2018). An example of a Tier 3 support within the academic engagement domain may be one-on-one meetings with students to practice a specific study strategy prior to an exam.

Non-Academic Supports by Tier

As previously discussed, CCR includes both academic *and* non-academic skills. Therefore, it is important for educators to establish classroom routines that promote non-academic skills for students with disabilities. A growing body of research supports the concept of a growth mindset, which falls under the ownership of learning domain of the CCR framework (Blackwell, Trzesniewski, & Dweck, 2007; Mangels, Butterfield, Lamb, Good, & Dweck, 2006; Romero, Master, Paunesku, Dweck, & Gross, 2014). When students develop a growth mindset, they better understand the importance of and their own capabilities toward taking academic risks during learning. While formal interventions explicitly teaching growth mindsets do exist (cf., Paunesku, Walton, Romero, Smith, Yeager, & Dweck, 2015), educators can and do implement a variety of more informal strategies.

Cooperative learning is an instructional strategy that can be delivered to all students at Tier 1 and addresses the interpersonal engagement domain. Cooperative learning has research evidence

supporting both academic learning as well as supporting communication and group problem-solving skills (Barkley, Cross & Major, 2005). While many educators may informally introduce cooperative learning techniques, it is critical to explicitly teach peer collaboration skills. One approach uses cooperative learning role cards in which each group member is assigned a specific cooperative role (e.g., facilitator, recorder, resource manager, etc.) described in detail on the cards (Barkley et al., 2005). Additionally, students who may need more intensive support (Tier 2) may benefit from reflecting on their collaboration skills, with a specific focus on strengths and support needs. Working in small groups with students or asking them to reflect independently with fading supports may encourage students to learn the skills to self-monitor and self-regulate (Morningstar, Lombardi, et al., 2017).

An important aspect of the CCR domain ownership of learning is to ensure students take risks, make mistakes, and reflect to improve their learning. A non-academic CCR strategy that may be useful as a Tier 3 support is explicitly teaching students to identify mistakes that have been made, why the mistake was made, and how to prevent the mistake from happening again. This may be done through using teacher think-alouds to model these steps for students, guided practice with an educator when a student makes a mistake, and eventually independent practice identifying and preventing mistakes (Wilhelm, 2001). The complexity of CCR, with its many interconnected domains, may be daunting for some; with sufficient scaffolds in place, educator awareness of essential CCR skills can strategically target the strategies and experiences that will best support students to build their readiness for the future.

Measuring Educator Perceptions and Expectations of College and Career Readiness

As discussed previously, federal and state legislation plays an important role in encouraging schools to set high expectations for all students (Mishkind, 2014). There is also a clear line of research indicating that educator expectations are an important component to student success (Agran, Blanchard, & Wehmeyer, 2000; Jussim & Harber, 2005; Mazzotti et al., 2016). In a recent systematic literature review, Monahan and colleagues (2020) identified eight studies that examined CCR educator expectations for students with disabilities, among which six were original research and two were replication studies. The studies covered a range of participants including special education teachers, general education teachers, and CTE teachers. The analysis of the articles focused on expectations for postsecondary education success and expectations for employment success. With regard to postsecondary education, four studies found that high school general and special educators held lower expectations for students with disabilities, ranging from difficulties with admission into postsecondary institutions to expectations for less success in completing a degree or certificate (see Keel, Cushing, & Awsumb, 2018; Levin, Arluke, & Smith, 1982; Shifrer, 2013; Sinclair, Unruh, Griller Clark, & Waintrup, 2017).

Similarly, low expectations were found when employment outcomes were examined. Of the five studies addressing employment outcomes, four focused specifically on CTE teachers who were reported to hold lower employment expectations for students with disabilities as compared to their nondisabled CTE peers (Harvey, Cotton, & Koch, 2005, 2007; Harvey & Pellock, 2003, 2004). Keel and colleagues (2018) found that special education teachers had concerns over whether Latino students with disabilities would be able to maintain employment once they left high school. Overall, the limited studies in this area provide a concerning view of teacher expectations regarding students with disabilities and CCR.

In order to address the gap in research, as well as to better understand specific CCR expectations among teachers, Monahan and colleagues are currently developing an instrument, College and Career Readiness Teacher Expectation Survey (CCR-TES), which uses an established CCR framework (Morningstar, Lombardi, et al., 2017). The survey asks general and special educators to rate their belief that students *without* disabilities can learn to do certain CCR-related tasks. The

same items are then asked about students *with* disabilities. Samples topics include working collaboratively, goal setting and attainment, and accessing support in the postsecondary education and/or employment settings. The CCR-TES will allow for more specific research associated with CCR expectations as predictive of student outcomes. The validation and use of the CCR–TES may help researchers to better address teacher expectations for students with and without disabilities. In addition, districts may use the CCR–TES to measure the level of expectations that the educators have for SWD in order to determine a need for additional resources of professional development.

Conclusion

The notion of CCR has grown out of two decades of educational policy priorities. Despite an initial focus on students without disabilities, there has been a merging of disability policies, such as the transition planning mandates and increased alignment of research that includes students with disabilities in CCR. Some of the barriers to CCR opportunities for students with disabilities relate to the delivery of specialized transition services that are operationalized as separate from the general school populations. Concerted efforts to align and merge transition services with existing approaches in schools (e.g. MTSS, CCR) began in earnest close to a decade ago (Morningstar et al., 2012). Since this time, the articulation of and research associated with specific CCR frameworks have helped to clarify students' skills and experiences that can facilitate CCR. Most recently, measurement efforts, particularly those associated with student perceptions and teacher expectations, are emerging that will continue to support and inform data-based decision making as meaningful approaches to planning and operationalizing CCR efforts for all students.

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Addressing Equity and Providing Transition Education to a Diverse Student Population

Audrey A. Trainor, Hyejung Kim, and Seena M. Skelton

The U.S. public school population is trending toward a more racially diverse group of children. In 2016, for the first time in U.S. history, White students became a racial minority (49%) in U.S. schools (U.S. Department of Education, 2019). The racial representation of the student population has long been the focus of research and practice in education, with historical, social, and cultural contexts linked to slavery, manifest destiny, segregation, immigration, poverty, and disability. In the field of special education, the examination of diversity (racial and otherwise) has been amplified by the problem of racial disproportionality in disability classification, the use of exclusionary discipline, and access to the general education curriculum, manifested in secondary and postsecondary outcomes.

Simultaneous to shifts in the racial composition of the U.S. student population, interest and evidence around intersectionality, minoritization, and dominance, culturally responsive and sustaining pedagogies have helped explain disparities in educational opportunity and outcomes (see, for examples, Gutiérrez & Rogoff, 2003; Jiménez-Castellanos & García, 2017; Ladson-Billings, 2014). Special education intervention research has also accumulated to explain how to address the diversity of disability-related needs relative to achievement gaps (see, for examples, Carter et al., 2013; Cook, Tankersley, & Landrum, 2009; Haber et al., 2016). The landscape of providing equitable educational opportunities is embedded in historical inequality by a teaching force that is much less diverse (racially and otherwise) than the student population (U.S. Department of Education, 2016) is an ongoing, multifaceted challenge. Transition researchers and practitioners, in particular, must grapple with the shifts in population and practice to be effectively nimble and relevant because the field bridges the context of school to the larger, societal contexts of further education, employment, and adult living where young adults with disabilities often face additional disparities in employment, housing, economic and financial security, and access to medical care.

Equity in Transition Education: Beyond the Buzzwords

We all embody multiple, intersecting identities, influencing our experiences and transitions into adulthood and beyond. When framing a discussion of diversity and equity in transition to ensure all secondary students, including those identified with disabilities, are prepared for life after high school, understanding the cultural histories and lived experiences of people and their intersecting identities, as well as the cultures in which educational and work-based practices are embedded, is helpful. Decades have passed since Fair and Sullivan (1980) noted that groups of youth with disabilities faced

additional, limited access to career opportunities associated with racial and gender biases and structural inequalities. While the pace of progress toward equitable outcomes may be slow, the vernacular of diversity and equity has changed more rapidly. For example, terms that describe and identify disabilities have been updated, as have terms for racial groups (e.g., the shift from "Hispanic" to "Latino" and then, more recently, to "Latinx"). Contemporary definitions of categories once considered to be dichotomous have been changed to spectra definitions (e.g., sex, gender, and sexual orientation terms that go beyond previous categories of male/female and gay/heterosexual include "cisgender" and the use of "they" when referring to trans people). Change is constant, always reflecting the social construction of categories and the power and privilege associated with group membership. We use the term "diversity" to represent differences among and between members of groups of people based on race/ethnicity, disability, language, gender identity, religion, sexual orientation, and a myriad of other characteristics that contribute to individuals' social identities. In other words, we do not use the term diversity as a proxy for "people of color."

We focus on diversity as it pertains to equity because differences among and between people extend beyond preferences, habits, and mores regarding postsecondary education, career trajectories, and adult living arrangements. Unquestionably, economic and associated resources, power, and status are important factors in accessing education and employment opportunities (Darling-Hammond, 2006). The Individuals with Disabilities Education Improvement Act of 2004 (IDEA) defines transition services as a results-oriented process based on individual needs, strengths, preferences, and interests. Often overlooked are the societal structures one must navigate depending on their intersecting identities in relation to their individual needs, strengths, preferences, and interests. We use the term "equity," then, to signify processes and outcomes aiming to redistribute power and to account for, reduce, and eliminate structural biases historically associated with dominant groups so opportunity and access are available to all. Therefore, when we use the terms "diversity" and "equity," we are focusing on the interactivity of transition between people and practice.

Moving Beyond Secondary and Postsecondary Outcome Disparities

Disparities in educational outcomes are often framed as "achievement gaps"; however, as Ladson-Billings (2006) theorized, it might be more fruitful to conceptualize differences in outcomes across groups of students with disabilities as "educational debts." Structural and systemic challenges continue for youth and young adults with disabilities in spite of targeted systems-change policies. Biases also continue to perpetuate deficit-based attitudes about young adults who identify or are identified by others as outside of dominant groups (e.g., White, middle- and upper-class, Christian, cisgender, heterosexual, English-speaking, documented U.S. citizens). The challenges of ableism, racism, sexism, anti-immigration, linguicism, and other biases intersect and restrict transition opportunities. Confronting associated obstacles is necessary if we are to improve postsecondary outcomes in employment, education, and independent living. At the same time, understanding inequality requires the examination of differences in opportunity and outcomes.

Unequal Educational Opportunities

Educational outcomes reflect, in part, an accumulation of education opportunities. Many people with disabilities, people of color, and people living in poverty face obstacles and structural barriers to educational opportunities that have existed throughout the history of U.S. public schools. For example, poverty is a serious problem that disproportionately impacts minoritized populations and can reflect compounded exposure to both individual household poverty and school community poverty. According to the most recent nationally representative transition survey of youth with disabilities, the National Longitudinal Transition Study 2012, youth with disabilities were more likely to live in

low-income households (58%) than their peers without an individualized education program, or IEP (46%; Lipscomb et al., 2017). For youth with intellectual disability (ID), in particular, economic status is particularly notable, with 72% living in low-income households. Based on a secondary analysis of the NLTS 2012 data, 85% of high school students with disabilities who are also identified as English learners, the majority of whom identified as Black and Latinx, were from low-income households (Trainor et al., 2018). Additionally, other nationally representative datasets show that attendance at high-poverty schools also varied by race/ethnicity, with students of color (45% Latinx, 45% Black, 37% American Indian/Alaska Native, 25% Pacific Islander, and 15% Asian) more likely to experience exposure to school-level poverty than their White peers with disabilities (8%; McFarland et al., 2018). These analyses suggest that educational resources are different at the intersection of multiple sites of marginalization.

Many of the inequities in educational opportunities are connected to issues of disproportionality. The disproportionate representation of students by race/ethnicity in special education mirrors the patterns of social hierarchies of power and privilege. For example, both overrepresentation and underrepresentation in specific disability categories of multilingual students (also referred to as English learners) raise a concern about the extent to which special education services are being provided to the students who need them (Artiles, 2013). An abundance of research has shown difficulties and risks associated with disability identification in relation to students' language, race/ethnicity, gender, and class. The problem, first noted by Dunn (1968), has persisted over time. For instance, Black students have been overrepresented in emotional and behavioral disorders (EBD) and ID categories since 1974, and in 2016 they remained at greater risk of being identified in both categories (U.S. Government Accountability Office, 2018). Simultaneously, high school students with EBD and ID are more likely to be served in low-performing schools than their peers in other disability categories (Lipscomb et al., 2017), further complicating the phenomenon of racial disproportionality.

The spillover effects of disproportionality in disability identification contribute to structural barriers to the well-known predictors of academic success, such as access to the general education curriculum. According to the 40th Annual Report to Congress on the implementation of IDEA, Asian and Black students across disability categories are more likely to be educated in separate and more restrictive settings than their peers from any other racial/ethnic group regardless of their IEP status: only 57% of Asian and 58% of Black students with an IEP were served in the regular education setting for 80% or more of the day compared to 63% of students from all racial backgrounds combined, ages 6 to 21 (U.S. Government Accountability Office, 2018). Another dimension of inequality in educational placement appears in the patterns of exclusionary discipline across disability, race, and gender. Black youths, who are overrepresented in the EBD category, for instance, were almost twice more likely than their peers to be suspended, at 47% (Lipscomb et al., 2017). Other researchers have found that Black male students faced more punitive consequences for their behaviors (e.g. Skiba et al., 2014) than their White peers for the same disciplinary infraction. This spotlight on poverty at the individual and school level is not exhaustive, but it shows that contexts of inequity, although well-documented, continue to complicate transition.

Disparities in Measurable Postschool Outcomes

Patterns in the unequal distribution of resources and risks are, not surprisingly, reflected in post-school outcomes of youth from minoritized groups. For instance, high school completion is one of the indicators to measure educational outcomes. In 2016, 84% of students without disabilities received a regular high school diploma while 69% of students with disabilities did so (McFarland et al., 2018). Further only 57% of adolescents with EBD and 42% with ID graduate with regular diplomas (U.S. Government Accountability Office, 2018). Martin and Halperin (2006) reported that high school students (irrespective of disability status) from families with a low income drop out of

school at six times the rate of their peers. According to the previous National Longitudinal Transition Study (NLTS-2; completed in 2009), slightly more than half of students identified as having an EBD completed school with a diploma or certificate of completion; this outcome has remained consistent since the first NLTS, completed almost a decade earlier (Wagner, Newman, Cameto, & Levine, 2005). Disparities in outcomes are also evident in college enrollment and employment rates at the intersection of disability, race/ethnicity, and other markers of insider/outsider group membership. The annual reports from the National Center for Educational Statistics (Kena et al., 2014, 2015, 2016; McFarland et al., 2017; McFarland et al., 2018) show that while there have been incremental improvements in postsecondary enrollment across racial/ethnic groups, sustained disparities across groups continue to exist. For young adults with disabilities, 67% of students served across the 12 disability categories of eligibility in IDEA enroll in some postsecondary education program within the first eight years after leaving high school (Newman et al., 2011). Only 41% of those who enroll have completed a program during this same time period (Newman et al., 2011).

Conceptualizing disparities as individual outcomes associated with individual characteristics is of limited use for many reasons. First, youth with a disability and their families have multiple identities and characteristics, yet many research studies do not afford a clear understanding of which characteristics are associated with which experiences (Connor, 2009; García & Ortiz, 2013). Longstanding work in the fields of cultural psychology, sociology, cultural studies, linguistics, history, and anthropology have all demonstrated that phenotypic characteristics (e.g. skin color) are a single aspect of diversity with varying relationships to culture. Second, focusing on the individual as the unit of analysis is helpful, but similarly limited, because it ignores the context in which youth with disability receive education (Trainor, 2017). When the race of the individual is a focal point of analysis, for example, the social interactions constituting racism are de-emphasized and rendered invisible (Annamma, Jackson, & Morrison, 2017). Third, when considering race and ethnicity of youth with disabilities, the examination of disparities often uses the experiences and outcomes of White youth with disabilities as the standard of comparison. This comparison is problematic because it reifies the White supremacy and racial hierarchies (Quraishi & Philburn, 2015). To better understand the experiences and outcomes of diverse groups of youths with disabilities, we must also understand that these students are situated within their lived experiences in their school communities and that their cumulative schooling experiences and learning opportunities with school policy and climate, teachers, instructional methods, and curricula matter.

In the remainder of this chapter, we introduce a new framework for transition research that centers educational equity and represents an expanded, intersectional view of transition education as both process and result. Next, we highlight several evidenced-based practices that hold promise for increasing equity in transition outcomes across diverse populations of students who face a range of educational and community contexts. Last, we identify implications for research, practice, and advocacy.

An Expanded Framework for Transition

Since the 1990s, when scholars, practitioners, family members, and individuals with disabilities began reflecting on postsecondary outcome data and linking it to IDEA, theories of transition have emerged and evolved. Beyond conceptualizing transition as preparation for employment, transition models evolved to include, among other inputs and outcomes, community involvement (Halpern, 1985), self-determination (Wehmeyer, 1995), and postsecondary education (Hart, Grigal & Weir, 2010) in successful postsecondary transitions. Transition is complex because it occurs over time, across settings and domains, and represents both processes and results; over time, a need to expand the framework for transition has evolved (Trainor et al., 2019). We selected Trainor and colleagues' (2019) expanded framework for transition research (see Figure 20.1) because of its particular utility
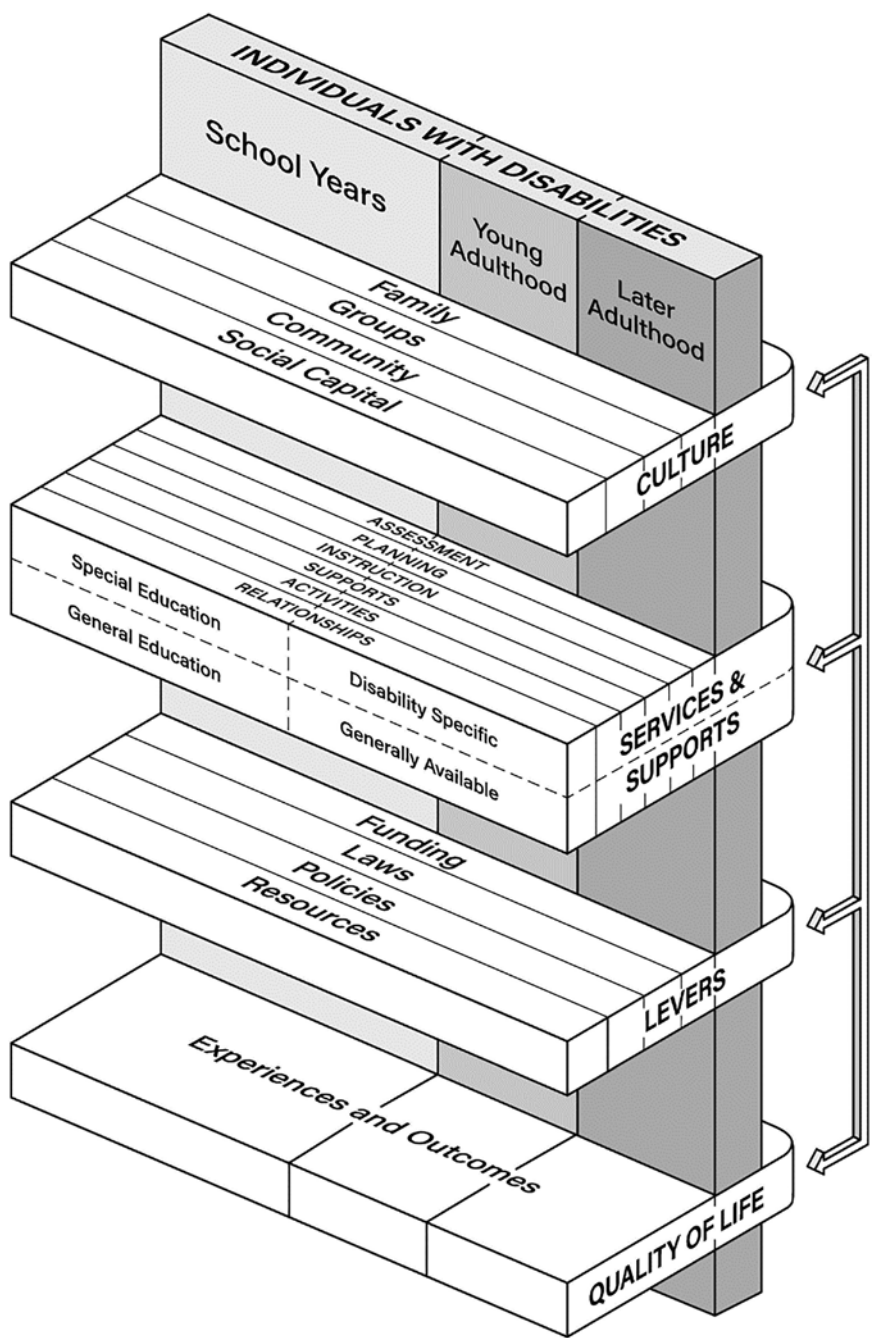
Figure 20.1 A Framework for Transition Research

in the discussion of diversity and equity. The framework highlights culture as a key consideration in transition research, with multiple orientations in relation to the individual with a disability. In the framework, culture is both an aspect of individual identity and an integral part of transition service delivery and postsecondary outcomes. Cultural interactions are depicted as existing between people, groups, settings, and artifacts.

The framework continues to position the student with a disability at the core of transition, maintaining this centering of the individual from the extant transition knowledge base. By centering the student in transition planning, we recognize that students are key actors, not empty vessels waiting for transition professionals to fill them with information about how to find employment or enroll in postsecondary education. By acknowledging the embeddedness of the students' position in group, community, and setting, the framework acknowledges the importance and potential relevance of the cultural histories, funds of knowledge, values, strategies, and practices that students possess, including obstacles faced by students, particularly those who face racism and other biases, in addition to ableism.

Acknowledging students' embodied identities and experiences (i.e., culture) and transition planning processes (i.e., services and supports) adds information and understanding to transition research, and thus practices, that also impact and are impacted by levers (i.e., macro-level resources such as policy and quality of life). Prior to this model's depiction, the conceptualization of transition was largely framed as individual goal setting, ongoing assessment, building skills and attitudes associated with adulthood employment, and, to a lesser degree, further education. And, following Halpern's (1985) call to consider the big picture of quality of life, this framework is among the first to explicitly capture spans of time depicted as the segments of the core calling attention to school years, young adulthood, and later adulthood.

A final notable feature of this framework is that all of its components – the core, the layers, the elements – are interconnected and can be conceptualized as having movement in proximity or distance from one another. The arrows between layers are intended to show variation in the relevance and impact of each of the layers of the model in relation to the core individual (Trainor et al., 2019). This provides an important view of transition as a set of processes and outcomes tailored to specific strengths and needs associated with a student with a disability. Trainor et al. (2019) depicted this framework and identified example uses of it in research. In the remainder of the chapter, we draw connections between the framework and evidence-based education and advocacy practices that hold promise for increasing educational opportunities for diverse student populations.

Promising Evidenced-Based Practices

Transition research amassed over the past three decades has provided evidence in support of positive predictors of postschool success in the areas of employment, postsecondary education, and independent living. The practices may serve to address transition education needs of youth with a range of disabilities. For example, career awareness and early work experiences, access to the general education curriculum, interagency collaboration, parental involvement, and self-determination interventions represent only a handful of the 20 evidence-based predictors recently identified by the National Secondary Transition Technical Assistance Center following systematic reviews of experimental and correlational research (Test, Mazzotti, et al., 2009; Mazzotti et al., 2016). Conclusions about the predictive strength of specific factors on postschool outcomes of specific subgroups of U.S. youth based on variables such as race/ethnicity or socioeconomic status (SES), however, are often limited.

Research itself is a cultural practice (Arzubiaga, Artiles, King, & Harris-Murri, 2008). In other words, the construction of a knowledge base or body of evidence in any discipline requires scholars to make decisions about how studies are designed, who gets included in studies, and to what extent the analysis of results can be generalized across groups. While some predictive evidence of positive

postschool outcomes is available, we must interpret these findings with the understanding that many questions about the applicability of findings for the groups of youth who constitute our diverse society remain unanswered. Nevertheless, extant transition research provides insight regarding the state of transition for youth with disabilities, including young people from minoritized groups. Next, we outline three predictor variables – family involvement, access to the general education curriculum, and self-determination and advocacy – identified by Test and colleagues (2009) and Mazzotti and colleagues (2016) – and we discuss each in the context of equity in transition for a diverse population.

Family Involvement

As special education law requires a family involvement in the educational decision-making process, educators and other stakeholders have strived to elicit meaningful participation from families of students with disabilities. Although the evidence shows that effective transition planning and services make a difference for postschool outcomes (Carter, Austin, & Trainor, 2012; Doren, Gau, & Lindstrom, 2012; Wagner, Newman, & Javitz, 2014), it is important to realize that not all cultures share the future orientation that informs transition education. Hodgkinson (2000) claimed that such a future orientation actually reflects a minority view in the world. He argued that the U.S. work ethic puts a high premium on "doing things" – being pragmatic – at the expense of being and becoming. For instance, families of students identified as English learners (ELs) with an IEP were less likely to provide input during transition planning than their non-EL counterpart (Trainor et al., 2018). Linguistic and cultural differences may render the families uncomfortable advocating for their child's needs, service providers may have a deficit view of families from non-dominant linguistic backgrounds, and/or schools may be under-resourced, leaving educators too little time for collaboration and consistent service delivery (Klingner & Harry, 2006). Since ELs and racial minorities are concentrated in urban areas where 40% of students attended a high-poverty school (McFarland et al., 2018), lower participation rates in school-based meetings, then, cannot be solely discussed without the contexts in which they are situated (Trainor, 2010b).

Perceptions of family involvement by transition specialists, teachers, administrators, and agencies often apply a narrow filter associated with middle- and upper-class access to transition resources. Youth and their families, regardless of cultural background, consistently express hopes and expectations to experience fulfilling adult lives (Ankeny, Wilkins, & Spain, 2009; Trainor, 2005, 2007; deFur, Todd-Allen, & Getzel, 2001). Oftentimes, families have multiple stressors, economic and disability related among others, and these can distort educators' perceptions of families' level of transition involvement. Because family involvement remains one of the strongest predictors of transition success, catering to the needs and strengths informed by an expanded understanding of the interactions between people and processes is critical.

Access to the General Education Curriculum

Interestingly, diversity considerations regarding family involvement as predictors of positive postsecondary outcomes involve practices heavily steeped in individuals' cultural values and beliefs about disability, education, and adulthood. Access to the general education is also a cultural practice but from an institutional perspective – that of schools and the U.S. system in which they exist. In fact, the IDEA mandates that students with disabilities have access to the general education curriculum, a vestige of the historic struggle to provide equal educational opportunities to youth with disabilities and to consider inclusive educational settings rather than allow separate settings to function as a default. However, such access has never been clearly defined or delineated (Wehmeyer, 2002). When access is constructed as learning the same curriculum as students without disabilities, researchers have posited that for adolescents without high-incidence disabilities (e.g., learning disabilities [LD] and EBD),

such access is a necessary prerequisite to participating in higher education and employment (Maccini, Strickland, Gagnon, & Malmgren, 2008). As shown in the Trainor and colleagues' (2019) transition framework, ensuring environmental equity during transitioning also requires connection with the spatiotemporal dynamics, such as changes in multiple layers of policies and funding situations.

Self-Determination and Self-Advocacy

Student self-determination is considered a key lever in the successful transition of students with disabilities (see Chapter 14 for a thorough discussion of this topic). In education research, self-determination is "a combination of skills, knowledge, and beliefs that enable a person to engage in goal-directed, self-regulated, autonomous behavior. As such, self-determination includes an understanding of one's strengths and limitations, together with a belief of oneself as capable and effective" (Field, Martin, Miller, Ward, & Wehmeyer, 1998, p. 2). In addition to the multiple types of evidence (e.g., descriptive, correlational, experimental), increasing student involvement in and ownership of decision making, goal setting, self-reflection, self-assessment, and self-advocacy make sense because people are likely to work toward goals that they themselves prioritize.

Important to consider when we focus on the diverse population of youth, however, is that the ways in which individuals think about disability, adulthood, and success in life are culturally constructed. For instance, early qualitative studies found that students' and families' beliefs and perceptions about transition, self-determination, and disability varied across groups based on culture and services and supports received (Povenmire-Kirk, Lindstrom, & Bullis, 2010; Rueda et al., 2005; Trainor, 2005, 2007). More recently, measurements of self-determination have been expanded to include how diversity in identity and context impacts students' acquisition and practice of self-determination (Shogren, Shaw, Raley, & Wehmeyer, 2018).

Self-advocacy, a component of self-determination, is an essential goal of transition planning. People who are self-determined and able to advocate self-interests have positive postsecondary school outcomes, including college and employment success (Eisenman & Tascione, 2002; Wehmeyer & Palmer, 2003; Wehmeyer & Schwartz, 1997). Self-advocacy can be defined as the ability to communicate one's needs and make informed decisions about the supports necessary to meet those needs (Izzo & Lamb, 2002). The basis for advocacy is a clear understanding of one's strengths, abilities, and limitations and knowing how to use these attributes to enhance one's quality of life (Doll, Sands, Wehmeyer, & Palmer, 1996).

For people who have been historically marginalized, advocacy is about much more than communicating one's needs effectively; rather, advocacy becomes a political act and a demand for social justice. As we consider the role of self-advocacy in transition planning, it is important to situate the concept of self-advocacy for people with disabilities in a sociohistorical context. With the demand for equality as a common goal across marginalized communities, the self-advocacy movement for people with disabilities, also known as the disability rights movement, was modeled after other social movements for equality, including the civil rights and the women's rights movements of the 1950s and 1960s (Scotch, 1989). These examples of social activism offered models of political action and ideological frameworks for people with disabilities to engage in both individual and group advocacy for basic human rights (Scotch, 1989). Early disability rights movements led by disabled people, such as the Independent Living Movement, Disabled in Action, and Deaf President Now, challenged the perceptions that disabled people are incapable of making decisions about their own lives and fighting for their own needs and desires. These groups, calling for social justice for the disability community, fostered the notion that people with disabilities have their own voice and can and must speak for themselves.

More recent educational research underscores the importance of self-advocacy skills in the successful transition of students with disabilities into adult life (Izzo & Lamb, 2002; Wehmeyer, 2003).

Viewing self-advocacy through an equity lens requires an intersectional approach accounting for the multiple inequities that disabled people with other marginalized identities face. When and how to self-advocate is contextual and should consider the power dynamics associated with one's social location defined by their multiple and intersecting social identities. Disability Critical (DisCrit) scholars point out the ways in which the same disability label can provide different opportunities to students of different races. For example, "a white student labeled with a learning disability may lead to more support in the general education classroom and extra time on high-stakes tests, which can ensure access to college, whereas for a student of color, the same disability label can result in increased segregation, less access to the general education curriculum, and therefore, limited access to secondary education" (Annamma, Connor, & Ferri, 2013, p. 17). People of color with disabilities and women with disabilities are more likely to experience violence at the hands of people who are supposed to offer protection and care than their White and/or male counterparts (Finn, Díaz, & Brown, 2016; Centers for Disease Control and Prevention, 2006). Because of discrimination related to gender and race and other non-dominant identities, people of color, women, and transgender people with disabilities confront different barriers, and thus advocacy skills must not only address ways to negotiate ableism but also racism and sexism. The reality is that people with disabilities often embody more than one marginalized identity; therefore, we must move beyond an identity-neutral approach to self-advocacy instruction and toward a critically conscious, intersectional form of self-advocacy research and instruction.

Future Implications

Research

An increasing body of research integrates factors of diversity as part of the research questions. The American Psychological Association (APA, 2003), guides scholars to position cultural considerations in the fore of research design and dissemination. Research goals must be expanded to identify and document transition practices that uniquely foster transition education by expanding the content and the methods of transitions studies to include factors and variables addressing and including diverse groups of youth and young adults with disabilities, some of whom experience inequities that are linked to those identities and experiences (Trainor et al., 2008; Trainor, 2017; Trainor et al., 2019).

Culturally competent transition researchers must examine their own biases and develop research questions, designs, and analyses that consider the cultural context for the subjects of their research (Arzubiaga et al., 2008). While qualitative research places significant importance on the researcher's biases and positionality, and critical theorists openly adopt a position relative to their perspective of social justice, other research paradigms have not addressed potential research biases across methods. We agree with Arzubiaga and colleagues that attention must be paid to these issues. Simultaneously, we concur with Test and colleagues (2009; Test, Mazzotti, 2009b) that correlational and experimental research designs are effective means to identify promising transition practices. Hence, we believe that researchers follow the ethical and quality guidelines for research with participants from both dominant and historical minority populations. In addition to the APA guidelines, researchers in special education should follow quality indicators for research (Odom et al., 2005).

Given these guidelines, several areas in need of research should be prioritized. For the correlational and experimental work that has been used to identify predictors of postschool success, we must test and measure these predictors for populations who have previously been omitted from data collection or data analysis due to their sample sizes. Further, we need to employ research methods that allow us to learn more about the social validity of transition education approaches for a range of individuals based on disability, race/ethnicity, SES, and gender. This is complicated, of course, because

the number of possible variable combinations is extensive. For example, why do postschool out-comes differ for youth with EBD or LD? And, within the subgroup of youth with EBD, do students from different racial/ethnic backgrounds experience unique barriers or facilitators? Or, what drives gender-based differences in transitions to employment? To illustrate, an example research question might be: Given special education disproportionality (i.e., the association of race, gender, and EBD), what are the specific transition–related preferences, strengths, interests, and needs of Black adolescent males who have been identified with EBD? In addition, how do we prepare teachers to implement culturally responsive instruction in ways that facilitate and support positive postschool outcomes for members of this group who experience some of the worst postschool outcomes? Research provides solutions in incremental steps; considerations for equity in postschool outcomes are complex but essential if we are to solve some of the most challenging and enduring problems in our field.

Practice

For the past several decades, personnel preparation programs throughout the United States have struggled to develop teacher education that yields professionals skilled in working with the diversity of students they might teach. Although programs increasingly attempt to respond to this need, their efforts often get diluted because of competing demands, limited faculty experience, and uncertainty regarding culturally appropriate ways to engage in dialogue about the issues (Trent, Kea, & Oh, 2008). Cultural competence requires an acceptance and respect for difference, an ongoing assessment of one's own culture and biases, attention to the dynamics of difference, a commitment to the con-tinuous expansion of cultural knowledge and resources, and a willingness to change one's practice with deepening understanding (deFur & Williams, 2002).

deFur and Williams (2002) said, "Adding to this complexity [of transition planning] is the fact that concepts of success and the dreams that families hold for their children are interwoven with cultural perspectives" (p. 107). For example, transition assessment encourages IEP teams to ask questions of youth such as "Where do you want to live?" after finishing high school. In many cultures, adult chil-dren continue to live with a parent until the young adult marries. Even then, some cultures expect that one child will always live with a parent to care for a mother or father. Many parents of adult children with developmental disabilities see living away from family as a far–off goal, not a graduation goal (deFur, 2010). IDEA also requires that IEP transition teams set employment goals with students, yet many students may have not even observed family members working. Perhaps the IEP team may suggest trying out another job or working less time to accomplish academic goals; the IEP team may not realize that the youth's pay provides financial support for the family. By law, transition IEPs must discuss postsecondary education options, but many students may be the first in their family to attend college, and perhaps the family lacks knowledge of how to access higher education. Culturally responsive transition requires professionals to develop deep cultural understanding of students and their families. They seek support from the community when needed to assist in the development of trust with families. Using this frame of reference and paired with high expectations and strategies for successful postschool outcomes, the culturally responsive professional facilitates a shared vision with the family for the young adult's future (deFur, 2010).

Transition assessments, school curriculum, and community experiences must also be examined to discern the degree to which these reflect the diversity of youth in transition. For example, are the transition assessments inclusive of various race and ethnicities? Do the transition curriculum materi-als (books, media, posters, etc.) reflect the cultural diversity of the country? Are there school policies that demonstrate that racism, ableism, sexism, and linguicism will not be tolerated and clear conse-quences when people violate these policies? Does the school track students, and does this tracking separate students by disability, race/ethnicity, and gender and contribute to lower standards? If so,

what steps can be taken to change this? Are disciplinary procedures administered consistently and fairly regardless of race/ethnicity, ability, gender, or linguistic backgrounds? Do dropout prevention efforts include students with disabilities and culturally responsive practices? Transition practitioners and administrators must be proactive in addressing these questions to ensure culturally responsive school-based transition practices.

Advocacy

We might ask what an equity-centered, intersectional form of self-advocacy would include. Using Test, Fowler, Brewer, and Wood's (2005) conceptual framework of self-advocacy for students with a disability as a model, we illustrate how self-advocacy instruction and research can be expanded in ways that overtly center equity. In the following we list each of the components in the framework and provide an extension of the current sub-components to illustrate an equity-centered and intersectional perspective.

Knowledge of Self

Having an awareness of one's multiple identities is a critical aspect of knowing oneself. For people with disabilities, this includes having a recognition of and pride in membership in the disability community (Skelton, 2019). Educators should be cognizant of disability identity formation and can assist in shaping the ways in which students with disabilities perceive themselves, their bodies and minds, and their way of interacting with the world as positive and with pride (Forber-Pratt, Lyew, Mueller, & Samples, 2017). A crucial aspect of this involves supporting students with disabilities to learn about disability history, particularly the disability rights and justice movements, providing counter-narratives to the perception that disabled people are helpless and dependent on those without disabilities to speak and advocate for them. Just as Black history and women's history are important for Black students and girls to develop positive self-images, disability history is important for students with disabilities (Thompson, 2018).

Knowledge of Rights

Students with disabilities should also learn about their civil rights. Information provided to students with disabilities also possessing other intersecting, non-dominant identities should not only focus on laws that prohibit discrimination against people with disabilities (e.g. ADA, IDEA, and Section 504 of the Rehabilitation Act of 1973) but also laws that prohibit discrimination based on race, sex, national origin, and religion, including the Titles VI and VIII of the Civil Rights Act of 1964 and Title IX of the Education Amendments Act of 1972.

Communication

Students should be taught to use tools, knowledges, and resources from multiple communities for critiquing the status quo that marginalizes any group and for identifying problems and solutions that will lead to social change towards an inclusive and just society (Stovall, 2006; Gay, 2018; Aronson & Laughter, 2016). It is important for students with disabilities to feel empowered to mobilize against social injustice and to communicate in ways that demonstrate agency. Students with disabilities should be provided learning opportunities to practice questioning societal status quo policy and practices that privilege dominant groups and oppress, marginalize, or make invisible individuals or groups who embody non-dominant identities (Freire, 1970; Duncan-Andrade, 2007).

Leadership

Students with disabilities should be supported to demonstrate their capacity to lead for social change that positively affects their everyday lives and the lives of others. Instruction and opportunities for students with disabilities to practice their individual and group agency to facilitate change should include an expanded view of leadership that centers equity for all disabled people as well as others who are marginalized, with the goal of creating an inclusive society that recognizes and appreciates diversity as part of the human experience.

Final Thoughts

When attention to diversity and equity are woven into transition research studies in intentional and impactful ways, the work is likely to have increased relevance in the lives of young people with disabilities who have a range of experiences and outcomes associated with sociocultural realities of our diverse society. Paying attention to diversity and equity as a foundational step to research design has the potential to address structural challenges that exist for diverse youths and young adults and continue to disrupt equity. Weissglass (1997) claimed that biases regarding race, ethnicity, class, and gender are institutionalized (we would argue the same is true for people with disabilities) and that achieving equity goes beyond addressing personal prejudices. Clearly, there are risks in addressing the systemic bias and discrimination that pervade our society and schooling, but the risk of doing nothing is even greater, as evidenced by transition outcome gaps based on the sociodemographic characteristics of students. Aligning our professional efforts with advocating with and for all people with disabilities is key to sustaining opportunities to live, learn, and work in our communities and in society. There are multiple avenues to begin advocating for equity-centered transition research and practice for youth and young adults with disabilities; the ethical choice is whether to begin.

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21

Effective Strategies for Interagency Collaboration

David W. Test, Valerie L. Mazzotti, Stephen Kwiatek, and Wen-hsuan Chang

Approximately 25 years ago, Halpern (1994) noted that when transition planning for students with disabilities, it can be possible to plan for postsecondary services while students are enrolled in school. Halpern also noted that early interagency collaboration should occur to create "a seamless transition of *agency responsibilities*" (p. 123). Halpern was not alone in advocating for a seamless transition. In fact, Repetto and Correa (1996) provided a framework for a seamless model of transition service planning and provided specific suggestions for multiagency, or interagency, collaboration beginning at birth and continuing through age 21. Repetto and Correa suggested providing services in a holistic approach, which would include health care, training for employment, skill development, academic education, financial planning, and other needs, which are tailored to the students' and families' individualized needs. As suggested by Repetto and Correa, interagency collaboration is one of the most important components to ensure students with disabilities experience a successful and seamless transition to adult life. To ensure the services are provided seamlessly and collaboratively becomes a critical issue in transition, as a smooth transition plays an integral part in improving students' post-school outcomes (Test et al., 2009).

Defining Interagency Collaboration

Interagency collaboration has been identified as a process where agency representatives work collectively for mutual benefit toward a common goal of supporting a student from high school to transition to adulthood. Test, Aspel, and Everson (2006) defined interagency collaboration as "a relationship between two or more people, agencies, or organizations that is well defined and mutually beneficial" (p. 146). Rowe et al. (2015) described interagency collaboration as "a clear, purposeful, and carefully designed process that promotes cross-agency, cross-program, and cross-disciplinary collaborative efforts leading to tangible transition outcomes for youth" (p. 15).

Legal Requirements for Interagency Collaboration

Interagency collaboration has been mandated by recent federal legislation requiring schools, community organizations, and governmental agencies to work together. This includes the Individuals with Disabilities Education Act (IDEA, 1990, 2004), the Workforce Innovation and Opportunity Act (WIOA, 2014), and the Every Student Succeeds Act (ESSA, 2015). See Table 21.1 for a summary of each act.

Table 21.1 Summary of Acts

	Main Focus	Purpose	Original Acts
Individuals with Disabilities Education Act (IDEA)	Requires transition to (a) include multi-services (e.g., postsecondary education, vocational training, integrated employment, adult education, adult services, independent living) and (b) individualized education program (IEP) meeting must include students, parents, community agencies, and other service providers.	To enhance collaboration between representatives and stakeholders and to provide continuous services for all students with disabilities.	***Section 1414. Evaluations, eligibility determinations, individualized education programs, and educational placements*** The term "individualized education program team" or "IEP Team" means a group of individuals composed of – (i) the parents of a child with a disability; (ii) no less than 1 regular education teacher of such child; (iii) not less than 1 special education teacher, or where appropriate, not less than 1 special education provider of such child; (iv) a representative of the local educational agency; (v) an individual who can interpret the instructional implications of evaluation results, who may be a member of the team described in clauses (ii) through (vi); (vi) at the discretion of the parent or the agency, other individuals who have knowledge or special expertise regarding the child, including related services personnel as appropriate; and (vii) whenever appropriate, the child with disability (IDEA, 2004, Section 1414 (d)(B), p. 887).
The Workforce Innovation and Opportunity Act (WIOA)	Requires state and local boards to coordinate and align workforce programs to provide coordinated, complementary, and consistent services to job seekers and employers. Requires at least 15% of the funding to state vocational rehabilitation agencies to provide pre-employment transition services to support youth with disabilities in transition from secondary school to postsecondary school and employment.	To improve the public workforce system for all youth including those with significant disabilities, through creation of jobs, training, and retention of workers. To ensure students with disabilities are provided pre-employment transition services (Pre-ETS) to obtain and retain competitive integrated employment.	***Section 107. Local workforce development boards*** The local board shall coordinate activities with education and training providers in the local area, including providers of workforce investment activities, providers of adult education and literacy activities under title II, providers of career and technical education (as defined in section 3 of the Carl D. Perkins Career and Technical Education Act of 2006 (20 U.S.C. 2302)) and local agencies administering plans under title I of the Rehabilitation Act of 1973 (29 U.S.C. 720 et seq.), other than section 112 or part C of that title (29 U.S.C. 732, 741) (WIOA, 2014, Section 107 (c)(11)(A)).

			Section 419. State allotments
Every Student Succeeds Act (ESSA)	Requires training for teachers and joint professional development for teachers in collaboration with career and technical educators and educators from institutions of higher education.	To integrate rigorous academics to increase collaboration.	(d)(1) From any State allotment under subsection (a) for a fiscal year, the State shall reserve not less than 15 percent of the allotted funds for the provision of pre-employment transition services. (2) Such reserved funds shall not be used to pay for the administrative costs of providing pre-employment transition services (WIOA, 2014, Section 419, (d)). Section 8002. Definitions The term "expanded learning time" means using a longer school day, week, or year schedule to significantly increase the total number of school hours, in order to include additional time for – . . . instructional and support staff to collaborate, plan, and engage in professional development (including professional development on family and community engagement) within and across grades and subjects (ESSA, 2015, Section 8002 (22)(B)).

Individuals With Disabilities Education Act (IDEA, 1990, 2004)

IDEA requires agencies to support the transition to adulthood through such activities as postsec-ondary education, vocational training, integrated employment, adult education, adult services, inde-pendent living, and community participation. The law calls for interagency collaboration by "(a) articulating critical interagency linkages, (b) including students, parent, and community agencies during IEP planning, and (c) coordinating services both in school and with outside agencies" (Noo-nan & Morningstar, 2012, p. 313). Under the 2004 reauthorization of IDEA, schools must also invite representatives of agencies that are likely to be responsible for providing or paying for transition ser-vices to IEP meetings and follow up with these agencies to ensure they are meeting students' needs. IEPs for the transition to adulthood can serve as blueprints for coordinating services and identify-ing staff and agency responsibilities and thus prevent breakdowns in services (Wehman & Witting, 2009). IDEA's requirements for interagency collaboration correspond to the idea that "improved post-school outcomes are the driving force and focal point of a free appropriate public education for students with disabilities" (Benz, Lindstrom, & Yovanoff, 2000, p. 509).

The Workforce Innovation and Opportunity Act (WIOA, 2014)

WIOA establishes supportive services for employability and employment. The goal of the WIOA is to reform the public workforce system for all youth, including those who have disabilities. The law directs the Departments of Education, Health and Human Services, and Labor to collaborate in their programs for job training, job creation, and worker retention. WIOA supersedes the Workforce Investment Act of 1998 and enables state and local boards to respond to workforce needs of local and regional employers more effectively.

In addition, WIOA mandates increased collaboration between state and local vocational rehabilita-tion services (S/LVR) and education agencies (S/LEA) so that youth with disabilities in secondary school receive pre-employment transition services (Pre-ETS) that enable them to find and keep suit-able jobs. WIOA assigns 15% of funds to S/LVR and S/LEAs for Pre-ETS and requires these agencies to work together to develop strategies for supporting youth with disabilities as they transition into the world of work. WIOA stipulates that Pre-ETS for students with disabilities focus on job exploration, work-based learning, postsecondary education options, workplace readiness, and self-advocacy.

The Every Student Succeeds Act (ESSA, 2015)

ESSA sets high standards and expectations for all students and encourages multiple stakeholders to work together to promote students' college and career success (White House ESSA Fact Sheet, 2015). ESSA requires secondary school teacher training, as well as joint professional development for teachers, career and technical educators, and educators from institutions of higher education, as appropriate, to integrate rigorous academics into such efforts. The law also provides subgrants to schools that have collaborated with employers and community-based organizations to increase par-ent and family engagement.

Together, these laws encourage schools and other government agencies to establish collaborative arrangements with multiple stakeholders for supporting transition into adulthood for students with disabilities. This interagency collaboration can take place at multiple levels.

Levels of Interagency Collaboration

Interagency collaboration can occur at the state, community, and school level. See Table 21.2 for a brief description of each level.

Table 21.2 Strategies and Models for Increasing Interagency Collaboration

Level	Strategies	Models
State teams	State transition teams apply for external funding; listen to local input; disseminate information; site visits; joint planning; joint training (Noonan, Morningstar, & Gaumer-Erickson, 2008).	Maryland Seamless Transition Collaborative (MSTC)
Community teams	Community teams jointly train staff; meet with agency staff through community transition teams; disseminate transition information (Noonan et al., 2008).	Communicating Interagency Relationships and Collaborative Linkages for Exceptional Students (CIRCLES)
School teams	School teams create flexible scheduling and staffing; facilitate meetings with agencies, students, and families; provide information and training to students and families (Noonan et al., 2008).	Communicating Interagency Relationships and Collaborative Linkages for Exceptional Students (CIRCLES)

State Teams

State-level teams are designed to support the needs of both community- and school-level teams (Noonan et al., 2008). State teams can include people such as state special education directors, state vocational rehabilitation directors, state career and technical education directors, and parent training centers' representatives and are typically obligated to develop and coordinate state policies, provide state resources and support, identify and address statewide needs, and develop interagency agreement among state agencies to facilitate transition services. One example is the Maryland Seamless Transition Collaborative (MSTC; Luecking & Luecking, 2015). MSTC provides "seamless connections to work support and postsecondary education well in advance of secondary school exit" (p. 5). The MSTC student services flowchart starts in tenth grade (or three years prior to exit) and can continue for two years after exiting high school. The process begins by having students participate in an adapted Discovery Process (Condon & Callahan, 2008) to identify student strengths, needs, and preferences. These are documented in a Positive Personal Profile (Tilson & Cuozzo, 2001). Intervention components may include self-determination and self-advocacy instruction, work-based experiences (including paid employment supports), student-led IEP development, family support/participation, health and social linkages, and public benefits management.

Community Teams

Community teams are composed of the directors of service provider agencies, such as school district administrators, special education administrators, school counselors, community career centers, postsecondary education and training professionals, community-centered board staff, mental health organizations, and advocacy organizations. One model for community-level interagency collaboration is Communicating Interagency Relationships and Collaborative Linkages for Exceptional Students (CIRCLES). CIRCLES is a transition planning service-delivery model designed to guide communities and schools in implementing interagency collaboration (Flowers et al., 2018). CIRCLES is a three-tiered model that includes interagency collaboration with community-level, school-level, and individual-level teams. Community Teams (CTeam) include district-level agency administrators and supervisors who can make policy and monetary decisions. The CTeam meets several times a year to address larger issues of access to services and identify gaps and overlaps services within a community.

School Teams

School Teams (STeam) are typically composed of individuals who provide direct services to students, such as vocational rehabilitation (VR) and developmental disabilities case managers and school counselors. In CIRCLES, school teams meet directly with students and their families (Flowers et al., 2018). Students begin these meetings by presenting their strengths and areas of need. Then, agency members of the STeam discuss ways to deliver transition services to each student. This level of meeting enables each agency to meet with each student and family prior to the IEP meeting. If nothing changes between the STeam meeting and the IEP meeting, then adult service providers do not need to attend since they have already agreed to provide services at the STeam meeting.

Adult Services

Test et al. (2009) identified interagency collaboration as a predictor of postsecondary success based on Bullis, Davis, Bull, and Johnson's (1995) results that found students who received assistance from multiple community-based agencies were more likely to be engaged in postschool employment or education. While the number of federal, state, and community agencies makes it nearly impossible to make one comprehensive list, the following agencies should be considered when supporting students with disabilities who are preparing for adult life.

Centers for Independent Living

The purpose of Centers for Independent Living (CILs) is to maximize the independence of an individual with disabilities and help individuals with disabilities access their communities through services provided (Mazzotti & Rowe, 2015). Although services vary depending upon the individual community, CILs typically provide (a) advocacy supports, (b) skill training for independent living, (c) information and referral, and (d) peer counseling (Mazzotti & Rowe, 2015). Additionally, Plotner, Oertle, Reed, Tissot, and Kumpiene (2017) noted that services provided by CILs can increase disability awareness and also promote inclusion, and, because most CILs are operated by individuals with disabilities, CILs can be used to help educators raise expectations for students with disabilities. The Administration for Community Living contains information on CILs and provides contact information on where to contact them in each state (https://acl.gov/programs/centers-independent-living/list-cils-and-spils).

Developmental Disability Services

Grigal, Hart, and Migliore (2011) found youth with intellectual disability were less likely to have goals related to competitive employment or postsecondary education and were more likely to have goals related to more restrictive settings (i.e., sheltered or supported employment) when compared to peers with different disabilities. Results highlighted the importance of services targeted to individuals needing developmental disability services to develop skills for postsecondary education and/or competitive employment. To support individuals needing these services, developmental disability services usually provide ongoing services, utilizing VR funding, that begin after the person has exited high school (Simonsen, Stuart, Luecking, & Certo, 2014). More specifically, developmental disability services provided could include supported employment, support with competitive employment, case management, and residential services (Mazzotti & Rowe, 2015). The National Association of State Directors of Developmental Disabilities Services' website contains a link to the person in charge of each state's developmental disability services (www.nasddds.org/state-agencies/).

Housing Authority

Where people live and with whom they live are two critical features related to overall quality of life (Walker & Storey, 2014). Walker and Storey (2014) explained that employment, free time, social, and community participation activities, along with access to community resources, are all affected by where individuals live. Therefore, it is important to examine what supports are available for housing.

The Fair Housing Act prohibits individuals with disabilities from being discriminated against for housing and housing-related transactions due to their disabilities. According to the U.S. Housing and Urban Development's (HUD) website, there are multiple programs available to all individuals and those available specifically for individuals with disabilities. One such example is Supportive Housing for Persons with Disabilities (Section 811). The program provides no-interest loans that can be forgiven when program requirements are met for 40 years. The no-interest loans can be used for construction or rehabilitation of supportive housing for individuals with disabilities. Additionally, Section 811 provides rental assistance for the difference in costs between HUD-approved costs per unit and 30% of the adjusted income of the resident (www.hud.gov/sites/documents/19565_811_ DISABILITIES.PDF). The U.S. HUD website has a page with contact information to learn more about available state-specific programs (www.hud.gov/local).

Mental Health Services

The importance of mental health services cannot be overstated. Poppen, Sinclair, Hirano, Lindstrom, and Unruh (2016) conducted a national survey of 49 states and 648 education and community professionals working with secondary students to examine mental health concerns, barriers, and strategies that could be used to assist with mental health concerns. Poppen et al.'s respondents indicated 48% of secondary students with disabilities experienced some mental health concern, and 82% of respondents explained that students who received supports utilized community-based supports to address mental health needs. Therefore, it is critical to consider supports available through mental health service agencies, which could include case management, therapeutic recreation services, respite care, and residential supports (Mazzotti & Rowe, 2015). The Substance Abuse and Mental Health Services Administration website contains a search tool to find supports available by city, state, or zip code (https://findtreatment.samhsa.gov/).

One Stop Career Centers

One Stop Career Centers originated as part of the Workforce Investment Act of 1998 (P.L. 105–220) and provide services to anyone needing support with finding employment (Schall, Wehman, & Carr, 2014). Typically, services are free, and include (a) job searching, (b) job placement, (c) resume writing, (d) registration for job services and unemployment insurance claims, and (e) providing information on community programs and resources (Mazzotti & Rowe, 2015). The U.S. Department of Labor's website contains information on finding local job-related supports (www.dol.gov/general/topic/training/onestop).

Postsecondary Education Institutions

Newman, Madaus, and Javitz (2016) examined the relationship between individuals with disabilities having a transition plan that listed disability-specific and generally available supports and their receipt of supports in postsecondary education settings (i.e., two-year, four-year, and college technical education). For both postsecondary two-year and college technical education, students with specifically listed accommodations had a statistically significant increase in the likelihood of receiving

disability-specific accommodations. Therefore, along with general program requirements, it is important to consider the role secondary educators have in IEP development and its relation to postsecondary supports, both general and disability specific, offered by postsecondary education institutions.

Postsecondary education can consist of a variety of postsecondary options including community colleges, four-year universities, and technical schools. Community colleges offer associate degrees and certification programs. Based on current field demand and need, technical schools provide students with technological skills needed to meet current demands (Mazzotti & Rowe, 2015).

Another postsecondary education consideration for students with significant disabilities is Think College. According to Think College's website, "Think College is a national organization dedicated to developing, expanding, and improving research and practice in inclusive higher education for students with intellectual disability" (para. 1, 2018). Think College's website has a map of the United States where a person can click on an individual state to learn about postsecondary education options specific for students with intellectual disability (https://thinkcollege.net/).

Social Security Administration

The Social Security Administration (SSA) provides programs and supports to individuals with disabilities for employment, insurance, and education and training (Honeycutt & Livermore, 2018). Specifically, SSA provides two disability benefits programs: (a) the Social Security disability insurance (SSDI) program and (b) the Supplemental Security Income (SSI) program. According to the SSA (n.d.), SSDI provides benefits to individuals with disabilities who are "insured by workers' contributions to the Social Security Trust fund" (para. 1; www.ssa.gov/disabilityresearch/wi/generalinfo.htm). SSI provides cash assistance payments to people with disabilities, including those who are under 18 years of age, who have limited resources and income.

The SSA has multiple major federal programs that support transition-age students with disabilities (Honeycutt & Livermore, 2018). Of particular importance to transition-age youth is the student earned income exclusion (Honeycutt & Livermore, 2018). Honeycutt and Livermore (2018) explained that the SSA, through its SSI and SSDI programs, provides income support to individuals with disabilities who qualify. Honeycutt and Livermore further explained that the purpose of the student earned income exclusion was to encourage employment and allow participants to keep more of their earnings and retain insurance coverage through Medicare or Medicaid.

Other programs offered include (a) Plan to Achieve Self-Support (PASS), (b) Medicare, (c) Medicaid, (d) work incentives, and (e) Ticket to Work programs. For those who qualify, PASS can be used to help individuals with disabilities return to work. For example, PASS allows an individual with a disability to pay for services or items needed for a work goal by placing money aside or using items the individual owns (www.ssa.gov/disabilityresearch/wi/pass.htm). The overall purpose of PASS is to help people with disabilities find employment, which would reduce or eliminate SSI or SSDI benefits. Medicaid is a federal and state health insurance program provided to people with disabilities or people with low income (www.ssa.gov/disabilityresearch/wi/medicaid.htm). For youth with significant disabilities, Medicaid waiver programs exist, which could lead to enhanced independent living supports (Honeycutt & Livermore, 2018).

Another SSA program potentially relevant for transition-age youth with disabilities is Medicare, which is the national health insurance program. Medicare can assist with the cost of health care (www.ssa.gov/pubs/EN-05-10043.pdf).

SSA special rules make it possible for individuals with disabilities who receive SSI to receive additional supports, which are called work incentives (www.ssa.gov/disabilityresearch/wi/generalinfo.htm). Work incentives could include insurance benefits, cash benefits, support with disability-related work expenses, support to begin a new line of work, and financial assistance to obtain education and training (Mazzotti & Rowe, 2015). Certain work incentives, in certain instances, for individuals who

receive SSI and SSDI benefits who lose cash payments are still eligible for Medicaid and Medicare coverage (Honeycutt & Livermore, 2018). For example, some people who receive SSI and SSDI who, because of their earnings, lose cash benefits may be able to continue receiving Medicaid and Medicare coverage (Honeycutt & Livermore, 2018).

Transportation

Test, Walker, and Richter (2014) explained that community functioning skills are critical for individuals to access and navigate their communities. One important set of skills explicitly identified by Test et al. was travel and community safety skills, which include using public transportation. As a result, transportation services are critical to postsecondary success.

According to the U.S. Department of Transportation (USDOT), their mission is to "ensure our nation has the safest, most efficient and modern transportation system in the world; that improves the quality of life for all American people and communities, from rural to urban, and increases the productivity and competitiveness of American workers and businesses" (2018, para. 1). The USDOT website contains a page of every state's Department of Transportation (www.fhwa.dot.gov/about/webstate.cfm). Using this tool can help determine individual state-specific resources.

Along with the USDOT, Easter Seals also provides transportation supports for individuals with disabilities (www.easterseals.com/our–programs/transportation.html). Easter Seals partners with the National Aging and Disability Transportation Center to help individuals with transportation supports for employment, appointments, shopping, and other needs (www.nadtc.org/). Additionally, to help individuals identify and connect with organizations at the local, regional, or state level, Easter Seals partners with the National Center for Mobility Management to help people find the best match for transportation needs (https://nationalcenterformobilitymanagement.org/).

Vocational Rehabilitation

Vocational rehabilitation provides supports to individuals with disabilities to help them obtain employment and develop greater independence (Mazzotti & Rowe, 2015). Furthermore, VR may provide apprenticeship programs, employment training, and postsecondary education training, which assists individuals in obtaining employment goals (Mazzotti & Rowe, 2015). Rast, Roux, and Shattuck (2019) suggested VR is one possible source of support for individuals with disabilities to access postsecondary education. Rast et al. explained that postsecondary education training provides opportunities to develop vocational skills, which would ultimately relate to improved wages and overall job satisfaction. The U.S. Department of Labor sponsors a website that provides information on accessing VR services (www.careeronestop.org/ResourcesFor/WorkersWithDisabilities/vocational-rehabilitation.aspx).

Summary of Adult Services

Many agencies exist to support young people with disabilities' transition to adulthood, including agencies specifically for people with disabilities and agencies for all people. With so many options to consider when determining which agencies best support an individual's transition to adulthood, consider agencies that provide supports to help students achieve their individualized postsecondary goals.

Strategies for Increasing Interagency Collaboration

Promoting interagency collaboration is key to ensuring students with disabilities make a seamless transition into adult life. The complexity of the transition planning process often presents multiple

barriers to facilitating interagency collaboration among stakeholders. This in turn becomes a challenge for schools, adult service agencies, families, and communities. A seamless transition means students with disabilities and their families will have the opportunity to receive supports, build relationships, and get connected with needed services in high school to ensure postschool success (Noonan & Morningstar, 2012). While barriers exist, there are multiple strategies stakeholders should consider to build interagency collaboration to ensure sustainable partnerships over time that enhance all students with disabilities' transition into postschool life.

Barriers to Interagency Collaboration

Despite the well-documented benefits of interagency collaboration, several barriers exist, including: (a) challenges to attaining interagency agreements (i.e., memorandums of understanding [MOUs]) across service providers and (b) completing arduous tasks that involve a range of stakeholders from distinct backgrounds and agencies. The process of building collaborative partnerships may include, but is not limited to, getting to know each other through exchanging information, sharing ideas, planning together, and attaining a mutual vision and mission (Mazzotti & Rowe, 2015). However, sharing information without disclosing confidential content, a lack of concrete definitions on responsibilities and roles for each agency, and intra-agency politics and hierarchies may cause multiple problems and issues when agencies begin the collaboration process (Flexer, Baer, Luft, & Simmons, 2013; Test et al., 2006). For example, at the state level, barriers may include (a) lack of understanding other agencies' policies, (b) lack of communication between policy makers and service providers, (c) unclear goals and objectives, and (d) gaps in services (Noonan & Morningstar, 2012). At the local level, barriers may include a lack of teacher and family awareness of available services, not sharing information between schools and agencies, and absence of follow-up by schools and adult services to ensure students are actually provided to services (Povenmire-Kirk et al., 2015).

Strategies to Support Interagency Collaboration With Adult Services

Building interagency partnerships is about working together toward a shared mission and vision. Often "organization culture" (p. 919) plays a key role in how agencies work together and understand their roles in building collaborative partnerships (Aarons et al., 2014). Implementing strategies to increase interagency collaboration among local education agencies (LEAs) and adult services has the potential to decrease breakdowns in communication, decision making, problem solving, and overall partnerships (Luecking & Certo, 2002; Mazzotti & Rowe, 2015). Increasing adult service involvement in the transition planning process requires team building and teamwork. This includes developing interagency professional development, sharing resources, and implementing evaluation and accountability strategies (Noonan & Morningstar, 2012). To do this, LEAs and adult services need to promote and implement promising interagency practices.

For example, developing interagency professional development may ensure school and agency personnel understand the needs of students and the nuances involved in the transition planning process. Noonan and Morningstar (2012) suggested joint training of school and agency personnel. Joint training provides opportunities for school and agency personnel to gain understanding of the policies, processes, and procedures of each agency. Joint training might include co-sponsoring events at schools and within the community, attending trainings offered by LEAs and adult service providers, and co-hosting statewide transition conferences (Noonan & Morningstar, 2012). Providing interagency professional development might also include using face-to-face and hybrid models of professional development to engage multiple agencies across the state and at the local level (Mazzotti, Rowe, Simonsen, Boaz, & VanAvery, 2018).

Additionally, implementing promising interagency practices can facilitate information exchange and sharing of resources between schools and adult services. Sharing information and resources may reduce duplication of services across agencies and helps build the collaborative process between agencies. Developing formal interagency agreements (i.e., MOUs) at the state and local level is one strategy that can help facilitate each agency's ability to share information and resources. Butterworth, Foley, and Metzal (2001) suggested interagency agreements provide opportunities for agencies to take action to improve services for students with disabilities and can be the first step in promoting systems change. Interagency agreements typically include: (a) purpose statement; (b) description of each agency involved; (c) requirements that may impact the agreement; (d) definitions of key terms; (e) procedures and timelines; (f) process for implementing, monitoring, and evaluating the agreement; (g) process for how conflicts will be resolved; and (h) signatures of each agency representative with dates (Mazzotti & Rowe, 2015).

In addition to developing interagency agreements, state and local education agencies in collaboration with adult services should conduct an infrastructure analysis to determine current and long-term needs to identify a common vision and prioritize goals (NTACT, 2018). This process can be followed by community resource mapping to identify resources currently available within the community to support and identify short- and long-term needs of students and families. Community resource mapping also provides an opportunity for agencies to (a) identify gaps and overlaps in service, (b) align services and resources, and (c) develop a structure to support students with disabilities and their families throughout the transition planning process (Mazzotti & Rowe, 2015; NTACT, 2018).

When developing partnerships between state and local education agencies and adult services, change has to happen at the systems level. Therefore, consideration should also focus on leadership and developing long-term strategic plans. When partnering, it is necessary to attain buy-in from leadership at the state and local levels across agencies. Buy-in from leadership can help support a common vision and mission, increase opportunities for policy change, and facilitate resource sharing (Noonan & Morningstar, 2012). Additionally, stakeholders should ensure there is a plan in place to facilitate communication across agencies (NTACT, 2018). Developing three- to five-year strategic plans that include goals and activities to address identified needs is key. This includes updating plans annually and ensuring all key stakeholders are involved in implementation of the plan (Mazzotti et al., 2018; Noonan & Morningstar, 2012). Table 21.3 provides a summary of strategies for increasing interagency collaboration.

Strategies to Increase Family and Community Involvement

In addition to building interagency partnerships with adult services, it is necessary for schools and adult service providers to build partnerships with families and communities. This includes providing outreach to families and communities to facilitate a collaborative relationship. Families contribute to the transition planning process by encouraging independence and supporting the student in the transition into postschool life (Mazzotti & Rowe, 2015). To increase family involvement, schools and adult service providers should provide flexible scheduling, facilitate collaborative meetings, and offer information and training (Noonan & Morningstar, 2012). Flexible scheduling provides opportunities for families to engage with school and agency personnel at a time that works for them that may be outside the regular school day (e.g., evenings). Schools should also facilitate collaborative meetings with adult services, community partners (e.g., local businesses, community college disability services), school personnel, and families. These meetings provide an opportunity for all stakeholders to come together to discuss educational, employment, and living opportunities for students within the community. As mentioned previously in this chapter, developing school-level teams can help facilitate

Table 21.3 Strategies for Increasing Interagency Collaboration

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Strategies to Support Interagency Collaboration with Adult Services

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Develop Interagency Professional Development (PD)

- Provide joint training opportunities for school and agency personnel to gain understanding of policies, processes, and procedures of each agency.
- Co-sponsor events at schools and within the community.
- Attend trainings offered by LEAs and adult service providers.
- Co-host statewide transition conferences.
- Use face-to-face and hybrid models of PD to engage multiple agencies across the state and at the local level.

Facilitate Information Exchange and Resource Sharing between Schools and Adult Services

- Develop formal interagency agreements (i.e., MOUs) at the state and local levels.
- Conduct an infrastructure analysis to determine current and long-term needs.
- Conduct community resource mapping to identify available resources.
- Attain buy-in from leadership at the state and local levels across agencies to support common mission and vision.
- Ensure a plan is in place to facilitate communication across agencies.
- Develop, implement, and update a three- to five-year strategic plan that includes goals and activities.

Strategies to Increase Family and Community Involvement
Provide Outreach to Families and Communities to Facilitate a Collaborative Relationship

- Provide flexible scheduling.
- Facilitate collaborative meetings.
- Provide information and training focused on the transition planning process.
- Develop school-level teams that include families.

Help Families become Empowered with Knowledge to Strongly Advocate for Their Student

- Facilitate understanding of the importance of supporting their students in attaining self-determination/self-advocacy skills.
- Facilitate engagement within the community to ensure families can support their student obtaining the education, employment, and living supports needed to be successful postschool.

Source: Strategies derived from Mazzotti & Rowe, 2015; Noonan et al., 2008; Povenmire-Kirk et al., 2015.

this process. Additionally, it is the responsibility of schools and adult services to provide information and training to families on the "ins and outs" of the transition planning process, including, but not limited to: (a) accessing services (e.g., VR); (b) understanding eligibility criteria for services; (c) participating in student-focused planning (e.g., participation in the IEP, disability awareness, self-determination); (d) building collaboration with community partners; and (e) understanding options within the community to be successful in postschool life (Kohler, Gothberg, Fowler, & Coyle, 2016; Mazzotti & Rowe, 2015;).

When families understand the transition planning process, they become empowered with knowledge to strongly advocate for their student. As advocates, families can support their students in attaining self-determination/self-advocacy skills, including encouraging their student to learn about his/her disability, to set goals, and make a plan to reach those goals (Noonan & Morningstar, 2012). Further, gaining understanding of and building collaborative partnerships with community partners provides families additional opportunities to engage within the community and help their student obtain the education, employment, and living supports needed to be successful postchool. Table 21.3 provides a summary of strategies for increasing family and community involvement.

Evaluating Interagency Collaboration

Both research (Test et al., 2009) and legislation (IDEA, 2004; WIOA, 2014) confirm the importance of interagency collaboration. However, collaboration is often difficult to measure. This section describes three methods that can be used to evaluate the levels and intensity of interagency collaboration. All involve the use of self-rated, pre–post-test surveys.

Transition Collaboration Survey

The Transition Collaboration Survey (TCS) is based on Noonan et al.'s (2008) evidence-based indicators of high-quality collaboration, which included "flexible scheduling, and staffing, follow-up after transition, administrative support, variety of funding sources, state-supported technical assistance, ability to build relationships, agency meetings with students and families, training students and families, joint training of staff meetings with agency staff and transition councils, and dissemination of information to a broad audience" (p. 99). The resulting 15-item survey is rated on a 5-point scale (5= Very true of me now to 1= Not all true of me now). Overall reliability measured by coefficient alpha was .881 (Noonan et al., 2008).

The TCS was used by Noonan, Gaumer Erickson, and Morningstar (2013) to examine changes in collaboration for participants who completed one year of community transition team training. The study included 73 community transition team members from 16 community transition teams who were provided three two-day face-to-face trainings over seven months. Findings indicated that training resulted in a significant increase in 13 of the 15 indicators and that agency staff benefited as much as school staff.

Levels of Collaboration Scale

The Levels of Collaboration Scale (LCS) is based on Frey, Lohmeier, Lee, and Tollefson's (2006) stages of collaboration. The five stages include: (1) networking, which includes being aware of an organization, loosely defined roles, little communication, and all decisions made independently; (2) cooperation, which includes providing information to each other, somewhat defined roles, formal communication, and making all decisions independently; (3) coordination, in which information and resources are shared, roles are defined, communication is frequent, and there is some share decision making; (4) coalition, which means shared ideas and resources, frequent and prioritized communication, and all members having a vote in decision making; and (5) collaboration, which means members belong to one system, frequent communication characterized by mutual trust, and consensus reached on all decisions. Each member is asked to rate each partner agency on a 0 to 5 scale (0 = no interaction at all to 5 = collaboration). Test reliability ranged from .81 to .87.

Recently, Fabian, Dong, Simonsen, Luecking, and Deschamps (2016) used the LCS to study how the perception of collaboration among representatives contributed to successful outcomes of youth participating in the Maryland Seamless Transition Collaboration. The LCS was administered to 143 individuals participating in eight project management teams who were responsible for implementing the seven required elements of the MSTC. Results indicated teams with higher average LCS scores were almost 44% more likely to achieve successful vocational rehabilitation outcomes than teams with lower LCS scores.

Social Network Analysis

While the TCS and LCS measure varying levels of collaboration based on types or models of collaboration, Social Network Analysis (SNA; Durland & Fredricks, 2005) produces "maps" that represent

the intensity, frequency, or strength of interactions between agencies (e.g., levels of collaboration), as well as the direction of these interactions (i.e., who initiates interactions).

Noonan, Gaumer Erickson, McCall, Frey, and Zheng (2014) reported the results of using SNA maps to sustain the collaborative efforts of a state-level interagency team over three years. After teaching team members how to interpret the SNA maps produced from the LCS (Frey et al., 2006), results were used to develop action plans to improve collaboration among team members. Sample strategies included (a) coordinating meeting times in advance or participant input, (b) inviting new agencies to join, and (c) visiting exemplary programs within each agency to cross-train team members.

Conclusion

In the 25 years since Halpern (1994) called for agencies to work together to create "a seamless transition of *agency responsibilities*" (p. 123), much has occurred to make this possible. First, interagency collaboration has been mandated by federal legislation (i.e., IDEA, WIOA, ESSA). Second, interagency collaboration was identified as a predictor of postschool success for students with disabilities (Test et al., 2009). Next, models of interagency collaboration (i.e., MSTC, CIRCLES) have emerged, as well as descriptions of transition services that agencies can provide. There are also a multitude of recommended strategies for involving community agencies and families in the secondary transition process. Finally, methods for evaluating the level and intensity of interagency collaboration now exist. Together, these resources provide practitioners with the tools needed to make a seamless transition a reality for all students with disabilities.

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Supporting the Transition to Postsecondary Education for Students With Disabilities

Meg Grigal, Clare Papay, and Maria Paiewonsky

Supporting students with disabilities to successfully transition to postsecondary education can be a complex process. Professionals and families must assist students to contend with all of the traditional college planning activities such as attending to course requirements, GPA, college visits and applications, and college entrance exams. Additionally, they must also plan for disability-related needs of students, such as learning about academic accommodations and gathering documentation needed to gain access to those and other supports in college. Elmore, Veitch, and Harbour (2018) describe this as a dilemma faced by students with disabilities because they are both the same as and different from every other college student. They further suggest there must be a balance of attention paid to both the college preparation side and the transition side of the activities when supporting students with disabilities to access postsecondary education.

Are Students With Disabilities Attending College?

For many years there has been steady growth in students with disabilities accessing postsecondary education, and according to the National Center for Education Statistics (2019), 19% of undergraduates in 2015–2016 reported having a disability. The majority of these students have attention deficit disorders; depression; or mental, emotional, or psychiatric conditions (Hinz, Arbeit, & Bentz, 2017). Fewer college students report having specific learning disabilities, hearing or mobility disabilities, and developmental disabilities (Hinz et al., 2017). Much of the data used to identify students with disabilities currently attending college is drawn from datasets such as the Integrated Postsecondary Education Data System (IPEDs) or the American Community Survey (ACS) and from older studies such as the National Center on Education Statistics Beginning Postsecondary Students Longitudinal Study or the National Postsecondary Student Aid Study. Largely absent from these datasets and studies are two groups of students who have recently experienced increased access to postsecondary education: those with autism spectrum disorder (ASD) and intellectual disability (ID). The Higher Education Opportunity Act (HEOA) of 2008 was particularly impactful for students with ID by creating a new category of Title IV–eligible higher education program, called a Comprehensive Transition and Postsecondary (CTP) program, and authorizing support for program development and expansion in the form of model demonstration projects and a corresponding national coordinating center, resulting in increased availability of postsecondary education options for students with ID across the United States (Grigal, Hart, & Weir, 2013).

Considerations for Students With Disabilities Enrolling in College

Academic Experience

Students' access to the general curriculum in K–12 education is a critical aspect of their being prepared for college. Students who are enrolled in the general curriculum will be more likely to meet the academic requirements needed to take and pass college entrance examinations such as the SAT or ACT. In fall 2017, the percentage of students served under the Individuals with Disabilities Education Act (IDEA, 2004) who spent most of the school day inside general classes was highest for students with speech or language impairments (87% of all students with disabilities; McFarland et al., 2019). Students with specific learning disabilities (71%), visual impairments (68%), other health impairments (67%), developmental delays (65%), and hearing impairments (62%) also spent most of the school day inside general classes (McFarland et al., 2019). In contrast, only 17% of students with ID, 40% of students with ASD, and 14% of students with multiple disabilities spent most of the school day inside general classes (U.S. Department of Education, 2019). Therefore, students with ID and multiple disabilities are at a significant disadvantage in terms of having the necessary academic experience to be ready for postsecondary education, and many students with other disabilities will likely also have gaps in their academic preparation. Not all students seeking to continue learning have acquired the necessary skills to succeed in college, and students with these skill gaps are not limited to only students with disabilities. The majority of public two- and four-year colleges reported enrolling students who were not ready for college-level work, and 96% of schools indicated they enrolled students who required remediation in the 2014–2015 academic year (Butrymowicz, 2017). Furthermore, having access to general education classes does not guarantee access to the coursework most likely to be favorably reviewed by college admission staff.

Stereotypes about students with disabilities as not being "college material" by high school staff may limit access to college planning activities such as attending college fairs or events. This phenomenon is described by Ann, a blind Chinese American doctoral student in education and former Gates Millennium Scholar who attends a public research university in California. Ann began taking AP classes during her last two years of high school, and it influenced her college goals (Elmore et al., 2018).

> I only had a vague conception of college growing up. I started learning more during late middle school/early high school when representatives from universities would come in talking about college. But they would not go to the classes where students with disabilities were, like the resource room. My friend [who is also a blind Braille reader] and I didn't need to go to the special education resource room, and therefore lucked out and had access to the information provided about college. It was as if the disabled students in the resource room didn't need to hear about college and scholarships. Sometimes people will have lower expectations for you or worry about potential difficulties you might have if you go to college.
>
> *(p. 12)*

Planning for college requires the professionals involved believe students can and should plan on attending college and are aware of the various pathways to and through college (Grigal & Bass, 2018). As educators approach college preparation, they must consider the influence of each factor they can control, such as students' access to the general curriculum, students' targeted exit documentation, and the inclusion of students with disabilities in typical college preparation activities. Educators must also be cognizant of students' personal characteristics, such as race or ethnicity and socioeconomic status, as these factors may highlight the need for additional planning and supports to ensure that low expectations are not precluding student opportunity.

Impact of Specific Disabilities on College Planning

Students with less prevalent disabilities such as ASD, intellectual disability, and mobility, hearing, or vision disabilities often have additional transition support needs that may impact their college preparation (Getzel, 2005). First, these students may have support needs specific to their disability. Students who are deaf or hard of hearing may require assistive technology such as Communication Access Real-Time Translation (CART) or interpreters in their classes (Powell, Hyde, & Punch, 2014) and may need support to address needed accommodations if they are living in a dorm, such as an emergency alert device or notification system when someone knocks on their door. Those who are blind or have visual impairments may need supports related to accessible course content, assistive technology, or campus navigation (Trief, 2016). Those with mobility issues or those who use wheelchairs must look not only at the college campus in terms of accessibility but also at the surrounding community (Elmore et al., 2018). The following student experience demonstrates the importance of addressing accessibility both on and off campus.

K, who is a congenital amputee, is double-majoring in Law, Societies, and Justice and Disability Studies in the interdisciplinary honors program of a large northwestern state university. K uses a wheelchair and found campus visits were critical to making a choice about which college he/she would attend.

> On Admitted Student Day at [the small liberal arts college] campus, one of the activities took friends and family to learn about local restaurants. None of the streets had curb cut-outs and I had to drive in the streets. There were whole blocks that I couldn't access, and I realized I would be trapped on campus or driving in the street if I went to that university. This was a very important observation for me; it made the state university the only possibility for me.
>
> *(Elmore et al., 2018, p. 14)*

Students with certain disabilities may receive supports from disability service systems such as the state developmental disabilities office or from the state vocational rehabilitation agency. They and their families may need to coordinate supports and funding with each of these offices. Students may also receive benefits from the Social Security Administration, such as Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI). Attending to the impact these benefits may have on student financial status is critical, and in some states these designations may make students eligible for tuition waivers at certain colleges. Students who receive supports via Medicaid or via home- and community-based waiver services such as personal care aides or employment supports may also require additional planning (Parisi & Landau, 2019). Each of these elements may impact student and family financial status and may also directly impact a student's level of support services. Coordinating these needed services and financial supports may inadvertently end up taking priority during their transition planning meeting over conversations about preparing the student and the family for college. Working with families of students with more significant support needs may require educators to ensure equal attention is paid to both the college exploration and preparation activities and the postschool systems of support.

High School Exit Status

Students' high school exit status and culminating documentation can impact their access to college as students who graduate high school with a diploma are more likely to be deemed ready for college (DePaoli, Balfanz, Atwell, & Bridgeland, 2018). Why is the high school diploma important for college access? For most students, including those with disabilities, receiving a high school diploma is a basic admission requirement for applying to college. In addition to a diploma, most colleges

also require certain high school coursework, such as minimum foreign language and mathematics requirements, as well as additional requirements for entrance to the institution.

Students without disabilities exit high school either by attaining a diploma, attaining a GED, or dropping out. For students with disabilities, their exit options are more complex as far fewer of them receive a high school diploma (Thurlow & Thompson, 2000). In some states students with disabilities primarily obtain a standard high school diploma whereas in other states there are multiple types of non-standard diplomas including various certificates and types of occupational diplomas. Some states link receipt of diploma to participation in state general assessments and/or alternate assessments if the student has a significant cognitive disability (Achieve, 2013). The course requirements to earn a diploma for students with and without disabilities may be the same or different depending upon on the state.

The diploma decision impacts students' courses of study and should be a part of individualized education program (IEP) team decisions to ensure students have the necessary concentrations and course credits in English, foreign language, mathematics, science, and history courses to apply to college (Getzel, 2005). Although many states offer alternate paths to other types of culminating documentation, such as high school certificates, these may not help students with college admission. Some institutions of higher education see little value in alternative exit certificates and, in general, treat students who earn these alternative certificates as though they had dropped out of school (Gaumer-Erickson & Morningstar, 2009).

In 2016–2017 about two-thirds (71%) of the approximately 413,000 students served under the IDEA graduated with a regular high school diploma, 17% dropped out, and 10% received an alternative certificate (McFarland et al., 2019). Differences in exit documentation also differed by race and ethnicity. Diploma attainment was highest for Asian students with disabilities (76%) and lowest for Black students (64%). The percentage of exiting students who received an alternative certificate was highest for Black students (14%) and lowest for American Indian/Alaska Native students (4%). The almost 30% of students with disabilities who do not exit high school with a diploma face considerable challenges when seeking access to college.

Students with ID in particular are less likely to earn a regular high school diploma (Wagner, Newman, Cameto, Garza, & Levine, 2005). This is one reason why students with ID attend postsecondary education at a much lower rate than their peers with other disabilities or without disabilities (Newman et al., 2011). The HEOA (2008) addressed this issue by allowing students with ID who attend colleges that have been approved as CTP programs by the Federal Student Aid office to access financial aid without requiring a high school diploma. However, to date, of the 271 postsecondary programs serving students with ID across the United States, only 95 have received approval to offer a CTP program (Think College National Coordinating Center, 2019). Therefore, access to financial aid in college is available to relatively few students with ID, and those students with ID who seek postsecondary education at an institution without an approved CTP may find their options limited by their lack of a standard high school diploma. Table 22.1 provides a list of postsecondary education resources for students with disabilities.

Table 22.1 Postsecondary Education Resources for Students with Disabilities

Resource	Web Address
National Center for College Students with Disabilities (NCCSD)	www.nccsdonline.org
Disability Rights, Education, Activism, and Mentoring (DREAM)	www.dreamcollegedisability.org
Going to College	http://going-to-college.org
Get Ready for College	https://centerontransition.org/getready/demo.cfm

Preparation for Postsecondary Education

Although the IDEA (2004) requires transition planning begin at age 16, planning for postsecondary education should begin as early as possible in order to allow time for students with disabilities to prepare for college (Lalor, Petcu, & Madaus, 2018). According to Madaus, Grigal, and Hughes (2014), "Decisions made as early as elementary and middle school related to a plan of study and accommodation or modification use can have a significant long-term impact that either fosters or restricts postsecondary options for students with disabilities" (p. 55). In high school, decisions that are made around diploma paths and courses of study will impact students' readiness for college and their likelihood of admission (Hamblet, 2017; Lalor et al., 2018; Shaw, Madaus, & Dukes, 2010). In the following sections, we offer suggestions for preparing students with disabilities for postsecondary education.

Understanding College

A necessary first step for students and families is to understand the differences between high school and college. The college environment allows students more freedom than high school but also less structure, predictability, and contact with professors. A useful chart comparing high school and college can be found at www.going-to-college.org/. Students with disabilities may need particular support in developing "college knowledge," the skills needed to understand how to apply for and succeed in college. College knowledge includes skills such as knowing the academic expectations of college, differences between high school and college, the college application and selection process, and how to access financial aid (Hooker & Brand, 2010). Explicit instruction from educators on these topics is needed to support students with disabilities to develop this critical knowledge (Grigal & Papay, 2018). This instruction should be coupled with college visits to increase exposure and facilitating relationships between youth and adults who can guide the youth through the college admission process (Hooker & Brand, 2010).

Developing Academic and Non-Academic Skills

In order to be successful in college, students with disabilities need to develop both academic and non–academic skills (Morningstar, Lombardi, Fowler, & Test, 2017; Walker, Getzel, Dukes, & Madaus, 2018). Academic preparation requires the student to have taken the necessary coursework needed to be accepted into a college or university and to be ready for the academic rigor of that institution. Unfortunately, many students with disabilities report they were not prepared by their high schools for college-level coursework (Garrison-Wade, 2012), in particular math and English. In a study conducted by Garrison-Wade (2012), students with disabilities used words such as "watered-down, dumb, [. . .] too easy, and slide through" to describe their high school classes (p. 119). Further, the lower-level high school courses students were placed in meant they were at a disadvantage when they began college-level coursework. In community colleges, students are typically required to take placement tests in math and English and then take remedial classes if they do not pass the test. Students with disabilities, because of the nature of their disability and/or academic underpreparation, may be required to take and retake these noncredit remedial classes, a frustrating and potentially costly experience (Grigal & Bass, 2018). High school educators must ensure the coursework taken by students meets the requirements for college admission and ensure the long-term implications of course selections are considered by the IEP team (Lalor et al., 2018). In particular, it is incumbent upon high school educators and transition staff to help students and families identify when gaps in preparation exist and offer resources to address these gaps. This may entail looking for summer bridge programs or gap-year programs or working with IEP teams to creatively access remediated coursework prior to exiting high school.

The development of non–academic skills is of equal importance in preparing for college. Hart, Boyle, and Jones (2018) describe these as *foundational skills*:

> Skills upon which all others are built and include skills related to personal academic and career habits. These include skills such as punctuality, communication, cultural know–how, demonstrating respect towards others, a commitment toward a goal, and the ability to balance multiple roles through engagement with others, as well as independence and self-direction, including knowing and communicating one's needs through self-advocacy.
>
> *(p. 83)*

Students with disabilities need these skills to be successful in college, and they will likely need support in high school for skill development and practice (Hart et al., 2018). Morningstar et al. (2017) propose a framework for college and career readiness (CCR) including six domains: academic engagement, mindsets, learning processes, critical thinking, interpersonal engagement, and transition competencies. The framework can be used by educators to identify and target the range of skills students with disabilities need in order to be successful in college. For students with more significant support needs, a useful tool for educators is the Foundational Skills for College and Career Learning Plan (Hart et al., 2018). This tool is structured to allow students to self-identify their priorities for foundational skill development, set goals, and monitor and evaluate their progress towards those goals.

Several studies have documented the particular importance of self-determination and self-advocacy skills in college (e.g., Barber, 2012; Garrison–Wade, 2012; Getzel & Thoma, 2008). The component skills of self-determination, in particular problem-solving skills, learning about oneself (and one's disability), goal setting, and self-management, are essential to success in postsecondary education (Getzel & Thoma, 2008). Students with disabilities who access academic supports in college have higher grade point averages and a greater likelihood of graduating (Troiano, Liefeld, & Trachtenberg, 2010), and a prerequisite of accessing supports is for students to understand their disability and be able to advocate for the accommodations they need (Barber, 2012). To develop the self-determination skills needed for postsecondary success, students with disabilities should be supported from an early age to understand their strengths, weaknesses, learning style, and needed accommodations or supports (Hart et al., 2018). Students with disabilities should have a leadership role in their IEP process and should be provided with opportunities to practice self-advocacy throughout K–12 education (Walker et al., 2018). Hamblet (2017) offers the following suggested activities to help students prepare while in high school:

- Ask for clarification of material taught in class.
- Tell a teacher about their disability.
- Make an appointment to speak with a teacher (not catch them between classes).
- Discuss their need for a particular accommodation.
- As high school teachers for letters of recommendation.

Addressing College and Career Readiness in Middle and High School

Engagement and academic success in middle school are critically important to ensure students with disabilities complete high school and have a viable path to and through postsecondary education. While middle school students indicate interest in pursuing postsecondary education or training, few are actively engaged in CCR activities (Grigal, Cooney, & Hart, 2019). As students advance toward high school, their course choices and grades may directly impact their college options. At this

time, students can also begin to foster an understanding of their goals, academic and non-academic strengths, and support needs.

Engagement in CCR can be woven into middle and high school curricula (Grigal et al., 2019; Lombardi, Kern, Flannery, & Doren, 2017) to help students set and monitor long-term and short-term goals related to career, personal, and postsecondary areas of interest. Technology can be effective in motivating and supporting CCR with students with disabilities; in particular some digital curricula are available to enhance CCR. For example, the EnvisionIT curriculum, a teacher-guided, digital CCR curriculum, has been found to help students with disabilities improve reading and information technology literacy skills (Lombardi et al., 2017).

As students with disabilities progress into high school, access to CCR-related activities may be impacted by student placement in general education settings. Although some students with disabilities in high school access the general curriculum, those who have limited or no access may have fewer opportunities to cultivate CCR skills. It is critical general and special educators, and the professionals with whom they collaborate, who ensure CCR is being addressed with all students in a variety of environments. Skills within the six domains of the CCR framework developed by Morningstar et al. (2017) can be incorporated into the daily activities, routines, and established expectations of a classroom (Monahan, Lombardi, & Madaus, 2018). Monahan et al. (2018) offer a variety of suggested strategies for skill development in each domain (e.g., in the learning process domain, working with students who are preparing for an upcoming to test to note the date of the assessment in their planners and plan for distributed studying).

Preparing to Submit College Applications

To ensure students with disabilities are ready to submit college applications in their senior year of high school, Lalor et al. (2018) offer a timeline for preparation beginning in ninth grade, including a month-by-month list of activities for 11th grade. In 11th grade (or earlier), students should begin the college search process to determine which colleges and universities they will apply to. Students with disabilities should pay particular attention to colleges that provide the best fit for them in terms of the services offered to support their success (Lalor et al., 2018). Attending college fairs, researching online, and visiting colleges in person are steps that can be taken to learn about potential options. Also, in 11th grade, students will need to register for and take standardized tests that will be part of their application (i.e., SAT and/or ACT). Students should make sure they prepare for these tests and should be supported to apply for reasonable accommodations. In 12th grade, students should narrow their list of potential colleges and complete college applications. For students with disabilities who continue in high school past age 18, the IEP team should determine when is the appropriate time for these transition planning activities to occur. For students with ID in particular, college-based transition services (also known as dual or concurrent enrollment) can provide a pathway to higher education (Grigal & Bass, 2018; see next section).

College Experiences in High School

Dual Enrollment

Students with disabilities in high school may able to take advantage of dual enrollment programs. Dual enrollment programs allow high school students to be enrolled in high school and college simultaneously (Barnett & Stamm, 2010), providing students the chance to take college courses, either at the high school or on a college campus. Brand, Valent, and Browning (2013) suggest these programs benefit students "by helping them learn about college, see themselves as college students,

and experience college-level work in a supportive environment" (p. 12). Students with disabilities have the right to access any existing dual enrollment programs offered by their school district as long as they meet the eligibility requirements and prerequisites for enrollment. Students with disabilities are held to the same financial obligations, academic performance expectations, and consequences for both success and failure as all other students.

College-Based Transition Programs

Some students who have intellectual or developmental disabilities may continue to receive special education services until age 21 or 22 depending on the state in which they reside. College-based transition programs (also known as dual or concurrent enrollment programs) provide access to college courses, internships, and employment, as well as other campus activities, for transition-age students during their final two to three years of secondary education; 37% of the higher education programs enrolling students with ID throughout the United States provide college-based transition services (Think College National Coordinating Center, 2019).

Most college-based transition programs are operated and funded by school districts, although some have been initially established via federal or state grants (Papay & Bambara, 2011). These programs provide students with opportunities to explore all college has to offer while still receiving support from high school education staff (Grigal, Paiewonsky, & Hart, 2017). The college catalog offers a wide array of credit and non-credit courses that can relate to students' career or personal development goals. However, college-based transition programs vary in the amount of access students have to typical college classes. In some programs, students have access to a wide array of non-credit and credit-based college courses, and in others, there is minimal to no access to typical college courses. In a national survey of dual enrollment programs, Papay and Bambara (2011) found only about one-quarter of all students in these programs were participating in college classes and course access was dependent on the type of program model, the location of the program, and the level of academic ability of the student. A directory of available programs in the United States is provided at www.thinkcollege.net.

Importance of Expectations

Secondary educators play an important role by providing students with the necessary academic and non-academic preparation and creating access to college planning activities. A necessary precondition to provide this essential support is the educators' belief that students with disabilities are able to succeed in postsecondary education (Grigal & Papay, 2018). Garrison-Wade (2012) explains: "Students shared that, over time, low expectations of others and a lack of understanding about their disability by others and by themselves contributed to self-doubt and marginalization. The attitudes students found the most difficult to overcome involved the secondary educators' low expectations of them" (p. 118). Secondary educators may hold preconceived ideas about who is "college material" and may subsequently exclude students with disabilities from opportunities to learn about and plan for college. It is imperative educators expand their own knowledge and experience of postsecondary education options and available supports for students with disabilities in order to ensure they hold high expectations for all students (Grigal & Papay, 2018).

Role of Family in the Transition to College

Family engagement is critical to college planning, as the choice of a college is impacted by a family's location, financial status, culture, and values (Grigal & Papay, 2018; Hamblet, 2017; Madaus et al.,

2014). For students with disabilities, the large role family plays in their education during elementary, middle, and high school may make the transition to postsecondary education more difficult. During the kindergarten through middle school years, parents have likely been the primary voice in IEP meetings, and as students work their way through high school, parents have an integral role in transition planning. As students enter college or university, this central role changes, and parents are expected to go through their own transition from advocate to support provider (Hamblet, 2017).

College students are expected to create and manage their own schedules and work directly with the disability support offices to address any needed accommodations. Unlike in high school, where a family member can speak to a teacher or a support provider to facilitate the needed supports for the student, parents of college students have far fewer rights. Institutions of higher education must comply with the Family Educational Rights and Privacy Act (FERPA, 1974) to assure students' right to privacy. Family members may need support and guidance on their new role prior to students leaving high school and should be encouraged to discuss this issue with their child. A good resource is the PACER's National Parent Center on Transition and Employment (2017) brief entitled *Communicating with Your Student's College under Family Educational Rights and Privacy Act (FERPA).*

Family background and expectations also have a tremendous impact on students' expectations they will go to college and the support to make it happen. Students with disabilities whose parents have not attended college or who come from low-income households are substantially less likely to believe they can go to college (Madaus et al., 2014). Parent expectations about their child's potential to go to college are influenced by both the type and severity of their child's disability. A study by Doren, Gau, and Lindstrom (2012) found parents of students with learning disabilities had significantly higher expectations for future college attendance for their children than did parents of students with intellectual or emotional disabilities. Parental expectations have a significant impact as they often predict student achievement. For example, Papay and Bambara (2014) found parental expectations for employment and postsecondary education were some of the strongest predictors of successful postschool outcomes for youth with intellectual and developmental disabilities. If parents do not have clear expectations their child with a disability will go to college, they are less likely to seek out information needed to make it happen, such as financial aid applications, preparing for SAT or ACT entrance examinations, or taking students on college visits. Without parental support for these types of college preparation activities, it can be very challenging for a student with a disability to successfully apply and be accepted into a college or university. Transition professionals should work with guidance staff and other educators to connect students from low-income backgrounds or first-generation college students with programs specifically designed to provide additional support to both students and their families, such as Trio and Gear Up programs, and gather and share information about college scholarships and federal aid (Madaus et al., 2014).

Finally, the college pathways offered to students with disabilities must align with realistic options for their families. Grigal and Papay (2018) suggest transition checklists offered to most families may be helpful for students seeking to attend college full-time, but they may be less helpful to students who are seeking less-than-full-time college experiences. Transition educators should provide an array of options including attending college part-time, taking only one or two courses, and even potentially deferring college enrollment for a year or two. A family's capacity to support their child to attend college may depend on their financial situation as well as other family issues such as other children in college, providing care for an aging family member, unemployment, or incarnation. It may not be possible for students to plan for college immediately after exiting high school. Nontraditional pathways including both part-time and online options should be shared with students and families, and those for whom college is not immediately possible should be encouraged to consider accessing higher education in the future when time and resources allow. Table 22.2 provides a list of postsecondary education resources for families of students with disabilities.

Table 22.2 Postsecondary Education Resources for Families of Students with Disabilities

Resource	Web Address
PACER Center: National Center on Transition and Employment	www.pacer.org/transition/
Think College	https://thinkcollege.net/family-resources
National Collaborative on Workforce and Disability for Youth (NCWD/Youth)	www.ncwd-youth.info/publications/making-my-way-through-college/
Understood	www.understood.org/en/school-learning/choosing-starting-school/leaving-high-school/college-prep-what-you-need-to-know

Building Professional Capacity

As indicated earlier, the role and responsibilities of special education staff and transition specialists to facilitate transition and postsecondary education opportunities for students with disabilities are complex but also critical if all students, including those with disabilities, are to be given the chance to be college and career ready. The reality, though, is many special education staff and transition specialists have little pre-service or professional development training in transition planning (Benitez, Morningstar, & Frey, 2009; Morningstar & Mazzotti, 2014; Plotner, Mazzotti, Rose, & Carlson-Britting, 2016; Riesen, Schultz, Morgan, & Kupferman, 2014). In one study of teacher and transition personnel perceptions of their training, almost 75% disagreed or strongly disagreed that transition evidence-based practices were addressed during their university preparation programs (Plotner et al., 2016). In fact, in an examination of special education preparation programs in the United States, results indicate that in the majority of programs, only a single transition course is offered to students, if any course is offered at all, and the methods for teaching these practices are primarily lecture and reading based, rather than applied learning and field experiences (Morningstar, Hirano, Roberts-Dahm, Teo, & Kleinhammer-Tramill, 2018; Williams-Diehm, Rowe, Johnson, & Guilmeus, 2018). As for opportunities for in-service training, Plotner et al. (2016) found by surveying nearly 300 special educators and over 200 direct-service transition professionals (transition specialists and vocational rehabilitation counselors), 50% of direct-service transition professionals, and 68% of educators reported never or seldom being provided with training regarding evidence-based transition practices; 45% of direct-service professionals and 50% of educators reported seldom or never receiving resources related to evidence-based practices in transition planning, including planning for postsecondary education opportunities, from their districts.

Overall, evidence suggests special education personnel do not feel they have the competencies necessary to implement effective practices necessary to deliver high-quality transition services (Benitez et al., 2009; Morningstar & Benitez, 2013; Plotner et al., 2016). As a result, special education and transition personnel often do not feel confident or prepared to provide those services (Benitez et al., 2009). This is especially true regarding students with disabilities' preparation for college (Brand, Valent, & Danielson, 2013).

Despite or perhaps because of these findings regarding limited pre-service and in-service professional development opportunities to develop transition and postsecondary education planning competencies, some states ($n = 16$) have recently developed transition-related professional credential certificates or endorsements (Simonsen, Novak, & Mazzotti, 2018). There has also been a slight increase in the number of personnel programs including transition content, and federal funding opportunities have supported the availability of coursework taught by faculty with transition (Morningstar et al., 2018; Plotner et al., 2016).

Other avenues and resources have become available for special education and transition personnel to enhance their skills and knowledge and to implement evidence-based transition and postsecondary education practices. When professionals with transition responsibilities were asked how they are able to gain knowledge regarding transition evidence-based practices, 60% of direct-service professionals and 48% of special educators indicated they are accessing this information through professional literature, including journals (Plotner et al., 2016). Given the range of formats for professional transition literature and information utilized for dissemination (e.g., national, state, and local websites; live and archived web conferences; and hard-copy and online journals), it is possible for evidence-based transition practices to make their way to transition professionals, regardless of their access to formal training. Through these formats professionals can access: (a) evidence-based transition and postsecondary education practices (e.g., Papay, Grigal, Hart, Kwan, & Smith, 2018; Test et al., 2009); (b) professional transition and inclusive postsecondary education standards (e.g., Council for Exceptional Children's Division on Career Development and Transition standards for transition specialists, 2013; Think College Standards, Quality Indicators and Benchmarks, Grigal, Hart, & Weir, 2012); (c) recommendations for collaboration among school professionals (e.g., teachers, counselors, school psychologists; e.g., American School Counselor Association [ASCA], 2016; Flowers et al., 2018; Wilczenski, Cook, & Regal, 2017); and (d) examples of systemic change practices through interagency collaboration (e.g., Flowers et al., 2018; Honeycutt, Bardos, & McLeod, 2015; Noonan, Gaumer Erickson, & Morningstar, 2013; Plotner, Trach, & Strauser, 2012). Together, these resources and practices can guide transition personnel to prepare students with disabilities for college.

Access to resources is important but not sufficient to effectively influence the work of transition specialists and special educators. To enhance professional practice and student outcomes, practitioners and supervisors must regularly access resources and share them via professional development activities. In a study examining the essential features of effective professional development related to transition and special education, Holzberg, Clark, and Morningstar (2018) examined 73 published articles and determined there are four essential elements of professional development that positively influence transition and special education teachers: (1) coaching and feedback through sustained engagement either in person, online, or via phone; (2) collective participation among teachers through collaboration, feedback, modeling, or applied practice; (3) consistent "manualized" (i.e., written content) training either in print, in media, or in person; and (4) active learning embedded in professional development through group activities, discussion, and problem solving. Well-designed professional development is an essential component of creating a cadre of professionals capable of implementing evidence-based transition practices needed to prepare students to successfully transition to higher education (Darling-Hammond, Hyler, & Gardner, 2017).

Promoting Secondary Transition Content Knowledge

Transition personnel are fortunate to have two key resources to understand evidence-based transition and postsecondary education guidance to frame and guide their work. First, the Office of Special Education and Rehabilitative Services, at the U.S. Department of Education (U.S. DOE, 2017), offers guidance to transition and special education staff on best preparing students with disabilities for postsecondary education. Among their recommendations are providing students with (a) comprehensive preparation at the secondary education level (e.g., promoting interesting and challenging courses, engaging in school or community-based activities that allow students to explore career interests, meet with school counselors to discuss goals, being an active participant in IEP meetings, and visiting colleges), (b) information about how to pay for college, (c) guidance on how to choose the right college, (d) an understanding of their rights and responsibilities in postsecondary education, and (e) how to utilize vocational rehabilitation services for college participation (U.S. DOE, 2017).

Second, the predictors outlined by Test et al. (2009) at the National Technical Assistance Center for Transition (NTACT) provide transition personnel with evidence-based practices that IEP teams can utilize to develop effective transition instruction related to academics, career development, self-determination, and life skills. These predictors direct transition personnel toward teaching practices more likely to lead to improved postschool outcomes for students with disabilities, including participation in postsecondary education and employment.

Without professional training or guidelines, special education and transition personnel indicate they are unsure how to provide transition services, and, as a result, they may offer a limited scope of services (Morningstar & Benitez, 2013; Shogren & Plotner, 2012). A number of evidence-based transition services standards are available for transition personnel and provide the necessary depth and breadth, highlighting the comprehensive nature of these services. The Taxonomy for Transition Programming 2.0 (Kohler, Gothberg, Fowler, & Coyle, 2016) provides a framework including student-focused planning (e.g., IEP development), student development (e.g., assessment), family engagement (e.g., family involvement), program structures (e.g., program characteristics), and interagency collaboration (e.g., collaborative service delivery). This framework is based on the latest literature regarding predictors of post-school success. For college preparation, Grigal et al. (2017) created a framework for college-based transition services that includes building a foundation (e.g., a commitment to supporting transition services that include college), systems collaboration (e.g., establishing college-school partnerships), and a model of support for students (e.g., plan, support, work, learn). Both of these frameworks are based on the understanding that transition personnel must be prepared to work with multiple stakeholders (students, families, college staff, state agency personnel, community providers) and facilitate transition services simultaneously at the student and systems level. Table 22.3 provides a list of postsecondary education resources for educators.

Table 22.3 Postsecondary Education Resources for Educators of Students with Disabilities

Resource	Web address
National Technical Assistance Center on Transition (NTACT)	www.transitionta.org/
Learning Disabilities Association of America: Transition Planning Requirements Guide	https://ldaamerica.org/transition-planning-requirements-of-idea-2004/
National Collaborative on Workforce Development/Youth: *Guideposts for Success*	www.ncwd-youth.info/wp-content/uploads/2018/03/Guideposts-for-Success-English-Print-Quality-1.pdf
Seattle University: Transition Services Flowchart	www.seattleu.edu/ccts/transition-services/flowchart/
Next Steps New Hampshire: Short Videos on Transition IEPs	https://nextsteps-nh.org/dr-ed-oleary-video-shorts/
University of North Carolina, Charlotte: CIRCLES Implementation Guide	https://circles.uncc.edu/
Zarrow Center, University of Oklahoma: Transition Resources	www.ou.edu/education/centers-and-partnerships/zarrow
Transition Coalition	https://transitioncoalition.org/
Think College	www.thinkcollege.net
Navigating the Transition from High School to College for Students with Disabilities (book)	www.routledge.com/Navigating-the-Transition-from-High-School-to-College-for-Students-with/Grigal-Madaus-III-Hart/p/book/9781138934733
From High School to College: Steps to Success for Students with Disabilities (book)	http://pubs.cec.sped.org/p6233/

School-Based Collaboration

Assuring all students receive the transition services needed to effectively prepare them for postsecondary education and employment goals requires coordination and collaboration with multiple school partners. Too often transition personnel are expected to provide transition services as if these are separate or specialized services whereas, in reality, the comprehensive nature of transition services requires collaboration with a range of school partners. High school counselors, for example, are expected to assume responsibility for encouraging and supporting the academic, career, and social/emotional development of all students through comprehensive school counseling programs. Counseling staff may assume students with disabilities need specialized counseling support, and, in turn, special education staff may assume high school counselors' student caseloads are at capacity. However, as the American School Counselor Association points out, school counselors, in collaboration and consultation with special education staff and families, have the skills, knowledge, and expertise to provide appropriate counseling services to students with disabilities (ASCA, 2016; Cook, Hayden, Wilczenski, & Poynton, 2015). School psychologists also have the training and expertise to support students with disabilities. Wilczenski et al. (2017) discuss specifically how school psychologists can support the transition of students with disabilities, including those with ID, from school to postschool activities by helping students to identify their strengths and interests, promoting self-determination, and assisting IEP teams and families to explore and encourage postsecondary education options. The authors connect these recommended practices to their own professional standards of the National Association of School Psychologists, which requires school psychologists to adhere to evidence-based practices and to serve as consultants for all students (NASP, 2010).

Systemic Change Through Interagency Collaboration

Finally, in addition to school-based collaboration, interagency teams can be used to enhance transition services and lead to improved postschool outcomes for students with disabilities (Flowers et al., 2018; Noonan et al., 2013). Noonan, Morningstar, and Gaumer Erickson (2008) identified 11 key strategies high-performing districts implemented at the local level related to interagency collaboration, including flexible scheduling and staffing, follow-up after transition, administrative support, a variety of funding sources, state-supported technical assistance, the ability to build relationships, agency meetings with students and families, training students and families, joint training of school and agency staff, meetings with agency staff and transition councils, and dissemination of information to a broad audience. Establishing community transition teams has been found to be an effective mechanism for increasing interagency collaboration (Noonan et al., 2013). In particular, school staff, including transition specialists, indicated through their participation in or facilitation of transition teams that their supervisors better understood their role and responsibilities for transition services and allowed them more time to collaborate with outside agencies. Transition team membership led to increased coordination of services with co-workers and outside agency staff and for frequent communication with families about transition services. Outside agency staff were also found to benefit from participating in interagency transition teams, which provided them with a clearer understanding of how team members' jobs related to transition services.

In a recent study of interagency transition teams, Flowers et al. (2018) describe the Communicating Interagency Relationships and Collaborative Linkages for Exceptional Students (CIRCLES) model of interagency teams in which they propose three levels of interagency collaboration. The first level is described as the community team, made up of administrators and supervisors from disability-related agencies such as vocational rehabilitation (VR) or developmental disability service organizations that may be involved in the provision of transition services. Facilitated by a school district

transition coordinator, this team meets two to four times a year to identify and address related policy issues. The second level is called a school team, in which the transition coordinator arranges monthly meetings for direct-service staff from the same disability-related agencies, such as adult service coordinators or VR counselors, to meet directly with students, who use the opportunity to present and discuss their postsecondary goals. They then work together, often with family members, to discuss the best way to provide transition services. The third level is the IEP team, customized with the use of a checklist to develop student IEPs aligning with their goals. Research examining the CIRCLES model has found students who are supported by the three teams demonstrate higher levels of IEP meeting engagement and higher levels of self-determination (Flowers et al., 2018). Similar interventions including ongoing interagency collaboration can be used to coordinate postsecondary planning at multiple levels for students with disabilities.

Conclusion

The complex process of preparing students with disabilities for college includes supporting students and their families to know their options (Grigal & Bass, 2018; Hamblet, 2017), be equipped academically to navigate college content (Lombardi et al., 2017), prepare and submit applications (Lalor et al., 2018), and be ready to begin a part-time or full-time college experience. All of these activities occur in the same time and space of traditional transition activities, including identifying needed postschool supports, working with involved state or community agencies to create or provide those supports, and guiding students through their final years of secondary education. As transition personnel grapple with this critical amalgam of activity, we have to acknowledge our guidance related to transition activities (e.g., IDEA, 2004) is more than a decade old and does not necessary represent current or best practice. Elements of the IDEA were updated by the Every Student Succeeds Act (ESSA) in 2015 to keep the laws consistent. In addition, there were some IDEA regulations that cross-referenced ESSA, and those references were updated for accuracy. However, the primary guidance regarding transition services was not updated; thus, this guidance remains the same as it was 15 years ago. The lack of modern guidance reflecting our evolved understanding of what students with disabilities are capable of, and the best way to foster positive adult outcomes, is important to consider when providing transition services.

Professionals supporting the transition of students with disabilities to postsecondary education must use the existing guidance as a foundation of practice but also stay aware of and engaged with current developments in the field of general, special, and higher education. Some of the more recent developments in the field of transition include the expanding focus on CCR in middle and high school and the growth of college experiences during high school, including college-based transition programs for students with ID who remain in high school until age 21 or 22. Transition professionals also have access to research and resources that reflect expanding pathways for students with disabilities to pursue postsecondary education, potentially leading to a wider range of occupational fields. Pairing these resources with effective professional development provides transition and special education personnel with the tools and knowledge needed to ensure that all students with disabilities have the preparation and support needed to access higher education.

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Promoting Access to Supports and Accommodations in Postsecondary Education

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The importance of college on future adult outcomes is clearly illustrated in data from the National Center on Education Statistics (NCES, 2017), which reported that people with disabilities with a two-year (35%) or a four-year degree (45%) were employed at higher rates than people with disabilities without a high school degree (15%) and people with disabilities with only a high school degree (22%). Data from the U.S. Department of Labor Statistics indicates these earning disparities translate to almost $600,000 over a 30-year working career (Wei, Wagner, Hudson, Yu, & Javitz, 2016). Encouragingly, the number of students with disabilities going to college continues to increase. For example, in the 2007–2008 academic year, 10.9% of undergraduates in the United States reported having a disability (NCES, 2015). This figure increased to 19.4% of undergraduates in the 2015–2016 academic year (NCES, 2018). Also of note is that students with disabilities who received special education services are more likely to attend two-year rather than four-year institutions (U.S. Department of Education, 2017). These students experience a range of disabilities, including cognitive disabilities (i.e., attention–deficit/hyperactivity disorder [ADHD] and learning disabilities [LD]), as well as psychological disorders (i.e., depression and anxiety). Recent research on college freshmen from the fall of 2016 indicates that more than a third of the respondents (34.5%) reported frequently feeling anxious, a number that increased among students reporting disabilities. Large numbers of students also reported being depressed (Eagan et al., 2017).

Postsecondary institutions are required to provide an array of services and accommodations to qualified students with disabilities. Unfortunately, there is a paucity of national data on accommodation use. The most comprehensive picture comes from the National Longitudinal Transition Study-2 (NLTS-2; Newman, Wagner, Cameto, Knokey, & Shaver, 2010), which followed a nationally representative sample of students with documented disabilities as they transitioned from secondary to postsecondary institutions. The most common accommodations received in college (two-year, community, technical, and four-year) were additional time on tests (79%); access to special technology (37%); testing in a separate room (19%); a reader, interpreter, or in-class aide (17%); and a scribe/note taker (17%). These findings are similar to that of an earlier study (Sharpe, Johnson, Izzo, & Murray, 2005).

Despite the growth in college access, as well as postsecondary services for students with disabilities, outcomes, including retention and graduation, remain poor compared to students without disabilities (Cortiella & Horowitz, 2014; National Council on Disability, 2015; Newman et al., 2011).

To assist in transition planning that promotes better postsecondary preparation for students with disabilities, this chapter begins with an overview of college services. Next, some of the common challenges faced by students with disabilities are discussed, including the change in legal requirements; the standards of evidence, or documentation that verifies a disability and need for individually appropriate accommodations; and the need to self-disclose and self-advocate to receive services. Research on the experiences and perspectives of students with disabilities regarding transition–relevant topics is presented, as is information on assistive technology and the role various types of technologies can play in supporting students in their transition to college.

An Overview of College Services and Programs

It is important that students, families, and secondary personnel understand that special education services, and their component requirements and protections such as a free appropriate public education and individualized education program (IEP), end at high school graduation or exit. Likewise, services and accommodations outlined in a Section 504 plan (as mandated in Subpart D) end when the student leaves high school. The Americans with Disabilities Act Amendments Act of 2008 (ADAAA) and Subpart E of Section 504 mandate that postsecondary institutions provide accommodations and other supports to ensure access to educational opportunity, including physical access, access to information and instruction, and access to academic programs for qualified students with disabilities. Thus, as a result of the change in legal protections and rights following high school completion, services that are available to students in secondary settings may not be available in college (U.S. Department of Education Office for Civil Rights, 2011). Available services vary by institution and are overseen by campus personnel (hereafter referred to as the Accessibility Services Office [ASO]), whose charge is to ensure equal educational access, not to ensure student progress and success as mandated in the Individuals with Disabilities Education Act of 2004. Additionally, college accommodation decisions are made on a case-by-case, course-by-course, program–of–study–by–program–of–study basis, and some accommodations received in high school, or even in some college courses (e.g., no spelling penalty, use of notecards for memory cues), might not be allowed in another course or program of study.

At a minimum, every postsecondary institution receiving federal funding must provide some form of basic services to eligible students if determined individually appropriate (e.g., extended test time, a separate test room, access to note takers or assistive technologies, residential accommodations). However, some programs go beyond basic accommodations to support students to develop and enhance skills that will promote success in college settings and beyond. These may include some or all of the following types of services and supports: academic advising, learning strategy specialists, assistive technology specialists, student support groups, and peer mentors. It is important to note that services that go beyond required accommodations may be offered on a fee-for-service basis, beyond standard tuition and student fees. If students and families have specific support interests, it is especially important to contact a prospective institution's ASO as part of the college exploration process. Figure 23.1 provides an overview of the range of services that might be available to students with disabilities and Figure 23.2 provides an overview of the roles and responsibilities of students, faculty, and ASO offices.

Documentation Requirements at the College Level

Just as available services can vary from institution to institution, so too can the requirements to verify a disability and need for services. The vast majority of colleges and universities require some form of verification, typically known as documentation, to authenticate the need for requested accommodations (W. Lindstrom, Nelson, & Foels, 2013; Raue & Lewis, 2011). The verification process is accepted as standard practice in postsecondary settings (Nondiscrimination on the basis of disability

Decentralized Services	Loosely Coordinated Services	Centrally Coordinated Services	Data-Based Services
Designated disability contact person may have multiple responsibilities Basic services as mandated under Section 504 Few formal policies	Disability contact person Generic 504 support services and accommodations Procedures in place for accessing services Peer tutors available for all students Students referred to other on-campus services (e.g., counseling and/or career services, residential life)	Full-time disability coordinator Services located in Office for Students with Disabilities or other on-campus sites (e.g., learning or academic skills center) Full range of accommodations Policies and procedures in place Emphasis on student self-advocacy Assistive technology may be available Specially trained disability specialists may be available	Full-time program director; assistant director and/or additional staff Services located in Office for Students with Disabilities Full range of accommodations Comprehensive policies and procedures Emphasis on student self-advocacy Assistive technology available Individualized support plan available

Figure 23.1　Continuum of Postsecondary Support Services

Source: McGuire, J. M., and Shaw, S. F. (2005). *Resource guide of support services for students with learning disabilities in Connecticut colleges and universities* (p. 6). Storrs: University of Connecticut, Center on Postsecondary Education and Disability. Reprinted with permission.

in state and local governments, 2016; U.S. Department of Education Office of Civil Rights, 2011). Prior to the amendment of the ADA, the regulations provided little guidance regarding allowable verification policies and procedures. In contrast, the recently published ADAAA regulations explicitly state that documentation requested to verify a need for accommodations must be reasonable and limited, considerable weight must be given to past accommodations received, and responses to accommodation requests must occur in a timely manner (Nondiscrimination on the basis of disability by public accommodations and in commercial facilities, 2016). In their guidance to the revisions to the amended ADA regulations, the U.S. Department of Justice (DOJ) also noted that less onerous types of documentation, such as school records, should be sufficient for establishing the presence of a disabling condition in most cases (Nondiscrimination on the basis of disability by state and local governments, 2016).

Despite these adjustments, documentation challenges remain for transitioning students with disabilities. First, the type and extent of verification documentation required can vary widely across institutions, especially as all postsecondary institutions may not have adjusted to the directives of the more recent ADAAA regulations. Some settings may require recent comprehensive psychological or psychoeducational evaluations with specific assessment components, as was common prior to the ADAAA (J. H. Lindstrom & W. Lindstrom, 2011; W. Lindstrom et al., 2013; Madaus, Banerjee, & Hamblet, 2010). Some may even hold that documents from K–12 education, such as IEPs, 504 Plans, and Summary of Performance documents (SOPs), are insufficient for eligibility decisions (W. Lindstrom et al., 2013). At the opposite extreme, other institutions may follow guidance issued by the Association on Higher Education and Disability (AHEAD, 2012), which asserts that student report
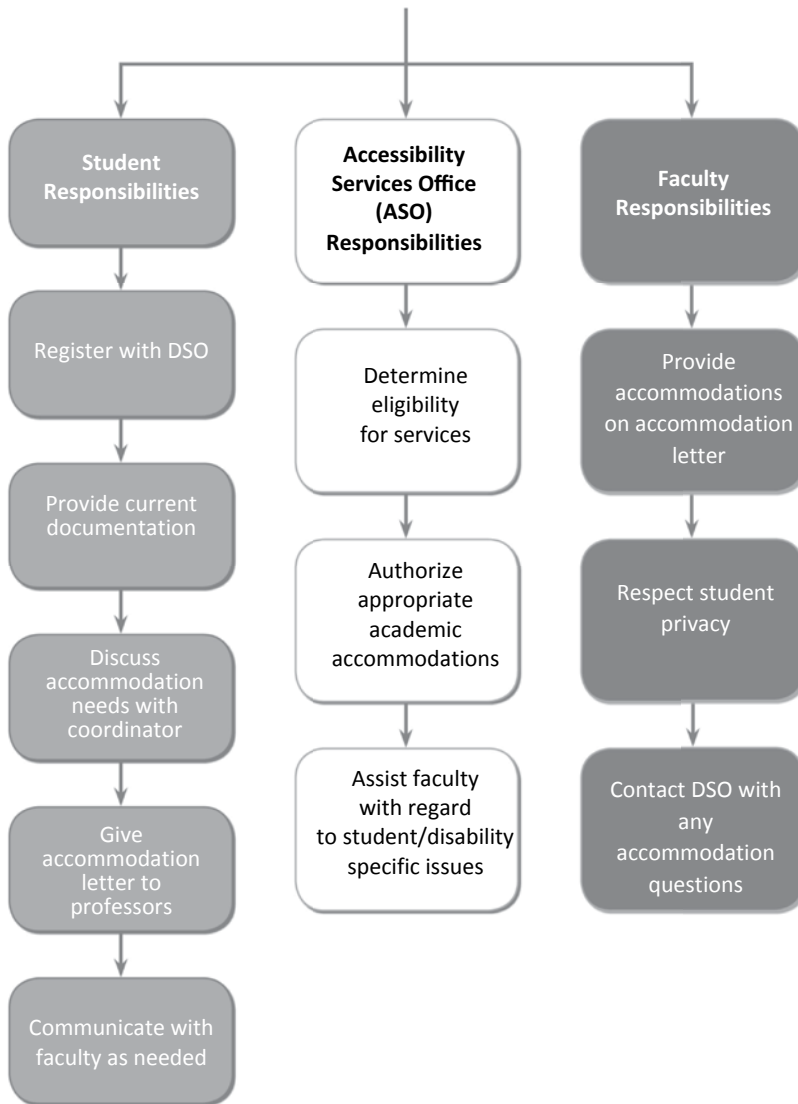
Figure 23.2 Roles and Responsibilities

of a history of learning problems and accommodations may be sufficient to verify a need for accommodations in some circumstances.

Implications for Students in Transition

Students in transition, either from high school to college or transferring from one college to another, can expect to see variation in the scope of required documentation. The degree to which postsecondary disability documentation review practices have changed since the passage of the amended ADA is unclear. Banerjee and colleagues (2015) reported that ASO professionals derived the greatest

relative value from historical evidence of disability (i.e., development, educational, and medical histories), followed by (in descending order by relative value) comprehensive information regarding diagnosis, clinical interpretation and recommendations, and test scores. Consistent with the ADAAA regulations, the emphasis on history could be interpreted as tantamount to giving considerable weight to past accommodations and services received. In a recent national survey, Wadlington and colleagues (2017) found that over 75% of ASO professionals at least sometimes use high school documentation in the determination of eligibility for services and over 70% viewed transition reports to be at least somewhat useful. These findings suggest that most ASO professionals place some value on records provided by secondary schools but do not commonly perceive them as sufficient for eligibility decisions as urged by DOJ (Nondiscrimination on the basis of disability by state and local governments, 2016). Further, ASOs continued to express value for current assessment data (i.e., 3 to 3.5 years old), standardized test scores, and previous evaluations.

Ultimately, the ADAAA regulations should result in a significantly greater role for documentation such as IEPs, 504 Plans, and SOPs, interactive processes between ASOs and students that focus less on how a disability was diagnosed and more on whether or not accommodation requests are functionally warranted, and fewer barriers to service eligibility for transitioning students. Until this occurs consistently across colleges, it is recommended that students in transition receive updated assessments within three years prior to graduation. The documentation should also clearly specify prior services and accommodations used. It is also worth noting that if the student's condition changes, or if new or more extensive accommodations are requested, other information may be required to substantiate additional needs.

Disability Disclosure

Large-scale survey findings consistently indicate that the vast majority of students with disabilities receiving services in high school do not seek them in postsecondary settings. For instance, Cortiella and Horowitz (2014) found that only 24% of college students who received special education services in high school registered for disability services upon reaching college. Findings from the NLTS-2 were nearly identical, with only 28% of college students with disabilities disclosing to their postsecondary schools (Newman et al., 2011). These findings appear a likely contributor to poor outcomes for students with disabilities for several reasons. First, the transition to college is challenging for all students (JED Foundation, 2015), and even more so for students with disabilities (Stodden, Jones, & Chang, 2002), who must cope with the traditional challenges of starting college, as well as the functional limitations associated with their disability. Second, many students with disabilities face greater academic challenges than those experienced in high school, all while using fewer resources and supports if they chose not to access services. Finally, receiving appropriate supports and accommodations in postsecondary programs has been shown to be related to academic success, retention, and graduation for students with disabilities (Dong & Lucas, 2016; Lightner, Kipps-Vaughan, Schulte, & Trice, 2012; Trammell, 2003).

Little is known about why students chose to forego seeking services for which they are eligible. Extant evidence suggests that some students with disabilities lack knowledge regarding potential services and how they are accessed (Lightner et al., 2012; Thompson-Ebanks & Jarman, 2018). Other barriers are more psychological in nature. Some evidence suggests that students choose not to disclose a disability due to fear of being treated differently, misunderstood, or perceived as having an unfair advantage (Lightner et al., 2012; Thompson-Ebanks & Jarman, 2018). Shame and a desire to forge an identity free of the disability label have also been acknowledged (De Cesarei, 2015; Lightner et al., 2012). Practical barriers have also been identified. Disability documentation needed to access services can be expensive to acquire, some students express difficulty finding the time to seek out services, and some students may misjudge their academic acumen, resulting in a failure to recognize

when supports are needed (Lightner et al., 2012). It is clear, however, that many students who delay accessing supports seek them out in response to an academic crisis (Lightner et al., 2012).

Requesting and Monitoring Accommodation Use: The Importance of Self-Knowledge

Best practice in transition planning emphasizes student involvement (Martin et al., 2006; Test et al., 2004), and both student request for and utilization of ASO services in college is a prime example of involvement of this nature. Knowledge of one's strengths and needs, including those related to a disability, and the ability to self-advocate for these needs are essential skills that can be developed in high school (Milsom & Hartley, 2005). A recent trend in the secondary setting underscores the importance of personalized learning, "in which there is an emphasis on the infusion of technology and repeated assessment to drive instruction, as well as a focus on student choices, interests, and preferences and student-directed learning" (Wehmeyer et al., 2018, p. 6). Self-determination reflects the notion of ownership as well as how one can engage in a set of behaviors in order to achieve it.

The Importance of Self-Determination

Self-determination has been identified by students with disabilities themselves as essential for college success (Getzel & Thoma, 2008), and their belief has been supported by research on student postsecondary experiences (Gelbar et al., in press). College students with disabilities must be aware of available services and how to self-disclose and request accommodations while concurrently navigating the campus system, culture, and course requirements. In fact, the skills of self-determination are reflected in students' ability to understand their strengths and needs, disclose their disability, and request and monitor necessary accommodations. Unfortunately, many students enter college without well-developed skills of self-determination, although research shows that an understanding of how a disability impacts academic achievement, and how to request and evaluate the effectiveness of accommodations, is linked to better academic performance (Fleming, Plotner, & Oertle, 2017c).

Implications for Students in Transition

Transition planning for secondary students should focus on the development of self-determination and its component skills. Students should be taught about the nature of their disability and should be able to articulate their strengths, weaknesses, and preferences. Secondary students with disabilities can assist with the determination of accommodations in collaboration with school case managers and can participate in the ongoing evaluation of their effectiveness, which likely varies as a function of setting (classroom or testing center), type (test or instructional accommodation), and course delivery (face-to-face, blended, or online). Subsequent adjustments can be self-monitored and evaluated. Opportunities of this nature allow students with disabilities to become agents of their own success and to develop skills that can be used in college. This will require students to make effective choices about their learning (i.e., whether and when to access and utilize disability-related services), assert their needs (i.e., meet regularly with their disability specialist to evaluate the effectiveness of their accommodations and responsiveness of faculty), and pursue their goals in order to be successful (i.e., postsecondary retention and graduation) (National Center for Learning Disabilities, 2018).

Factors Impacting Postsecondary Outcomes

A comprehensive systematic review and meta-analysis conducted by Richardson, Abraham, and Bond (2012) examined 13 years of research identifying antecedents of academic performance

(e.g., grade point average) for all students. Factors with at least a medium correlation included high school grades, standardized college entrance exam performance (i.e., SAT and ACT scores), academic self-efficacy, grade goals, and effort regulation. Considering evidence that students with disabilities attending four-year institutions shared similar predictors of attendance and persistence with peers (Fleming & Fairweather, 2012; Mamiseishvili & Koch, 2011), it is likely that these correlates apply. However, given the disparate outcomes for students with disabilities (Newman et al., 2011), it is also likely that additional factors should be considered. The sub-population referred to as "students with disabilities," including students who enroll in postsecondary education with a documented disability or those who experience a disability during college, is highly varied. The literature addressing factors documenting student experiences is replete with evidence spelling out how to support students through the use of particular programs and services that have had promising outcomes. Findings of this nature will be subsequently reviewed.

Factors Influencing Performance of Students With Disabilities

Participation in a college preparatory curriculum and self-advocacy instruction have benefits for students (Barnard-Brak, Schmidt, Wei, Hodges, & Robinson, 2013; White, Summers, Zhang, & Renault, 2014; Yu, Novak, Lavery, Vostal, & Matuga, 2018), and, as noted, self-advocacy skills are linked to better academic performance (Fleming et al., 2017c). Results of several studies have corroborated findings that the use of academic supports, inclusive of both services for students with disabilities as well as those available to all students, are associated with more positive educational outcomes (DuPaul et al., 2017; Newman, Madaus, Lalor, Javitz, 2019; Pingry O'Neill, Markward, & French, 2012; Troiano, Liefeld, & Trachtenberg, 2010; Yu et al., 2018). In particular, distraction-reduced testing, learning strategies, and the development of study skills assistance have proven beneficial (Pingry O'Neill et al., 2012). One-third of students with LD who reported utilizing accommodations have also reported higher levels of interaction with faculty and lower difficulty of assignments (McGregor et al., 2016). There also are differing needs depending upon disability. For example, DuPaul et al. (2017) found that students with ADHD benefitted more from academic coaching while students with LD received more benefit from tutoring.

Contrary to the aforementioned data, in a 10-year analysis of educational records from one institution, Herbert et al. (2014) found no difference in graduation rates between students with disabilities who did and did not utilize disability services. Additionally, the authors found that 54% of students in the 10-year sample who sought services did not receive them. Trends in the data showed a decline in the proportion of students who were denied services after the ADAAA regulations that broadened the definition of disability in 2008 (Herbert et al., 2014). Moreover, estimates from the NLTS-2 and other data suggest that only about a quarter to a third of students seek services (McGregor et al., 2016; Newman et al., 2011). Given these disconcerting statistics, researchers have also tried to understand what attitudes and skills are precursors to seeking academic accommodations. Initial studies suggest that students can increase knowledge and skills related to self-advocacy, develop the skills to make accommodation requests, and reduce negative attitudes towards accommodations (Barnard-Brak et al., 2013; Daly-Cano, Vaccaro, & Newman, 2015; White et al., 2014). These findings have useful implications for students, families, and service providers.

Implications for Students in Transition

Mentoring, increasing self-advocacy, training in disability law and reasonable accommodations, and providing an opportunity to practice are effective in increasing students' knowledge and skills and decreasing negative attitudes toward accommodation requests (Barnard-Brak et al., 2013; Daly-Cano, Vaccaro, & Newman, 2015; White et al., 2014). Student reflections regarding self-advocacy

development underscore the importance of learning such skills in secondary settings in order to have the opportunity to increase independence and self-reliance while in a supportive environment (K–12) and to prepare for the shift in responsibility that happens once students enter college. Students may practice leading their IEP meetings, speaking up in class when unable to access material (instead of having someone else do it for them), and researching available disability services as they consider which college is the right fit (Daly-Cano et al., 2015). As mentioned previously in the chapter, students will find differences between institutions in requirements for disability documentation and availability of programs and services that go beyond compliance. Students who understand and can describe the accommodations that have been effective for them in the past, and have supporting documents of their disability and accommodation recommendations, will likely find it easier to negotiate this process with the ASO. As an additional resource, state vocational rehabilitation agencies may help students connect with disability services on campus and potentially fill in gaps with paid services such as assistive technology, tutoring, or personal support while at school, if not offered (Oertle & O'Leary, 2017).

Understanding the Student Perspective

College students with disabilities have highlighted that their experiences are factors that impact their academic success, persistence, and satisfaction. Student academic experiences are influenced by interactions with faculty and staff, particularly with regard to learning activities (e.g., work in research teams and laboratories, clubs, clinical experiences). Faculty and staff have the ability to, and often do, cultivate student interest in a topic or field and support student learning and goal setting. Conversely, they are also in a position to squelch students' passions or otherwise discourage students from pursuing particular degree programs. Not surprisingly, experiences with faculty and staff are prominent in student narratives regarding their academic experiences. When faculty get to know individual students (with and without disabilities), adhere to accommodation requests, and exhibit flexibility, student experiences are positive (Fleming, Oertle, & Plotner, 2017a; Terras, Leggio, & Phillips, 2015). Unfortunately, many students share negative faculty and staff experiences, including negative reactions from faculty following disability disclosure and circumstances in which accommodation requests are questioned or not fulfilled (Fleming et al., 2017a; Hong, 2015; Marshak, Van Wieren, Ferrell, Swiss, & Dugan, 2010; Yssel, Pak, & Beilke, 2016). In response, students described decisions not to disclose or make accommodation requests for future classes or waiting until the disclosure is absolutely necessary, often to the detriment of their academic performance (Fleming et al., 2017a). Such issues underscore reasons why students with disabilities may not disclose a disability and subsequently utilize disability services.

Students report mixed experiences with the process of applying for and accessing accommodations and disability services at postsecondary institutions (Dowrick, Anderson, Heyer, & Acosta, 2005; Fleming et al., 2017a; Hong, 2015; Marshak et al., 2010; Reinschmiedt, Sprong, Dallas, Buono, & Upton, 2013; Yssel et al., 2016). Some students report satisfaction with services and accommodations, with many expressing regret that they did not know about or apply for services earlier (Baker, Boland, & Nowik, 2012; Fleming et al., 2017a). Such reports align well with findings documenting the positive impact of services and supports on student educational outcomes (Newman et al., 2019; DuPaul et al., 2017; Troiano et al., 2010; Yu et al., 2018). However, students in several studies expressed frustration with the lack of a person-centered approach employed by ASOs and confusion regarding what services and supports are available (Dowrick et al., 2005; Fleming, Coduti, & Herbert, 2018; Fleming et al., 2017a; Hong, 2015; Marshak et al., 2010). Students stated that they would benefit from more information about services and accommodations available in college and would also prefer, and likely benefit from, a more individualized accommodation process. Additionally, it is clear that many ASOs are underfunded and resourced, and students may consider this when selecting a postsecondary institution (Fleming et al., 2017a).

Another important aspect of college life is students' experiences with peers and the campus social climate, particularly toward disability. A feeling of belongingness and the nature of the campus climate are linked to student satisfaction, and, interestingly, students have reported mixed perceptions regarding how welcome and accepted they feel on campus (Fleming, Oertle, Plotner, & Hakun, 2017b). Students who struggle with peer relationships and campus climate have debated the process of integrating disability with personal identity, navigating disability-related challenges within the context of friendships and, depending on whether their disability was or was not visible, determining both whether and how much information to disclose to peers (Fleming et al., 2018). Moreover, students have also reported a need to improve campus accessibility and inclusion (Fleming et al., 2017a).

Implications for Students in Transition

Student experience informs implications for students, families, and educators with an interest in improving college preparedness. Colleges and universities vary widely in campus disability climate and the way in which an ASO is integrated into the broader student affairs landscape. Indeed, some institutions embrace disability as a form of diversity and improve responsiveness to disability issues on campus. Harbour and Greenberg (2017) have noted example initiatives including universally designed campus-wide assessments, disability awareness campaigns, and employing a sociopolitical framework related to disability and accessibility policies and practices. Such efforts can result in an improved fit, academically and socially, for some students, particularly as each considers how disability fits into their personal identity and whether to disclose to peers. An ASO's philosophy and visibility on campus may be considered by students and families during application and admissions decisions. Once on campus, students should build relationships with peers and faculty mentors to develop feelings of belonging and improve campus integration as both are predictors of satisfaction and persistence. Faculty mentors can facilitate student understanding regarding how to approach other faculty to discuss accommodations and can provide support if students feel unwelcome or undervalued in academic programs (Vaccaro, Daly-Cano, & Newman, 2015).

Assistive Technology to Assist in Transition

Assistive technologies and services (AT) have symbiotically held the potential to improve social, academic, and daily living outcomes for individuals with disabilities for more than two decades (Marino, Marino, & Shaw, 2006; Marino, Israel, Vasquez, Fisher & Gallegos, 2019). As defined in the Individuals with Disabilities Education Act (2004), assistive technology devices are: "Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of children with disabilities. The term does not include a medical device that is surgically implanted, or the replacement of such device." This definition can refer to hardware, software, or another stand-alone device. Assistive technology services are defined as: "Any service that directly assists a child with a disability in the selection, acquisition, and use of an assistive technology device." This includes evaluating, selecting, purchasing, and training individuals to use the AT with fidelity.

The use of AT for college-bound students with disabilities should begin as early as possible after the transition plan has been established. This provides opportunities for the student to become proficient with the AT prior to using it independently in the college environment. The following section identifies AT to ensure students maximize their strengths while minimizing the negative impacts associated with their disabilities. Executive function and content learning serve as two overlapping constructs to frame this discussion (Mitchell & Gansemer-Topf, 2016). Each is essential at the postsecondary level, where students must independently establish personal goals, plan, initiate an organized process to achieve the goal, and avoid distractions (D'Alessio & Banerjee, 2016).

Executive functions (EF) are critical for successful employment and thus should be considered during the transition planning process (Miyake & Friedman, 2012). Executive functions are defined as the processes of physical, cognitive, and emotional self-control and self-regulation necessary to maintain effective goal-directed behaviors (Torske, Naerland, Oie, Stenberg, & Andreassen, 2018). They include working memory, cognitive flexibility, emotional control, task initiation, planning, organization, and self-control (Diamond, 2013).

Impairments in executive function inhibit content learning, self-efficacy, and self-determination (Dunn, Shannon, McCullough, Jenda, & Qazi, 2018). To be successful in the postsecondary environment and workplace, students need 21st-century knowledge and skills, including authentic and dynamic problem solving and collaboration, proficient executive functioning, and critical analysis skills (Schwab, 2016). However, these cognitive and interpersonal skills can be challenging for students with executive function deficits (Koch, 2016).

Assistive technologies should be considered as a compensatory strategy to help students circumvent institutional, situational, or individual barriers in the learning environment. The types of AT from which a student will benefit should be individually selected based on an AT assessment of their needs and preferences. The assessment should examine the types of tasks the student must complete, the environment where the tasks will occur, and the resources already available to the student (Federici & Scherer, 2017). The purpose is to support the student without adding an additional layer of complexity to the task. Without this assessment, more than half of all AT are abandoned (Satterfield, 2016).

With this information in mind, the following assistive technologies are presented as potential examples to assist students during the transition to postsecondary education. The list is not meant to be a comprehensive review of all AT. The items presented here were identified as effective AT by postsecondary students during a recent study of SWDs funded by the National Science Foundation (Marino, Vasquez, Banerjee, & Moore, 2015).

AT to Support Reading and Writing

Kurzweil 3000

An annual subscription to Kurzweil 3000 for $700 (individual) or $200 (more than 20 users) for each license includes many key aspects of the literacy development process. Users must have access to the Internet. The software includes text-to-speech in over 18 languages and dialects. This feature includes customizable reading and presentation rates, with words being highlighted as they are read. Users also can create MP3/audio files to listen to text later. To support comprehension, several dictionaries are included along with the ability to post sticky and voice notes, create study guides using chapter summary templates, and organize and display column notes. The software includes word prediction, spell checking, and graphic organizer development. Finally, a speech-to-text tool helps learners self-regulate their writing while a bibliography tool assists with compiling evidence to support claims. This product has received favorable reviews in more than 20 peer-reviewed papers since 2006 (Steinberg & Murphy, 2012).

Ulysses

For $4.99 a month, or $39.99 a year, a student can use the Ulysses writing app. It simplifies the writing process with a plain text editor that uses a markdown tool to convert files to HTML. Ulysses has custom writing themes and a dark mode (e.g., flipped white and black background). There is also a typewriter mode, which displays one line of text at a time. This strategy has been shown to increase comprehension in individuals with disabilities (Schneps, Thompson, & Hefner-Wong, 2013). The

program allows for hierarchical organization of pages and folders. Folders are exportable to Dropbox and iCloud. Files can be exported as text, HTML, ePub, PDF, and DOCX. Searching within Ulysses yields results from the user's entire library.

Read&write by Texthelp

A one-year subscription for $145 offers support with reading, writing, comprehension, and vocabulary development. The toolbar presents a suite of literacy and language solutions. Features include word prediction, picture and talking dictionaries, speak as I type, type as I talk, language translation, and check it (which checks spelling, grammar, word usage, etc.).

Scrivener

Scrivener is a macOS app priced at $44.99 or $19.99 for iOS 9 or higher. Scrivener is a writing app with a simple writing palate, similar to Microsoft Word. The user interface presents a highly customizable layout and design features, designed to create a personalized presentation for the writer. For example, screen background, transparency, and text colors can be easily modified from the project landing page. Projects are stored as separate self-contained files. Each file has text with associated corkboard (i.e., notecard or storyboard layout) and threaded cork-board notecards, which allow you to see notecards within a timeline. The chapter outline mode provides a basic layout of the story. In addition, Scrivener allows for metadata keyword searches to organize the user's writing within themes.

Evernote

For $8 a month, Evernote seamlessly integrates with many existing writing apps. It makes it easy to collect, store, and search for notes. It syncs seamlessly across mobile and PC devices. Users can share notes and notebooks with other people. Students can drag and drop many file types into Evernote, including images and PDF files. There are very few customization features, but this simple approach maximizes time on task while minimizing the chances of inadvertently deleting information. Entire notebooks can be stored on mobile devices. There is a name card scanning app that can save information from the card onto a contact list. Finally, Evernote offers a dark mode for those who prefer that medium.

Nuance Dragon Home

Nuance Dragon Home sells for $110 and works with word processing and email programs to turn speech into text. It allows students to compose manuscripts, send email, search the web, and post to Facebook or Twitter using only voice commands. This product requires a Nuance-approved microphone.

LiveScribe 3 Smartpen

The LiveScribe 3 smartpen starts at $179.95. The pen charges with a USB charger and holds a charge for about 14 hours. The pen connects via Bluetooth to your PC, android, or iOS. The pen will connect with Evernote or OneNote using an app called LiveScribe Plus. The pen allows you to transcribe handwritten notes into typed notes or keep them in a handwritten format. Photos and texts can be attached to the notes. The pen can also record audio, which is time stamped to match handwritten notes. Notes can be organized within the LiveScribe Plus app.

AT to Enhance Executive Function

XMind

XMind is a free mind mapping software that allows the user to articulate relationships among ideas and create flowcharts and timelines as part of the prewriting process. Files can be saved directly into Evernote or exported as an image for use in Word or another word processing program.

RoboForm

RoboForm allows users to have access to all of their online services including usernames and passwords across multiple websites. At $19.95 a year, it will establish highly secure usernames and passwords and synchronize them across all devices. This will decrease the cognitive load associated with creating and managing passwords (Mayer, 2014).

Scheduling Software

Smartphone clocks and calendar apps can provide alerts for students to initiate tasks, transition to a new task, or contact a teammate (Basham & Marino, 2013). This can assist students while solving ill-structured problems lacking explicit instructions or rule sets (White, 2013). Visual scheduling software allows students to see the duration of assignments so they can quickly ascertain their progress toward specified goals.

Noise Cancelling Headphones

Noise cancelling headphones assist students with attention challenges by limiting the noise-related stimulation in the environment. This may be especially salient as students struggle with persistence and initiation tasks during periods where they can easily become distracted.

Conclusions

Postsecondary education is a viable and important opportunity for students with disabilities, with increasing numbers of students attending. However, differences in legal mandates from the K–12 level to the postsecondary level result in differences in available services and in student rights and responsibilities. Research clearly indicates that the use of accessibility support services, as well as other available campus supports, positively impacts student outcomes; however, most students with disabilities do not self-disclose and avail themselves of support services, and they have lower retention and graduation rates than their peers without disabilities. Making students with disabilities and their families aware of the postsecondary landscape, and preparing students to self-advocate in order to properly access and utilize needed services (both accommodations and appropriate assistive technologies), should be an essential part of transition education. With careful long-range planning regarding the development of both academic and non-academic (e.g., self-determination) skills, students with disabilities can be better prepared to not just access, but to successfully complete, college.

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Job Placement and Job Development for Young Adults With Disabilities

Marcus Poppen and Andrew Scheef

As could be sufficiently evidenced by this text alone, great efforts have been taken throughout the better half of the past century to understand and address barriers to employment for young adults, including those with disabilities. In the previous chapters, you have been introduced to the basic concepts of *secondary special education and transition*, and you have learned about individual, family, social, and cultural factors that can contribute to the employment and career outcomes of youth and young adults with disabilities. You have also learned about the emerging focus on career design and implications for ways that transition practitioners can work to help facilitate improved outcomes for the consumers of their services. Many of these services draw upon collaborative relationships between stakeholders. In this chapter, we aim to build on this foundation and discuss the key concepts of *job placement* and *job development* – two related, but unique, terms that are often used to describe the ever-changing roles and tasks of transition and rehabilitation professionals whose work is centered around enhancing the career development and occupational outcomes of young adults with disabilities.

Employment and Career Development for Young Adults With Disabilities

Employment is a critical part of identity and perceived success in society, and most people will interact with the world of work at some point in their lives. Some of the benefits of work include the fulfillment of personal needs, such as a sense of purpose, mental health, financial independence, and economic and social mobility. Work also fulfills broader social needs such as workforce demands and innovations that will enable societies to compete in a global economy (Blustein, 2006; Borjas, 2016; Brown & Lent, 2013; Sharf, 2013; Strauser, 2014). Career theorists have developed several models that help us understand the role of work within people's lives and explain how career decisions are made. Some of these models can be used as frameworks to guide the career services that are made available to all young adults.

One family of career theories includes person-environment models (e.g., trait and factor, work-adjustment, Holland's theory of vocational choice), which have historically emphasized the role of personal attributes (e.g., preferences, interests, needs, and strengths) on career choice and the importance of the alignment between these attributes and those of an individual's workplace (Brown & Lent, 2013; Holland, 1997; Sharf, 2013; Strauser, 2014). Although person-environment models can be credited for our knowledge of how aligning personal attributes with occupation can lead to jobs

that satisfy both an individual and the demands of his or her workplace, they tend to (a) overstate the importance of internal and individual level factors, (b) assume that these factors remain stable over time, and (c) neglect to recognize additional structural and contextual factors that also influence career development and choice (Duffy, Blustein, Diemer, & Autin, 2016; Lent, 2013). Other theories, like social cognitive career theory (SCCT; Lent, 2013), have built on the foundations of person-environment models and social learning theory (Bandura, 1986) to offer a more wholistic perspective on career development. These theories can be particularly helpful when trying to understand the role of work and career choice among people who have received differential treatment because of physical, social, and/or cultural differences. SCCT describes how personal attributes such as self-efficacy, outcome expectations, interests, and goals can lead to career-related choices and actions. In addition, SCCT describes how the relationships between personal attributes and career-related choices are moderated by person-level inputs (e.g., gender, race/ethnicity, disability, predispositions), background contextual affordances (e.g., financial circumstances, experiences of discrimination and marginalization, educational placements), and proximal influences (e.g., encouragement from teachers, role models, services and supports, availability of work, current financial circumstances; Sharf, 2013). These theories provide an opportunity for professionals working with individuals with disabilities to reflect on the ways that, much like gender or race and ethnicity, "disability, in and of itself, does not determine career development" (Szymanski & Hanley-Maxwell, 1996, p. 49). Instead, disability is rather a person-level input that introduces a unique set of individual and environmental factors into the process. By developing an understanding of these theories, transition practitioners can better understand the various pathways to employment, shedding light on the complex networks of factors that influence career choice and outcomes, many of which can be addressed through services and supports like job placement and job development.

Employment remains a particularly salient issue for young adults with disabilities, who, as a whole, have experienced exclusion from many aspects of social, economic, cultural, and political life. Despite longstanding efforts to remove barriers and support postsecondary outcomes related to employment, young adults with disabilities aged 16 to 24 continue to experience unemployment rates that are more than twice that of their same age peers without a disability (17.8% compared to 8.4%; U.S. Department of Labor, 2019). This ratio has been stable since 2008 when the U.S. Department of Labor first added questions to the Current Population Survey that allowed them to identify individuals living with disability and is a trend that has been shown to persist throughout the lifespan (U.S. Department of Labor, 2009–2019). Using the knowledge introduced by modern career development theories that describe how structural and contextual factors influence career development and choice (e.g., SCCT), it can be hypothesized that descriptive and qualitative discrepancies in employment outcomes between individuals with and without disabilities may be addressed through targeted interventions and supports when they are implemented with a focus on career development and choice. Furthermore, by acting in accordance with these core values, we can demonstrate a presumption of employability for all, an important assumption for job placement specialists to both acknowledge and embrace (Tilson & Simonsen, 2013).

Intervention research in the field of secondary special education and transition also supports the hypothesis that students with disabilities benefit from early career-related experiences, particularly paid work experience. A landmark study published in 1997 explored the in-school and out-of-school experiences of young adults with and without disabilities and found that having two or more work experiences during the final two years of high school increased the likelihood of competitive employment one year out of high school (Benz, Yovanoff, & Doren, 1997). Related efforts showed that work-based learning activities were among one of the most important features of effective school-to-work programs and that it was feasible for transition practitioners to facilitate these opportunities by providing individualized services and persistent supports (Benz & Lindstrom, 1997; Benz, Lindstrom, & Yovanoff, 2000). Fast-forward two decades later, and studies continue to provide

evidence in support of the relationship between early career-related paid work experience and positive postsecondary outcomes (e.g., Carter, Austin, & Trainor, 2012; Joshi, Bouck, & Maeda, 2012; Lindstrom, Doren, & Miesch, 2011; Mamun, Carter, Fraker, & Timmins, 2018; Shandra & Hogan, 2008; Wehman et al., 2015). Furthermore, paid employment and work experience have since been included as a research-based predictor of improved postschool outcomes in the areas of education, employment, and independent living (Mazzotti et al., 2016; NTACT, 2018; Rowe et al., 2015; Test, Fowler, et al., 2009; Test, Mazzotti et al., 2009).

Rehabilitation practitioners, whose major role includes finding work for consumers, have been engaged in job placement practices for a longer time than educators (Gilbride & Stensrud, 1992). These efforts were guided by the broader social, political, and economic purposes of federal workforce development programs, such as those supported by the Rehabilitation Act of 1973, which had a stated purpose to "promote and expand employment opportunities in the public and private sectors for [individuals with disabilities] and to *place* such individuals in employment" (P.L. 93–112 § 2, emphasis added). The Rehabilitation Act of 1973 was also the first act to require vocational rehabilitation (VR) agencies to coordinate with education officials to support the school-to-work transitions of young adults with disabilities. This collaboration has been significantly strengthened by the more recent Workforce Innovation and Opportunity Act (WIOA) of 2014, which streamlined workforce development systems to increase the prosperity of workers and employers in the United States, economic growth, and the global competitiveness of the United States. Other federal laws have also sought to specifically address issues of postsecondary outcomes for young adults, including those with disabilities, such as: (a) the Individuals with Disabilities Education Improvement Act (IDEA) of 2004, which emphasizes wide-ranging postsecondary outcomes, including education, employment, and independent living; (b) the Strengthening Career and Technical Education for the 21st Century Act of 2018, which emphasizes the role of postsecondary education in developing career and technical skills and the need for states to recruit traditionally underserved populations to enroll in career and technical education programs; and (c) the Every Student Succeeds Act of 2015, which emphasizes the importance of preparing all students, including students with disabilities, to succeed in postsecondary and workplace settings and providing high-quality education to traditionally underserved populations (Poppen & Alverson, 2018).

The progression of theory, research, and policy that has highlighted the importance of early career-related experiences for facilitating positive postsecondary outcomes for young adults with disabilities has changed the competencies that transition professionals need to have in order to be successful in their jobs (see Holzberg, Clark, & Morningstar, 2018; Mazzotti, 2018; Tilson & Simonsen, 2013). As such, it is becoming increasingly important for transition practitioners to be knowledgeable about job placement and job development practices and skilled in providing these services and coordinating their delivery with other professionals.

Job Development as a Strategy to Facilitate Career Development and Employment

Although the terms "job placement" and "job development" are often used interchangeably, job placement services tend to highlight the specific match between job seekers and existing opportunities within a community. Job placement services provided by VR agencies have been defined by the Rehabilitation Services Administration (RSA) as "a referral to a specific job resulting in an interview, regardless of whether or not the individual obtained the job" (RSA, 2019, p. 49). Professionals offering job placement services may work to understand the labor market in their area, listen to employers about the types of employees they need, and help the individuals on their caseload be competitive in applying for and securing these opportunities. Additionally, as was described by Gilbride and Stensrud (1992), "the traditional approach [to job placement] has been to view placement as the end-state of the

vocational rehabilitation counselor/client relationship" (p. 34). Job development, on the other hand, is viewed as a more holistic practice that can include a job placement but also addresses other key factors related to an individual's career development (e.g., long-term viability and career advancement opportunities) and aims to build sustainable partnerships with employers to improve the recruitment and retention of individuals with disabilities (Strobel Gower, Rudstam, & Young, 2014). Drawing from our previous discussion about models of career development, simply engaging in job placement activities is not likely to address the various other reasons why people work or promote positive elements of career development. For these reasons, "job development" is the term we will be using to discuss the *processes* of facilitating employment opportunities for young adults with disabilities, such as is done when developing, carving, creating, or customizing positions that match the unique needs, abilities, and interests of the job seeker and the sometimes unknown needs of an employer.

An abundance of research on the effectiveness of job placement services has emerged from analysis of VR case service data that has been made available to researchers by the RSA (e.g., RSA-911). Job placement assistance services are listed as a service that has been provided to as many as 40% of transition-age consumers of VR services (Alsaman & Lee, 2017). While limited by not being able to control for the more nuanced aspects of job placement (e.g., individualized planning, networking), correlational analyses of these data have consistently shown that receiving job placement services from VR is a predictor of competitive employment for young adults with disabilities, including those with particular disability types such as autism spectrum disorder and attention-deficit/hyperactivity disorder (e.g., Alsaman & Lee, 2017; Glynn & Schaller, 2017; Kaya, Hanley-Maxwell, Chan, & Tansey, 2018; Sung, Sãnchez, Kuo, Wang, & Leahy, 2015). Much of the literature on job development is grounded within the practices of supported employment and customized employment. Common features of effective job development models include individualized career planning and assessment, engagement and networking with employers, building relationships with employers and learning about their business needs, finding job openings and negotiating placements, and offering initial and ongoing supports to individuals and their employers (e.g., Luecking, 2008; Luecking & Buchanan, 2010; Migliore, Butterworth, Nord, Cox, & Gelb, 2012; Migliore, Lyons, Butterworth, Nye-Lengerman, & Bose, 2018; Riesen & Morgan, 2018; Tilson & Simonsen, 2013). Other literature on job development has focused on strategies for coordinating services among the complex networks of stakeholders involved in supporting young adults with disabilities, including families, schools, and the broader community (e.g., Cimera, 2010; Hall, Bose, Winsor, & Migliore, 2014; Murphy, Easterbrook, Bendetson, & Lieberman, 2014; Wehman, 2017; Whittenburg, Sims, Wehman, & Walther-Thomas, 2018). This research offers an important insight into the effectiveness of job placement and job development practices. When combined with existing knowledge about career development and the importance of work for young adults with disabilities, it can be helpful for supporting a framework for job development in schools.

A Framework for Job Development in Schools

Being able to recognize and deliver job placement and job development services is an essential part of the work of transition service providers. We propose the following framework that transition practitioners can follow when implementing job placement and job development practices in schools: (a) individualized planning, (b) employer recruitment and engagement, and (c) supporting sustainability and career advancement.

Individualized Planning

Individualized planning is a central theme of job development models that lead to positive job placement and career development outcomes for young adults with disabilities (Luecking, 2008;

Luecking & Buchanan, 2010; Migliore et al., 2012, 2018; Tilson & Simonsen, 2013). In order to successfully support the job placement and career development outcomes of young adults with disabilities, job developers must begin by authentically getting to know students, their families, and their acquaintances. In doing so, practices will focus on the strengths and needs of students and assist our efforts to match these attributes with work opportunities. Here we describe three approaches to individualized planning that can be implemented within a school setting: (1) person-centered planning, (2) discovery and customized employment, and (3) the Self-Determined Career Development Model. We also discuss how transition assessments can be helpful within each of these models and the importance of considering self-employment.

Person-Centered Planning

Person-centered planning (PCP) is a broad term that describes a process-oriented approach used to gain a better understanding of an individual with a disability, often with an intellectual or developmental disability (IDD). Since the mid-1980s, individuals with disabilities and their support teams have implemented PCP to guide problem solving and resource identification to help people achieve success in a variety of life arenas (Holburn, Jacobson, Vietze, Schwartz, & Sersen, 2000; Lyle O'Brien, O'Brien, & Mount, 1997). The hallmark characteristics of PCP include: (a) activities and supports that are based on the strengths and desires of the individual, (b) planning that includes the active involvement of the people who are important to the individual, (c) opportunities for the individual to make meaningful decisions, (d) the utilization of community and natural supports whenever possible, (e) a focus on community inclusion through personal relationships, (f) emphasis on individual voice regarding the allocation of economic resources to maximize opportunities and experiences, (g) planning that is reoccurring and participants who maintain ongoing commitment to the collaborative process, and (h) satisfaction of the individual, who is pleased with the supports and services delivered through the process (Schwartz, Holburn, & Jacobson, 2000; Schwartz, Warren, & Rossi, 1994). Although empirical data supporting PCP as an evidenced-based practice to support employment is lacking (Claes, Van Hove, Vandevelde, van Loon, & Schalock, 2010; Ratti et al., 2016), the common usage of the practice by job developers supports the notion that it can be effective. Migliore et al. (2012) surveyed job developers to identify commonly used practices to support employment goals for individuals with disabilities; 64% of job developers identified PCP as a strategy for career planning and assessment, more than any of the other practices on the survey. The direct involvement of job developers in the PCP process may be crucial to the extent to which it is successful (Kaehne & Beyer, 2014).

Discovery and Customized Employment

Although PCP provides insight into the strengths and interests of an individual, the process may be misguided if the results do not fully reflect who job seekers are at their core. When the job interests of individuals are not well-aligned with who they are as a person, PCP alone may not lead to positive employment outcomes. Referring to PCP, Callahan and Condon (2007) explain that "too often, job seekers are simply asked what they want to do before anyone takes the time to fully understand who the person is" (p. 23). In order to address this, job developers may consider using the Discovery process before beginning employment-focused PCP. Discovery seeks to provide in-depth understanding of individuals and the context surrounding their employment interests, preferences, strengths, and needs; the process is essentially a form of qualitative research that may include interviews with stakeholders, observation, record reviews, and targeted assessments as necessary (Callahan & Condon, 2007).

The Discovery process alone does not support positive employment outcomes for individuals with disabilities; the resulting information is used as a foundation for individualized job development through customized employment. The WIOA defines customized employment as a process

"designed to meet the specific abilities of the individual with a significant disability and the business needs of the employer" (2014, p. 210). Customized employment differs from other job development practices, primarily in that it (a) focuses on the uniqueness of the job seeker over the local labor market (through Discovery); (b) leads to the development of a new job through negotiations with employers; (c) is designed to benefit both the employer and the job seeker; and (d) foundationally is based on respect and dignity for the job seeker, recognizing that the individual is free to make personal life choice (Harvey, Szoc, Dela Rosa, Pohl, & Jenkins, 2013).

Although customized employment is widely used by job developers, a dearth of research on its effectiveness limits the extent to which it be classified as an effective practice based on empirical research (Inge, Graham, Brooks-Lane, Wehman, & Griffin, 2018; Riesen, Morgan, & Griffin, 2015). In order to identify core characteristics of customized employment, Inge et al. (2018) conducted a qualitative research study that consisted of focus group interviews with known national experts and implementers. As a result, 12 key practices or components were identified, including: (1) meeting at a physical location selected by the individual, (2) building rapport in an effort to better understand the individual, (3) truly listening to the individual without making assumption, (4) identifying the interests, skills, and abilities of the individual, (5) interviewing family and friends of the individual to further understand interests, skill, and abilities, (6) observing the individual's daily activities in multiple community settings, (7) allowing the individual to observe on-site at potential business partners, (8) conducting informational interviews with potential employers to better understand the needs of the business and the viability of a match for the job seeker, (9) observing the individual perform tasks required at potential businesses, (10) supporting the individual in finding work experiences to better understand interests, skills, and abilities, (11) confirming job-related interests, skills, and abilities with the individual and his or her circle of support, and (12) negotiating of job duties with employers. The authors describe the final item as a hallmark of customized employment, noting that if it "is not negotiated, then it's not customized" (Inge et al., 2018, p. 163).

Self-Determined Career Design Model (SDCDM)

Recognizing that the Self-Determined Learning Model of Instruction (SDLMI) – which promotes self-determination through student-directed learning and self-regulated problem solving in service to a goal – may also support students in employment-related arenas, Wehmeyer et al. (2003) developed the Self-Determined Career Development Model (SDCDM), now called the Self-Determined Career Design Model (see Chapter 5). Like the SLDMI, the SDCDM consists of a three-phase process, each phase featuring four questions related to a larger question that can guide individualized goal setting. The first phase of the SDCDM seeks to answer the question, *What are my career and job goals?* This is done by exploring potential career interests, gaining a sense of what the individual knows about the job, and understanding personal changes that need to be made to obtain work in this field. The next phase is focused around the question, *What's my plan?* In this phase, individuals identify potential barriers and related action steps that are required to obtain career goals. The final phase of SDCDM helps an individual self-evaluate work completed in the first two phases by answering the question, *What have I achieved?* This third phase involves the individual reflecting on action steps taken, noting the extent to which barriers were overcome, and identifying what exactly was done that led to the individual achieving (or not achieving) his or her employment goals. Shogren et al. (2016) explored the effectiveness of SDCDM using a larger scale study with 197 adults with disabilities. SDCDM was found have had an impact on improving self-determination skills, particularly autonomy, over the business-as-usual control group. Other studies have used SDCDM as part of an intervention package, making it difficult to isolate the effect of the model alone (e.g., Shogren et al., 2017; Wehmeyer et al., 2009). This promising practice provides an excellent example of individualized goal setting in career development.

Transition Assessment

Previously, job developers commonly used quantitative-based comparative assessment tools to identify the viability of specific jobs for individuals with disabilities (Callahan, Griffin, & Hammis, 2011). However, with the emergence of whole-person pre-employment processes (e.g., PCP, Discovery, SDCDM), more qualitative and informal assessments have become the favored tools of job developers (e.g., interviews, observations). Although these may include the use of informal assessment tools, the emphasis on the individual over general employability eliminates the need for evaluations that produce comparative information. Using assessment tools that glean information from the job seeker's circle of support (e.g., friends, family) may also be valuable in guiding the job development process (Callahan et al., 2011). When selecting transition assessments, practitioners should consider formal or informal tools that measure dimensions such as aptitudes, abilities, temperament, attitudes, physical capacity, motivation, and work tolerance (Neubert & Leconte, 2013; NTACT, 2016). In order to gain perspectives of multiple individuals, school-based practitioners may use cloud-based survey instruments to collect and analyze data (Scheef & Johnson, 2017).

Considering Self-Employment

Vocational assessments and individualization strategies (e.g., PCP, Discovery, SDCDM, transition assessment) may reveal that seeking employment in an existing business may not be well-aligned with the context surrounding an individual. In these instances, job seekers may consider seeking self-employment. Employed people with a disability are more likely to be self-employed than individuals without a disability (10.2% as compared to 6.1%; U.S. Department of Labor, 2018), which suggests this may be an option for some job seekers to consider. WIOA (2014) designates self-employment is as a form of competitive integrated employment and allows the use of funds to support technical assistance for developing self-employment opportunities for individuals with disabilities. Individuals with disabilities may be drawn toward self-employment for a number of reasons. These may include: (a) an intense interest in a particular area, (b) past negative experiences with traditional employment, (c) a desire to be creative, (d) a need for flexibility in schedule and obligations due to disability-related barriers, and (e) a feeling of needing to control personal destiny (Ashley & Graf, 2018). Although VR may offer supports to individuals interested in self-employment, the bureaucratic process may be a barrier for those who elect this route (Yamamoto & Olson, 2016). Job seekers interested in self-employment interviewed by Ashley and Graf (2018) were generally not satisfied with the knowledge and support offered from VR counselors. As such, school-based practitioners who support young adults with disabilities interested in self-employment should consider including instruction in relevant areas (e.g., writing business plans to support student goals). This should include learning job-specific tasks in the field in which the student is interested, developing supervisory skills, and acquiring office skills (e.g., bookkeeping, paperwork; Dotson, Richman, Abby, Thompson, & Plotner, 2013).

Employer Recruitment and Engagement

The second step in our proposed job development framework is to use an understanding of an individual's strengths and needs to guide employer recruitment and engagement. The process of recruiting and engaging employers includes developing an understanding of the labor market in the local area, identifying potential employers and getting to know their needs, and building and maintaining relationships.

Understanding the Labor Market in the Local Area

An important, but not terminal, aspect of recruiting and engaging employers is to develop an understanding of the labor market in the local area. Job developers must be aware of which businesses are

hiring, what kinds of jobs they are hiring for, what skills they are looking for, and what wages they are offering. Keeping a consistent watch on these factors can help students and transition professionals develop a broader understanding of available work opportunities in the area and localized employment trends. In some circumstances, the work of a job developer can include facilitating an interview between a job seeker and an employer for a position that already exists – which may result in a job. All of that said, it is important to not stop developing jobs at the boundaries of the labor market; doing so goes against the research, which suggests only a small percentage of job openings are advertised (Migliore, Hall, Butterworth, & Winsor, 2010). By developing an understanding of the labor market in the local area and making job placement referrals when appropriate, transition professionals will also be able to identify employers of more specialized positions that align with the strengths and needs of students.

Identifying Potential Employers and Getting to Know Their Needs

With an understanding of the labor market in the local area, transition professionals will have more knowledge about the variety of potential employers and their hiring practices. Combined with authentic knowledge of student's interest and needs, transition professionals can use this information to form relationships with employers in order to better understand their employment needs. In a qualitative study investigating the perceptions of employers about barriers and facilitators to the customized employment process, employers described the importance of working with employment specialists (e.g., job developers) who demonstrated curiosity in learning about their business's needs and expectations and who worked to establish meaningful relationships. Employers indicated that they were more likely to want to work with job developers who devoted time to observing their workplace and who conducted informational interviews with staff and supervisors prior to making a placement (Riesen & Morgan, 2018). Consistent with other research on effective job development practices, employers also suggested that employment specialists can develop meaningful relationships with employers by visiting and presenting to local business organizations (e.g., chambers of commerce, downtown business associations; Riesen & Morgan, 2018; see also Carter, Owens, et al., 2009; Carter, Trainor, et al., 2009; Simonsen & Fabian, 2011). Other attributes that have emerged as essential to developing relationships with employers include maintaining a presumption of employability, being strengths based, exhibiting strong communication skills, and being business oriented (Fabian, Simonsen, Buchanan, & Luecking, 2011; Rashid, Hodgetts, & Nicholas, 2017b; Tilson & Simonsen, 2013).

Although employers may hire employees with disabilities for the greater good of society, their willingness to hire an individual with a disability is likely dependent on financial rather than charitable factors (Domzal, Houtenville, & Sharma, 2008; Luecking, 2008; Luecking, 2011; Riesen & Morgan, 2018). Employers hire individuals with disabilities for many of the same reasons they hire individuals without disabilities, including the ability of the person to perform their job, his or her professional appearance and preparedness, and his or her attitudes and soft skills (Ju, Pacha, Moore & Zhang, 2014; Ju, Zhang, & Pacha, 2012; Lindsay et al., 2014; Simonsen, Luecking, & Fabian, 2015). As an alternative to focusing on charitable reasons for hiring an employee with a disability, Luecking (2008) explained the benefits of the demand-side approach to helping workers find employment. This strategy involves the job development specialist collecting information about the specific needs of a business and highlighting how a prospective employee can fill these gaps. If an employer can recognize how a specific person can fill the needs of the organization, they may be more open to hiring an employee with a disability. The implications of this demand-side approach include: (a) creating a demand for workers with disabilities due to customization skills of an effective job development specialist; (b) having the potential to discover job positions that had not been considered by an employer; (c) increasing the focus on the meeting of mutual needs rather than just the needs of

the person with a disability; and (d) coming to the conclusion that hiring a person with a disability is not only *possible* but *desirable*.

Building and Maintaining Relationships

Just as we build and maintain relationships with other professionals within our networks, the next step for employer recruitment and engagement is to focus on building and maintaining relationships with employers. The relationships between job developers and employers are critical to finding and maintaining employment for young adults with disabilities, and employers report having negative attitudes toward job developers who rush into the process or are just trying to make a quick placement (Rashid, Hodgetts, Nicholas, 2017a; Riesen & Morgan, 2018). In addition to putting the right foot forward during the initial phases of identifying and learning about employers, job developers can also engage in a variety of strategies to show their commitment to employers and maintain an ongoing relationship. In their systematic review of the literature, Gewurtz, Langan and Shand (2016) identified that some of these strategies include providing information and supports for employers, such as consultation about questions related to disability, providing accommodations, and legal requirements. Additionally, in a qualitative study investigating what employers see as successful supports from supported employment providers, findings suggest that employers view supported employment providers as brokers, guides, and troubleshooters (Gustafsson, Peralta, & Danermark, 2013). The brokerage role presents, mediates, and coordinates prospective employees, the guidance role provides guidance and support in unfamiliar situations, and the troubleshooter role helps take precautions by serving as a voice to unwanted consequences and to step in immediately when something needs fixing (Gustafsson et al., 2013). Other research on effective strategies for building and maintaining relationships between employers and job developers includes: (a) offering a single point of contact for the employers (rather than an agency); (b) providing assistance with work incentives planning; (c) offering agency-wide disability awareness trainings; and (d) providing ongoing supports for employers after making a placement (Gewurtz et al., 2016; Migliore et al., 2012; Rashid et al., 2017b; Riesen & Morgan, 2018). By engaging in some or all of these practices, school-based job developers can foster strong and ongoing relationships with employers.

Supporting Sustainability and Career Advancement

The third essential feature of our job development framework includes strategies for supporting the long-term viability and career advancement of individuals who participate in the job development process. This begins with negotiating work opportunities for students, providing ongoing placement supports, and facilitating opportunities for career advancement.

Negotiating Work Opportunities for Youth

Negotiating work opportunities for youth is perhaps the most critical component of effective job development. In taking the time to learn about the strengths and needs of an individual and the unmet needs of prospective employers, job developers can more effectively negotiate job placements. When negotiating a position with an employer, a job developer should remember to find out what an employer needs and to focus their negotiations on how their prospective employee is going to fill those needs (Luecking & Buchanan, 2010; Migliore et al., 2018; Rashid et al., 2017b; Riesen & Morgan, 2018). In their proposed comprehensive model of employment supports, Migliore et al. (2018) suggest that an effective approach to identifying job opportunities beyond those that are advertised is to look for tasks that need be completed, rather than looking for jobs. By looking for tasks, and combining these tasks in various and creative ways, a job developer can string together an

array of components that can quickly become a job that both aligns with the strengths and needs of the youth and the unmet needs of the employer. This approach aligns with findings from the literature that suggests one of the benefits employers report for hiring individuals with developmental disabilities is that they can increase workplace efficiency by completing tasks that would otherwise be included as a part of a job description for someone else (Rashid et al., 2017a). Specifically, Luecking and Buchanan (2010) recommended that final negotiations include specificity regarding: (a) job responsibilities, (b) work and pay schedules, (c) requisite support and supervision, and (d) expectations regarding productivity and output. In addition, the responsibilities of all other involved parities (e.g., employer, job developer, co-workers) should be clearly identified during negotiations.

Providing Ongoing Supports and Promoting Career Advancement

One of the qualities that sets job development apart from job placement is that it aims to build sustainable partnerships with employers that improves the recruitment and retention of individuals with disabilities (Strobel Gower et al., 2014). In order to achieve this outcome, it is critical that job development specialists continue to support students and employers to ensure their continued success. These positive relationships not only support the students currently placed at work sites but also lay the foundation for future collaborations. Luecking (2009) explained that employers involved with work experience programs expect "support in training and monitoring the youth at the worksite" (p. 121). Specific strategies that job development specialists may consider utilizing include: (a) evaluating the employer's expectations regarding student performance and supports and potentially developing a written plan to outline these items; (b) providing *service after the placement*, or following through on the agreed plan to support the students and responding to new concerns or emergencies without haste; (c) soliciting feedback from employers to identify strengths and needs of the work experience program; and (d) showing employers that their feedback is valued by making changes based on the formative information received. Additionally, recognizing the importance of early career-related experiences in shaping the vocational identities of young adults with disabilities, it is important that job development specialists continue to work with their youth to develop new skills and expand their opportunities for career advancement in a way that aligns with their strengths and needs.

Conclusion

Momentous efforts have been taken to address gaps in employment outcomes between young adults with and without disabilities. Although this gap still exists today, the knowledge that has been gained as a result of decades of scholarship and research on job placement and job development practices has helped to narrow it. At a time when unemployment rates for individuals with disabilities are at an all-time low, future efforts should not disregard existing models and frameworks. Attempts should be made to build on these models to support improved career outcomes, such as wage growth, employee benefits, and career advancement, for people with disabilities.

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Enabling Community Participation During and After Transition

Jessica Oeth Schuttler and T. Rene Jamison

In this chapter, we will briefly review the recent history of advocacy for community participation, discuss how community participation is defined, and review existing models designed to promote community participation in employment and postsecondary education for people with disabilities. Then we will review key principles and factors that influence community participation. Finally, we will share a program illustrating these principles put into practice in the context of a social-emotional and self-care curriculum called Girls Night Out, designed specifically for girls and young women with autism spectrum disorder (herein referred to as "autism") and related developmental disabilities. A note about language: throughout the chapter, the reader will note that we provide an overview of disability history, as well as reference literature, using terms such as "autism," "intellectual disability," and "developmental disability." We have used these terms when applicable to the groups being described in their corresponding literature. Where relevant, we have described supports and programming geared to be supportive of all participants, regardless of ability status.

A Brief History of the Community Participation Movement

Our summary begins in the 1930s – when workers with physical disabilities protested and advocated for their right to work and receive the accommodations needed to do so. During this time, the Work Progress Administration (WPA), a federal agency, supported job development for individuals with disabilities (Fleischer & Zames, 2011). Fast forward to after World War II – soldiers with disabilities returned home, seeking employment opportunities. The GI Bill supported access for those who had served to attend college (Fleischer & Zames, 2011). In the late 1950s and early 1960s, Ed Roberts, an undergraduate student at Berkeley, began the first university group that advocated for access to higher education. The group he founded evolved into the first Center for Independent Living in the United States (Fleischer & Zames, 2011).

The Developmental Disabilities Assistance and Bill of Rights Act (DD Act), hallmark legislation for the inclusion of people with developmental disabilities, was originally passed in 1963. The DD Act states:

> Disability is a natural part of the human experience that does not diminish the right of individuals with developmental disabilities to live independently, to exert control and choice over

their own lives, and to fully participate in and contribute to their communities through full integration and inclusion in the economic, political, social, cultural, and educational mainstream of United States society.

(Title 1, Subtitle A, Sec 101(a)1)

The DD Act incorporates numerous principles of community participation for people with developmental disabilities, including the following statements in the act:

With education and support, communities can be accessible to and responsive to the needs of individuals with developmental disabilities and their families and are enriched by full and active participation in community activities, and contributions, by individuals with developmental disabilities and their families.

(DD Act, Title 1, Subtitle A, Sec 101(c)7)

Individuals with developmental disabilities have access to opportunities and the necessary support to be included in community life, have interdependent relationships, live in homes and communities, and make contributions to their families, communities, and states, and the nation.

(DD Act, Title 1, Subtitle A, Sec 101(c)8)

Individuals with developmental disabilities need to have access to and use of recreational, leisure, and social opportunities in the most integrated settings, in order to enrich their participation in community life.

(DD Act, Title 1, Subtitle A, Sec 101(c)12)

The Willowbrook documentary, released in 1972, exposed horrific living conditions for children and adults with disabilities and was a powerful impetus for a broad wave of movements nationally to promote de-institutionalization. Also in 1972, the self-advocacy movement began in Oregon with People First; access and participation in the community is a core element of the movement's goals (History of the Self-Advocate Movement, 2019).

In 1972, the Education for all Handicapped Children Act (now known as the Individuals with Disabilities Education Act) passed, which legislates the rights of children with disabilities to have access to free and appropriate public education, including the language that "improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities." In 1990, the Americans with Disability Act (ADA) ensured physical access to public spaces and reasonable accommodations to promote participation in the community. In 1991, Self Advocates Becoming Empowered (SABE) was established in the United States. Their platform also placed great emphasis on community participation and opportunities for meaningful engagement in community living, with support as needed and defined by the individual (Fleischer & Zames, 2011).

A landmark Supreme Court ruling, the Olmstead Decision of 1999, also supported the rights of individuals with developmental disabilities to live in their communities, with supports from state and federal disability programs. As the conceptualization of disability shifted from a medical model of disability to the social ecological model, so too has society's understanding of disability as diversity and, thus, disability rights as civil rights (Shapiro, 1994). Increasingly, society recognizes the concept of intersectionality of disability with many other human identities (e.g. gender, race, sexuality, etc.). The Convention on the Rights of People with Disabilities, yet to be ratified by the United States,

recognizes, in Article 19, paragraph 1: "The equal rights of all persons with disabilities to live in the community, with choices equal to others, and [parties to the convention] shall take effective and appropriate measures to facilitate full enjoyment by persons with disabilities of this right and their full inclusion and participation in the community" (United Nations, 2006).

Legislatively and conceptually the law and policy referenced in the previous paragraphs clearly establish that community participation is recognized as vital for all people, including people with disabilities. Enabling community participation is a key focus of transition services; however, data continues to suggest that much work is needed to enable community participation as young people move from school to the adult world (Shogren & Plotner, 2012; Wehman et al., 2014). Particularly, youth with autism and intellectual disability (ID) have the poorest outcomes post–high school and the lowest levels of participation in planning and leadership in the transition process (Shogren and Plotner, 2012), necessitating specific supports for this population.

Community Participation for Adolescents and Young Adults: Postsecondary Education Experiences, Competitive Employment

Given the history just reviewed, what does it mean to focus on community participation and/or social inclusion? Simplican and colleagues (2015) explore the concept of social inclusion (to some, interchangeable with the idea of community participation). Models of social inclusion and community participation recognize that inclusion goes beyond a physical presence in a space or group and also includes the subjective experience of feeling a sense of belonging and the idea that the perspectives of people without disabilities need to change to recognize the equal value and contributions of those with and without disabilities in the creation of a social space and living environment (White, Simpson, Gonda, Ravesloot, & Coble, 2010).

In this chapter we define social inclusion as the combination of both social interactions and community participation (Simplican et al., 2015). White and others (2010) discuss the concept of communities fostering "interdependence" – by promoting relationships between people with and without disabilities, using social capital to build supports needed for social inclusion. This model of interdependence (Condeluci, 1999) includes supporting individuals to develop their competencies as members of a community, rather than simply learning skills to be more independent in basic skills of daily living. For example, interdependence targets the development of role competency – knowing how to be a good neighbor, citizen, and friend, rather than simply having the skills to navigate the community or take care of oneself in one's home. Rather than supports driven by a case manager, supports are identified and addressed in partnership with the person with a disability. There is a focus on relationship building – supporting social connection and teaching about ways to form relationships, including developing friendships and dating, rather than just social interaction skills. And finally, interdependence focuses on the process of cultural change – empowering individuals to advocate for changes in the way society views people with disabilities through clearly outlined, responsible, and persistent advocacy practices in the community.

How are we preparing our youth and young adults for interdependent, socially included lives in the community? For youth with and without disabilities, as they enter high school and the years beyond, they are considering opportunities for either postsecondary education (e.g. college or other work training) or employment (or both). For some, this might also mean moving out of a caregiver's home and into a more independent living environment, surrounded by peers. We would direct the reader to Chapters 22 and 23 to read more about postsecondary education as an opportunity for community participation and to Chapter 5 for further reading on career design and employment. Of course, community participation also means engaging in recreational/leisure activities of one's choosing, a model for which will be discussed in a later section (Girls Night Out).

Current Best Practices in Supporting and Promoting Community Participation

Why Is Community Participation Important?

In this section, we describe several considerations regarding the importance of community participation, including (a) impact on mental and physical health, (b) opportunities for social connection, and (c) because individuals with disabilities and their families continue to emphasize its value.

Community participation improves outcomes for children and adolescents with disabilities across various domains, including physical and mental health (Andrews, Falkmer, & Girlder, 2015). Participation increases exposure to factors that promote positive outcomes for individuals regardless of disability. For example, social and community supports serve as protective factors against mental health conditions and isolation and thus would be of value for all people. Individuals with intellectual and developmental disabilities, including autism, often report less community participation, fewer friendships, and a lower quality of life compared to those without a disability (Simplican et al., 2015). The adolescent and young adult period compounds difficulties related to social support and community participation as social norms and expectations become more complex and the responsibility of navigating such complexities shifts increasingly to the young person. Additionally, some adolescent students are supported in segregated special education programming, away from the broader school community, thus increasing risk for social isolation.

Diminished protective factors and increased complexity, compounded with the potential for greater isolation within adolescence and young adulthood, likely contribute to the elevated risk for co-existing mental health conditions experienced by individuals with intellectual and developmental disabilities, particularly autism (Croen et al., 2015). Thus, community participation should be of priority and a critical focus during the transition period for individuals with intellectual and developmental disabilities, setting the stage for increased participation and enhanced outcomes later in life.

Community participation is also valuable because it creates opportunities for engagement and interactions and thus the potential for connections and inclusion to grow. Community participation increases social interactions and shared activities between individuals with and without disabilities (Andrews et al., 2015), expanding the pool of potential relationships and social supports for all members of a community. Engaging with others who share the same life environments increases participation (Soresi, Nota, & Wehmeyer, 2011) and promotes the inclusion of people with disabilities, which as defined by Minnow (1990) encompasses living among, doing things with, and making decisions together. This description emphasizes active participation within one's community and its social networks.

Ultimately, community participation is important because individuals and their families value these experiences. For example, families of individuals with ID place the greatest value on programs that emphasize recreational activities or friendships compared to those focused on health care (Dahan-Oliel, Shikako-Thomas, & Majnemer, 2012). There is a critical need in the field for systematic programs and supports that define the implementation of strategies for an individual to access and successfully participate in desired activities with peers. This means crafting multiple opportunities for an individual to experience success, enhancing confidence and increasing the likelihood for community participation in the future.

Factors That Influence Community Participation

History and the current rates of community participation for individuals of all abilities highlight the challenges to consistently implement effective supports for community participation. Participation, or lack thereof, is likely influenced by multiple factors that are described in the sections that follow,

including engagement and sense of belonging, personal experiences and self-determination, and availability of accessible and inclusive spaces.

Engagement and Sense of Belonging

First, we will highlight the importance of engagement at all levels for people with disabilities within their own program planning, including the design of policies and programs intended to support community participation. To increase participation, we need to engage people with disabilities as leaders of decision making and planning that impacts their lives. This includes involvement at the program development and implementation level as well as decisions regarding service delivery (Duggan & Linehan, 2013). Policy makers must incorporate the input of people with disabilities on policies that drive access, funding, and insurance coverage in their communities.

Existing programs or interventions should consider an individual's interests, activity preferences, and opinions regarding where to go and with whom. Multiple studies (Andrews et al., 2015) found that incorporating activity preferences of individuals with ID significantly increased participation in and engagement within recreation activities. In their qualitative study, Milner & Kelly (2009) interviewed adults who utilized vocational service centers within New Zealand. Their findings indicated that the most highly valued forms of participation were self-chosen activities and that what mattered most to respondents was not where but rather how one participated. Respondents described feeling a sense of belonging as influential for community participation and satisfaction with services. Milner and Kelly (2009) identified themes or attributes that emerged related to a sense of belonging and participatory membership, such as psychological safety, social identity, self-determination, reciprocal and valued contribution, and participatory expectations. Interviewees described confidence and comfort from consistent visits and sharing spaces with people they trusted. They reported gravitating toward places they felt known, establishing a social identity (Milner & Kelly, 2009). Reciprocal interactions and feeling valued positively influenced community participation while feeling others had limited expectations was perceived as a barrier.

These findings suggest transition planning and supports for adolescents should emphasize ways to help individuals identify community activities and businesses aligned with their interests or preferences and within proximity to their home or transportation services. Establishing reciprocal relationships within one's community is a means through which to increase comfort, confidence, and a sense of belonging that promotes increased engagement and community participation.

Personal Experiences and Self-determination

Next, we will describe examples of ways to promote choice making and autonomy and discuss the relationship between self-determination and community participation. Engaging people in the program or planning process might first require supporting individuals in identifying their interests or preferred activities. Exposing individuals to various activities, completing an interest inventory, or identifying potential activities, groups, or events within their community gives people an idea of what's *on the menu* per se before putting in the order. Infrequent social or community experiences limits the knowledge or personal experience that proves useful when making plans, putting many individuals with intellectual and developmental disabilities at a disadvantage to share opinions or contribute to planning community-based activities. Promoting the self-determination of people with intellectual and developmental disabilities empowers them to participate in defining and making progress toward their personal goals.

Within the context of Causal Agency Theory, Shogren, Wehmeyer, Palmer, Forber-Pratt and colleagues (2015) define self-determination as "dispositional characteristic manifested as acting as the causal agent in one's life. Self-determined *people* (i.e., causal agents) act in service to freely chosen goals.

Self-determined *actions* function to enable a person to be the causal agent is his or her life" (Shogren, Wehmeyer, Palmer, Forber-Pratt et al., 2015, pp. 258). Studies demonstrate that both community participation (Andrews et al., 2015) and increased self-determination are linked to enhanced quality of life (Lachapelle et al., 2005). Self-determination and community participation are interrelated and have multidirectional influence on one another and improved outcomes. Increased self-determination is linked to increased choice opportunities (Neely-Barnes, Marcenko, & Weber, 2008) and greater community engagement (Shogren, Wehmeyer, Palmer, Rifenbark et al., 2015; Wehmeyer & Palmer, 2003), including recreation and leisure participation (Dattillo & Rusch, 2012). As noted prior, community participation provides individuals with intellectual and developmental disabilities opportunities to interact with individuals without disabilities, increasing chances to build relationships and establish social and community supports. Participation provides personal experiences that influence interests and opinions regarding plans for future activities and environmental supports needed for successful participation. Greater self-determination within adolescence is associated with positive outcomes later in life, such as keeping a job, living independently, and community inclusion (Martorell, Gutierrez-Rechacha, Pereda, & Ayuso-Mateos, 2008; Shogren, Wehmeyer, Palmer, Rifenbark, et al., 2015).

Individualized and Accessible Spaces and Supports

Community participation varies across individuals, as each person defines participation and their desired supports themselves. This can be done by approaching social spaces and opportunities through the lens of universal design, by thinking broadly about ways to participate within a community setting, and by utilizing assistive technology to facilitate communication and engagement within a community setting.

Universal design is the design and composition of an environment so that it may be accessed, understood, and used (DD Act, 2000) to the greatest extent possible by individuals of all abilities. Universal design shifts the focus from adaptations because of someone's "disability" toward the design of spaces (e.g., parks, work spaces, homes) or tools (e.g., equipment, software, products) that not only increase accessibility but enhance one's abilities or productivity. The universal design principles guide design of environments, products, and communication, including means of instruction or informational materials, that promote use by all while avoiding segregating or stigmatizing users. People need individualized supports and services that promote active participation beyond merely presence in a space with nondisabled peers. Thus, accessibility means creating an environment and personal support system that allows individuals to partake or participate in the activity and social interactions intended for the setting or event. This will vary, as for all individuals, based on personal characteristics that influence how one participates, considering mood, interest, and person–environment fit.

Communities can benefit from examining all possible ways in which people might engage with others or the activity. For example, attending a school dance presents numerous ways to actively engage in addition to dancing, which is potentially seen as the primary activity at such an event. Beyond physical spaces or individual supports for someone to dance, we should also consider supports and strategies needed for ancillary activities and interactions that would enable active participation for all. For example, navigating spaces for conversation or snacks, a photo booth or taking pictures and posting to social media, requesting songs, intimate interactions with a significant other, help planning or decorating for the event, or transportation and involvement in social activities that occur before or after the dance should all be considered.

Accessibility and availability of assistive technology (AT) influences an individual's ability to complete functional activities related to daily living, leisure, and social and community participation (Hammel, Lai, & Heller, 2002). AT encompasses seating and mobility, communication, environmental control, and daily living technologies. Availability and practice utilizing assistive technology or individualized supports within community and recreational activities is critical to ensure individuals

of all abilities experience success and to increase the likelihood of future participation. Such practice opportunities are important for individuals regardless of AT needs and should be prioritized within the transition period.

Planning and Intervening to Enhance Community Participation: An Example Program Considering Individual and Condition-Specific Variables

There is a clear need for supports that promote community participation and engagement in community spaces while also encouraging community spaces and members to become more inclusive, working toward the goal of interdependence (White et al., 2010). In the design of programs and supports, one should consider factors likely to influence community participation (e.g., sense of belonging, accessibility, based on interests or personal input, etc.) along with individual- and disability-specific variables that might also influence needed supports and community participation. For example, availability and comfort utilizing a communication system within the community or with unfamiliar people might be of significance to one individual while access to and navigation of reliable transportation could serve as a significant barrier or a critical change that leads to enhanced participation for someone else. As described earlier, limited social and community experiences often create a disadvantage to engage individuals with disability within the decision-making process, resulting in a barrier to achieve the sense of belonging (Milner & Kelly, 2009) linked to increased community participation.

Autism and Complexities Within Adolescence

Individuals with disabilities demonstrate less, and often more solitary, community participation (Duggan & Linehan, 2013) in comparison to those without disabilities. For individuals with autism, differences in social communication contribute to difficulties interacting with others and navigating social experiences. Rigid thinking patterns or intense interests can also limit participation in family and community activities or get in the way of education or work experience, without appropriate supports. Yet structured experiences and supports begin to decrease during adolescence and continue to wane in the postsecondary education period. Adolescents with autism report limited social opportunities and friendships (Bauminger & Kasari, 2000), a disadvantage at a time when social norms and expectations are defined by more reliance on peers. While there is a natural link between social skills and making friends or leisure time, there is often less emphasis on the connection between these skills and other areas of life (e.g., school, work). Nearly all activities require at least some degree of social competence. Norms and expectations morph over time, making social competence a constant moving target and sometimes a significant barrier and exhausting feat for many individuals with autism.

Gender Exacerbates Already Increased Complexity

During adolescence, social norms and expectations become more complex, particularly for females who encounter relationships that are emotion focused and require heightened levels of communication. For individuals with autism, the need for support in navigating social roles can also increase stress. For young women with autism specifically, their levels of stress, as measured by anxious/depressed symptoms, is heightened compared to females without autism and males regardless of autism diagnosis (Solomon, Miller, Taylor, Hinshaw, & Carter, 2012). The elevated risk for internalizing symptoms for all adolescent females as compared to males, compounded with increased

complexity in social interactions, results in females with autism experiencing a "double whammy" (Jamison & Schuttler, 2016; Solomon et al., 2012) during adolescence.

Prevalence rates for autism of 1 in 38 males and only 1 in 152 females (ADDM Network, 2018) may have implications for girls and women with autism that further exacerbate complexities within adolescence. Although one might argue this ratio suggests a lesser influence on females in general, it could also be interpreted to describe an increased potential for isolation that intensifies risk for mental health conditions for females with ASD – a *secondary impact* of prevalence. Females with autism are often isolated from other girls due to male-dominated autism programs and high rates of boys in special education (~66%, U.S. Dept. of Education, 2019). This narrowed pool means fewer opportunities for girls and young women with autism to socialize with other females their age, limiting their practice of critical gender-nuanced social-communication skills, potentially contributing to the increased social impairments often seen as they enter adolescence (Solomon et al., 2012). This *secondary impact* in autism prevalence creates barriers for girls and young women with autism to develop the sense of belonging and personal experiences likely to enhance community participation and suggests interventions and supports that consider individual-, disability-, and population-specific variables.

Considering long-term employment outcomes, while individuals experiencing disability are widely underemployed, women with autism show a *decline* in vocational activities over time (e.g., amount and quality of employment experience; Taylor & Mailick, 2014) when compared to males with autism. While the mechanism of this effect is still unclear, this population encounters significant barriers to access quality, evidence-based treatments, leading to poorer health outcomes.

Enhancing social supports and community participation can create a "buffer" against anxiety, depression, or other mental health concerns in all adolescents with disabilities but particularly in females with autism. Preventing symptoms of anxiety and depression by creating more opportunities for social connections might influence rates of co-existing mental health conditions for individuals with disabilities, creating long-range financial implications for cost savings in health care, employment, and decreased reliance on state or federal systems.

Girls Night Out (GNO): An Example Program

In the remainder of this chapter, we will describe a program that aims to increase community participation for individuals with intellectual and developmental disabilities, considering individual- and disability-specific factors. Girls Night Out (GNO) focuses on developing social competence and social-emotional health in girls with autism and related disabilities in the context of community-based, evidence-informed social experiences. Although this example highlights elements of intervention and supports designed to address some characteristics unique to the disability and population (i.e., females with autism and related disorders), the program is an excellent model for enhancing community participation for individuals regardless of their disability and provides concrete, practical strategies that consider needed supports, desires, and goals at the individual level, hopefully allowing readers to identify elements of planning and programming applicable to other populations and their work.

Program Overview

GNO is a community-based program to promote social-emotional health through social competence and self-care skill development for girls and young women with autism and related disabilities. The program includes direct services such as 12-week, targeted skills intervention groups (herein: GNO skills groups) as well as single-session community events. GNO skills groups utilize a peer-mediated approach and follow a manualized program that incorporates evidence-based strategies to enhance social-communication skills and promote positive social-emotional health. The curriculum focuses

on three areas: relationship building, self-care skills (personal hygiene and emotional), and promoting individual autonomy. Program structure and core curriculum areas are designed specifically for girls and young women with autism (and related developmental disabilities) and to address risk factors outlined prior. GNO includes typically developing girls (i.e., peer volunteers), providing opportunities for ongoing social interactions with girls with and without autism of a similar age, expanding the potential pool for developing social networks. It addresses a gap area within the critical time period of adolescence, emphasizing overall social-emotional health and practical skills needed to navigate post-secondary and community experiences, and leads to increased ownership of and investment into one's own self-care. The GNO model suggests behavior changes or skills develop through the combination of observation, practice, and cognitive restructuring that occurs under specific conditions in program design. The GNO curriculum creates strategic opportunities for successful practice across multiple exemplars (e.g., people, activities, settings) and tailors the intervention to help girls meet individualized goals set during participation. GNO utilizes evidence-based strategies to reinforce target skills and support community participation. The GNO model postulates that as participants experience success and develop greater confidence and competence, this ultimately enhances social competence and self-perception. By increasing competence and confidence in these areas, GNO aims to help develop a "social buffer" against symptoms of anxiety or depression. See Figure 25.1, which describes the GNO Impact Cycle, or the ways in which the program influences those who participate.

For the remainder of this chapter, we provide a further overview of the GNO-Teen skills group, highlighting elements that promote self-determination and community participation in adolescents and young adult females with autism, although many of the principles are relevant to those with other disabilities and support needs. We describe the structure of the 12-week program and provide details for several GNO sessions to illustrate implementation of evidence-based strategies in community settings. We emphasize program elements and sessions that highlight active participation of young women in decisions regarding personal goals and group activities. We describe strategies to build community competence and partnerships with hopes to create supportive, inclusive environments for individuals of all abilities.
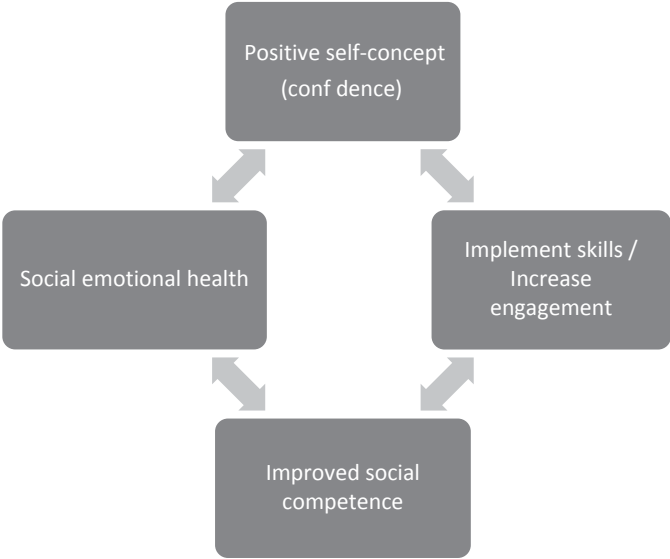
Figure 25.1 The GNO Impact Cycle

Program Structure, Strategies, and Supports

Groups of 8 to 12 teenage girls (ages 14 to 19) with and without autism complete the GNO curriculum through 12 weekly two-hour sessions. Sessions take place within community settings, selected to promote authentic practice opportunities for targeted social and self-care skills (e.g., restaurant, coffee shop, hair salon). Peer volunteers attend every session and receive training prior to most sessions to model use of supports and target skills and to help create opportunities for successful practice of skills by girls with autism. Session activities and descriptions referencing "participants" is meant to include all girls in the skills group (i.e., girls with a disability as well as the peer volunteers), such that all participants complete practice activities and utilize supports to best address individual needs and goals.

Each session follows a similar format with a detailed outline describing peer training, consultation with community partners, session goals, strategies and supports to enhance skills and promote generalization, facilitator roles and responsibilities, and checks to ensure treatment integrity. Facilitators utilize a token economy system to reinforce target skills and use of supports to achieve desired goals. All participants earn "GNO bucks" for bringing materials to each session, completing GNO practice activities, and self-monitoring social and self-care activities. Facilitators also deliver GNO bucks paired with real-time, specific feedback for demonstrating target skills. Girls have the opportunity to spend their bucks each week at the GNO store, stocked based on their interests and requests. Facilitators tailor coaching and specific feedback based on participant goals and personalize visual supports within a printed GNO planner provided to each girl at the onset of the program. Trained facilitators deliver content through direct instruction, social narratives, video modeling clips, and visual supports (such as "conversation key rings" – small cards with sample conversation phrases provided for each participant). Participants practice skills and receive feedback within genuine social and self-care activities each session. See Table 25.1 for examples of strategies used in GNO.

The GNO Curriculum

The GNO curriculum consists of three core areas, including (1) relationship building, (2) self-care skills, and (3) promoting autonomy around social competence and self-perception. Core areas and target skills reflect social development and the unique needs of females with autism. Program elements and activities are iterative and informed by input from past participants, our own program evaluation, and the interests and goals of current participants. See Table 25.2 for example GNO curriculum skills and locations.

Relationship-Building Skills

This domain addresses the heightened focus on conversation, shared interests, and shared emotions that occur in adolescent female relationships (Hannah & Murachver, 1999). All sessions emphasize conversation "entry" skills that serve as critical tools to initiate conversation across contexts, with a focus on both conversation skills (i.e., asking questions/making comments, reciprocal exchanges, etc.) and conversation content (i.e., exchange of person-related information, activity- or setting-related topics, etc.).

Conversation key rings (see Table 25.1) provide tips to help girls find out more about friends, initiate conversations related to the activity, and build on previous skills. Curriculum concepts promote "relating to the relationship" (Jamison & Schuttler, 2016). Session participants practice gathering information about friends or potential friends to guide if, when, and how to initiate making plans with someone. They work on identifying activities of interest and mechanisms to find school, community, or other organizations for social opportunities. Girls practice giving and receiving compliments and using verbal and nonverbal encouragers.

Table 25.1 GNO Teaching Strategies

Strategies	How These Evidence-Based Strategies Are Utilized during GNO
Peer mediated (Kamps et al., 2002)	Peers receive ongoing training to model and reinforce use of skills throughout GNO sessions.
Video modeling (Bellini & Akullian, 2007)	Videos portray specific conversation skills (relate to the person, activity, and relationship) across multiple settings.
Role-play and model (Ratto, Turner-Brown, Rupp, Mesibov, & Penn, 2010)	Practice situations and feedback on skill use (target conversation skills, making plans).
Visual supports (Johnston, Nelson, Evans, & Palazolo, 2003)	Organized in the My GNO Planner to introduce concepts (Gabby's Getting Ready), promote skill use (conversation key rings), support generalization (self-care checklists), and encourage self-monitoring (What I Did This Week sheets).
Goal setting (Shapiro, Durnan, Post, & Levinson, 2002; Hume, Loftin, & Lantz, 2009)	GNO participants set individual goals and self-monitor social and self-care skills using their WIDTW sheets in their planner.
In-vivo coaching/specific praise (Pemberton, Borrego, & Sherman, 2013)	Verbal praise is paired with GNO bucks (token economy) for use of target skills and related positive behaviors. Facilitators also employ differential attention.
Token economy (Atyeo & Forchuk, 2013)	Participants earn GNO bucks for bringing required materials, utilizing supports, and practicing skills.
Planned generalization (Stokes & Baer, 1977)	GNO occurs in multiple settings with ample practice opportunities across a variety of activities and people. Participants also rotate "GNO Friends" to allow for practice outside of GNO sessions.

Table 25.2 Example GNO Curriculum Skills and Locations

Session	Target Skills	Context/Locations
Meet and Greet	– Understanding and using GNO materials and supports *Relationship-building skills:* – Conversation entry skills (relating to the person and activity)	– Family space – Recreational center
Clothing in Context	*Relationship-building skills:* – Conversation entry skills (relating to friends by asking questions and making comments, activity related conversation topics, nonverbal communication) *Promoting competence in self-care:* – Promoting competence in self-care skills – Selecting clothing for your body, the weather, the location, the activity, etc.	– Clothing store – Home
Finding Common Ground	*Relationship-building skills:* – Conversation entry skills (asking questions and making related comments) – Finding common ground	– Coffee shop – Bakery – Café – Frozen custard shop
Dining Out and Goal Setting	*Relationship-building skills:* – Conversation entry skills – Relating to others, finding common ground – Supporting others *Building self-determination:* – Identifying personal strengths and areas of growth – Goal setting and monitoring *Promoting independence*: – dining out (order, budget, tipping)	– Restaurant – Home – Coffee shop

Session	Target Skills	Context/Locations
Fabulous Faces – Skin Care	*Relationship-building skills:* – Conversation entry skills and emotional support: giving and receiving compliments *Promoting competence in self-care:* – Skin care	– Skin care store – Home with community partner
Hairstyle Happiness	*Relationship-building skills:* – Conversation entry skills and emotional support (compliments and encouragement) *Promoting competence in self-care:* – Hair care	– Hair salon – Hair school
Fitness Friendly – Fitness and Nutrition	*Relationship-building skills:* – Encouragement and emotional support *Promoting competence in self-care:* – Body care (hygiene) – Health (fitness and nutrition)	– Exercise facility – Park – Field – Ropes course – Fitness center
Girls Just Want to Have Fun! – Girls Plan	*Relationship-building skills:* – Finding common ground – Making plans	– Park – House – Community locations
Body Care	*Promoting competence in self-care:* – Body care (hygiene)	– House – Comfortable setting with some element of privacy
GNO Literally!	*Relationship-building skills:* – Conversation skills (questions, comments, giving and receiving compliments) – Finding common ground – Making plans *Promoting competence in self-care:* – Hair care – Skin care – Clothing in context	– House and restaurant – Hotel room and restaurant (preferably a place for the girls to get ready together) – Social outing (dinner, game, dance, arcade, show, etc.)
GNO Reunion	*Relationship-building skills:* – Conversation skills (questions, comments) – Relate to relationship (common ground, making plans, continued connections) – Provides girls something to look forward to as GNO ends *less structured session	Something fun that the girls enjoy doing together!

Self-Care Skills

Program objectives include fostering a greater sense of individual identity and competence and reducing overreliance on family or other caregivers for self-care and social skills, with the goal of increased social supports from peers. Goals within self-care are promoting autonomy in determining relevant self-care needs and activities, improving necessary skills to complete these tasks, and utilizing available supports to build these skills. Practice opportunities are designed to support skill

development while empowering participants to identify and value their individual qualities, self-expression, and interests.

Individualized Growth in Social Competence and Self-Perception

Adolescence is a time for increasing autonomy and developing a sense of self (Steinberg, 2002), which should be reflected in how we support adolescents with autism or other disabilities and design interventions. Within GNO, facilitators solicit information from participants and their families at multiple points throughout the program. Curriculum areas are in line with developmental (social) milestones based on feedback from adolescent girls with and without autism and their families, constantly informed by experiences within the GNO program. GNO facilitators identify areas of strength and desired growth through individual interviews with each participant and their primary caregiver(s), conducted separately to ensure each girl has a voice. Priority areas are summarized and shared with participants to reference during a session designated to set goals. This is also an opportunity for girls to seek and share ideas and provide emotional support to help others achieve personal goals. Participants self-monitor personal goals throughout the program and complete activities within and outside of GNO sessions toward goals. Participants engage in a variety of activities across numerous settings, increasing personal experiences that inform goals, preferences, and future plans, including actions required to achieve their goals. GNO provides conditions that support the participant and her experiences of autonomy, mastery, and control by creating opportunities for growth appropriate to her level of needed supports and by reinforcing attempts and successes within a safe, supportive, and socially valid context. Hopefully, these successful, personal experiences will help girls shift their thinking toward action-oriented beliefs and their role as a causal agent, in line with Causal Agency Theory (Shogren, Wehmeyer, Palmer, Forber-Pratt et al., 2015).

Program Elements That Foster Community Participation

The GNO program illustrates many of the principles outlined earlier in the chapter that foster community participation. These components fall into three broad themes: setting (authentic to skill set and driven by preferences/interests of participants), connections (practicing skills with peers without disabilities and building relationships with existing businesses), and capacity building (individualized goal setting, supports for young women who participate and for community partners). We describe each theme and provide examples of this work in practice in the sections that follow.

The Where: Setting

Community partners serve the broader GNO goal of promoting inclusion of people with disabilities in the community through raising awareness and promoting inclusive practices at businesses and other local community locations in support of the GNO program. Community settings allow for instruction and practice of social and self-care activities within the social environments in which they naturally occur. Some GNO activities lend themselves to a more public space, such as a park for physical fitness, while other activities, such as hair care and skin care, are frequently best engaged in at a local business. Variation in activities for relationship skills and practices are driven by the interests and current activities of participants and peers. Girls have multiple opportunities to influence selection of GNO activities or locations. For example, girls select the restaurant for our "dinner and goal setting" session (see Table 25.2) and are charged to plan session activities and locations for two GNO sessions. For example, several participants in the past were very interested in horseback riding, so we held a GNO session at a stable that allowed participants to learn about grooming and caring for horses and to ride the horses with instruction and support from our

community partner. Girls practiced conversation and social skills within these activities and during a light meal.

Within each setting, there are a multitude of opportunities to teach, coach, and practice relevant and related skills by providing (a) concrete visual supports and cues within the setting (e.g. conversation-starter cards, visual schedule), (b) authentic settings and activities that elicit use of skills and opportunities to practice and reinforce skills, and (c) real-time coaching and specific feedback to encourage use of skills and successful practice creating an encouraging, safe environment (Jamison & Schuttler, 2016). Young women in the program gain positive experience across a variety of activities and community settings and, therefore, may be more likely to generalize skills (Stokes & Baer, 1977) and to engage in like activities or return to similar community spaces outside of the structured program time. Such strategic practice and supported experiences could help girls develop the sense of belonging needed to enhance community participation in the future. Choosing a community-based environment also means finding ways to encourage the physical space to be more accessible and to build the capacity of community partners to welcome and include participants with disabilities on the night of the event and beyond, which will be discussed further in the section on capacity building.

The Who: Making Connections

In this section, we describe the intentional ways GNO promotes connection between young women with and without disabilities. Consider the concept of observational/social learning, or the idea that we learn the most from watching those around us (Bandura, 1971). For young women with autism, due to differences in social communication, by this stage in life, they likely have had reduced opportunities to observe and learn from peers. Using peer mediators, we provide participants with autism in GNO with enriched opportunities to observe and practice social skills modeled by other girls who look and sound more similar to them than adults who serve as teachers or therapists (Kamps et al., 2002). Peers participating in the group and other participants are also more like the potential friends they may meet in their school or neighborhood setting, also increasing the likelihood that participants will be able to generalize the practiced skills outside of the group. We often plant conversation topics or questions with others in the group in order to address a sensitive topic – for example, encouraging a peer to ask a question about how often to shave one's legs, for example, rather than expecting that participants might ask. If there are specific questions we want to be sure are answered, we often will encourage a peer or participant to bring them up, rather than introduce it ourselves or wait for a participant to respond. We absolutely encourage questions and discussion from everyone, but sometimes a peer being comfortable bringing up a topic will make others more willing to talk than if a facilitator had introduced it.

The program, therefore, also benefits peers as they push themselves out of their comfort zone in order to try new things, to engage with people they might not have before, and to build their self-confidence in a wide range of areas. It is meaningful for peers to feel as though they helped contribute to the personal growth of others within the group by supporting, encouraging, and providing high-quality feedback to one another while also growing themselves. This growth is most likely to happen within a positive, caring, and supportive environment. Peers model positive attitude, practice healthy self-care, have a healthy support network, and encourage participants and others in the group to do the same. By having these young women participate as peers in GNO now, we are impacting their broader sense of place in the present and future with individuals with disabilities by embracing differences and finding common ground and by understanding the importance of being a part of an inclusive community.

Having girls with a variety of ability levels in the group also serves as a more natural source of reinforcement. While there is always the opportunity to earn GNO bucks as a more external form

of reinforcement, supportive feedback and encouragement from other girls in the group can often be even more meaningful in encouraging practicing skills, even when an interaction did not go as planned. We also encourage girls in our group to give honest feedback and respond respectfully about how another participant's approach, behavior, or other elements of a social interaction may have affected their perception. We utilize all participants, particularly peers, to help create opportunities for girls to practice skills, receive in-the-moment feedback or reinforcement, and experience success.

GNO participants and peers have been an outstanding resource for designing activities and events, as well as providing example statements and questions that might be asked while participating in an activity. They give us input on example "conversation card" topics, current trends in clothing, self-care, makeup, and hairstyles and support participants in learning those skills by modeling or encouraging them by sharing their personal experiences.

Peers participate in both an initial training as well as ongoing trainings that take place immediately prior to GNO sessions. In the initial training, we share a short video about autism, discuss the potential impact of autism on social interactions and other behaviors, and talk generally about the experiences of past peers and participants. We emphasize the importance of maintaining confidentiality, modeling healthy behavior, and facilitating social interactions. We give a general overview of the strategies we want the peers to use in GNO (e.g., pausing to give participants the opportunity to respond or ask a question, providing honest yet supportive feedback, outwardly utilizing GNO tools and supports, being willing to introduce certain concepts, and being strong models of the skills being focused on). We talk about the supports used in GNO (e.g. GNO bucks, Planner, etc.) and how our expectations will be the same for peers and participants to complete practice activities outside of GNO sessions. We also allow time for questions. From there, peers receive ongoing training, usually prior to weekly sessions. We also try to check in on an individual basis with peers to ensure that their experience is positive and/or to give encouragement and feedback to help make their contributions as meaningful as possible.

To promote connections, girls complete "practice activities" after each session that involve contacting one of their GNO Friends as well as beginning to identify young women outside of the group with whom they may explore a friendship. Additionally, they use a GNO Planner that provides visual supports and social narratives to reinforce social competence and self-care concepts outside of session and includes a framework for recording information about new social connections formed within and beyond GNO. Part of the curriculum also includes structured practice with making plans, including designing a session of GNO.

The How: Capacity Building

Capacity building involves growing competence for all involved in GNO. This means supporting participants with and without autism through individual goal setting and measurement of growth toward those goals, as well as supporting community partners in enhancing accessibility of environment and interaction skills. Both approaches are described here.

Identifying goals and smalls steps toward reaching them, as well as monitoring progress toward goals, is a key component of the GNO program. Young women and their families give us input at the beginning of the group on areas they are interested in working on, and facilitators also make suggestions based on their observation of the participants in session meetings. Around the fourth session, girls work in small groups, supported by a facilitator, to talk through and establish goals, as well as small steps they can self-monitor. Based on these goals, the participants' self-monitoring sheets (housed within their personalized GNO Planner) are individualized to align with the goal activities. Each week, between sessions, girls then check off their completion of their small steps and report back to facilitators, who provide tangible reinforcement for completion of steps toward goals.

While we sometimes visit places without establishing community partners or disclosing the purpose of our group, we take advantage of every opportunity to build more inclusive communities. Training typically takes place within a few days prior to or immediately before the session begins, depending on the level of the community partner's involvement. We spend more time consulting partners prior to the session when they are providing expertise on a topic (e.g., skin care, hair care, fitness, etc.). For others, we often contact the establishment ahead of time and simply describe the purpose of our GNO group and the space or other features needed for the session. For example, at our dinner and goal-setting session we often spread to multiple tables and stay there for a longer period of time than typically required to eat dinner. Upon arrival, we meet with the server before the participants arrive to share information about our group and goals for the session around ordering, calculating gratuity, and payment. We provide tips for communicating with the participants and ways to support their goals. At times, training might also include providing evidence-based information about autism and related disabilities in general, as well as necessary supports specific to the makeup of our group, the activity, and individual needs. The general teaching strategies of the program are also reviewed and practiced (e.g. specific praise, use of tangible positive reinforcement) so that partners are often able to use the strategies themselves. The schedule for the session is also reviewed, and the integration of community partner expertise is discussed and agreed upon.

As another example, during training with hair-care professionals working with our group, the following activities are undertaken:

- General overview of autism and how it affects each individual uniquely but that usually they have noticeable differences in social interaction from others and sometimes engage in repetitive behaviors.
- Review of accessible communication strategies, for example:

  - Use concrete, straightforward language while also using language that is age appropriate.
  - Providing opportunities (e.g., "pausing") to give girls the opportunity to respond rather than rushing too quickly or assuming they won't respond.
  - Explaining what you will do before you do it can help with putting them at ease.

- Review of specific strategies and supports used in GNO to promote accessibility and participation, for example:

  - After you show someone how to do the style, have them practice in small steps. (e.g., first how to hold the hair, then how to use the iron, then which spray to use). Using specific feedback with "labeled praise" – telling girls exactly what they did that was good is a helpful way to reinforce what they are learning/practicing ("Great job holding the curling iron" or "You are doing great working on that braid!"). Pair this feedback with a GNO buck to encourage further use of a skill.
  - Conversation cards are used to encourage initiation with others. During the hair-care session, facilitators will be taking photographs to use in a visual support demonstrating the hair-care skills learned during the session.

Throughout the session, we also provide live coaching and feedback to community partner representatives to support them in working with the group.

Following Up

Once we have held an event with a community partner, we always follow up with a thank you note. We also try to take a group photo at the end of each session so that we can send the photo along with our thank you to put a "face" with our note.

Conclusion

Community participation as a vehicle for inclusion and a core component for transition has been the focus of this chapter. We have reviewed briefly a history of the community participation movement and emphasized the importance of community participation for improving a variety of outcomes for individuals with disabilities, including enhanced social-emotional health, self-determination, and future community participation. We described some critical factors that may influence community participation and should be considered when designing programs or supports for individuals with disabilities. Finally, the Girls Night Out program has been described as a model for enhancing community participation for young women with autism and related developmental disabilities.

Throughout this chapter, we have emphasized the importance of building connections between individuals with and without disabilities around interests and in spaces that are accessible and supportive for community participation. The power of the GNO program is its intentionality in forming connections among all stakeholders (young women, businesses, community spaces) to build everyone's skills (e.g., enhancing accessibility as well as building role competency) in ways that are important to them, maximizing individual and community impact. This program serves as an example of ways to incorporate individual strengths and interests, promote access and inclusion, and ultimately enhance community participation for young people with disabilities.

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26

Trends in Transition Educator Personnel Preparation

Monica L. Simonsen, Mary E. Morningstar, and Stacie L. Dojonovic

Despite initiatives to improve secondary transition educator quality, there is still much discourse in the field of special education concerning educator preparation to support student postschool outcomes. Both the Every Student Succeeds Act (ESSA, 2015) and the Individuals with Disabilities Education Improvement Act (IDEA, 2004) call for improved educator quality as well as better student postschool outcomes. Supporting the transition of youth with disabilities from high school into adult life, there continues to be a need for transition professionals (e.g., secondary special educators, career and technical education [CTE] educators, vocational rehabilitation [VR] personnel) to possess specialized knowledge and skills to provide effective secondary transition programs, instruction, and services (Morningstar & Mazzotti, 2014). This includes, but is not limited to, competencies related to: (a) transition evidence-based practices and predictors of postschool success, (b) transition assessment, (c) developing postschool goals aligned with individualized education program (IEP) goals and transition services, (d) facilitating career development and work-based learning opportunities, and (e) providing transition services in collaboration with adult service providers (Mazzotti, Test, & Mustian, 2014; Simonsen & Neubert, 2013).

Over the past few decades, studies have shown that transition professionals often report they lack knowledge and skills necessary for implementing effective and evidence-based transition practices (Morningstar & Benitez, 2013; Plotner, Mazzotti, Rose, & Carlson-Britting, 2016). Consequently, it could very well be that educators who are unprepared to plan and deliver transition services may be inadvertently contributing to the poor outcomes of students with disabilities (Morningstar & Clavenna-Deane, 2014). Past research is replete with studies that support that transition professionals do not feel prepared to properly plan and implement the activities that lead to successful transition for students (Li, Bassett, & Hutchinson, 2009; Plotner, Trach, & Strauser, 2012). More recently, Mazzotti and Plotner (2016) found that while transition professionals (i.e., educators and vocational rehabilitation counselors) reported generally using evidence-based practices (EBPs) in their work, the majority did not have adequate knowledge of specific EBPs. This is compounded by the fact that many educators and professionals involved in transition planning receive most of their training *on the job* (Kohler & Green, 2004). Plotner and colleagues (2015) found that knowledge of secondary transition EBPs gained through university preparation programs predicted greater use of these practices by direct-service transition professionals. These findings are consistent with those from Morningstar and Benitez (2013), who found a statistically significant relationship between transition educator

preparation and training as the most influential factors associated with frequency of implementation of transition-related planning and services.

The challenge of ensuring that educators are equipped with specific skills and experiences to support the development and implementation of transition programs for youth with disabilities is compounded by a national special education teacher shortage. Since 2008, the number of special education teachers has continued to decline due to decreased enrollment in university personnel preparation programs in special education and low retention rates of special education teachers in the public schools (Aragon, 2016). Notably, the attrition rate of special education teachers is almost twice that of general education teachers (Keigher, 2010). According to the U.S. Bureau of Labor Statistics, the shortage of special education teachers, along with a continued need for special education services to support children and youth with disabilities, has led to an 8% projected increased demand for special education teachers, including secondary special education teachers, over the next eight years (https://www.bls.gov/ooh/education-training-and-library/special-education-teachers.htm).

Although research points to the critical role of educator preparation programs in ensuring that graduates are competent in supporting transition-age students with disabilities to progress toward postsecondary education goals (Morningstar, Kim, & Clark, 2008), only a limited number of such preparation programs require transition content. In a recent survey of transition personnel, almost 75% disagreed or strongly disagreed that transition EBPs were addressed during their university preparation programs (Plotner et al., 2016).

These perspectives are corroborated by recent research of 140 special education educator preparation programs from 43 states that found that fewer than half of the programs (46.2%) required a dedicated course in secondary special education and transition for initial licensure (Morningstar et al., 2018). For the most part, respondents indicated that transition content was embedded within existing characteristics and methods courses, although the levels and intensity of the transition content and modality of instruction were often not reported or were sporadic. This study was a follow-up to research published over 15 years prior examining educator preparation programs and transition-specific content. Unfortunately, it would seem very little improvement has occurred since 2003 when Anderson and colleagues reported that 44% of instructors reported offering a course or courses focusing on transition (2003). The need to increase the availability of sufficiently robust transition content cannot be overstated given the relationship between transition coursework and educator preparedness to implement critical transition services (Tilson & Simonsen, 2013).

In another study, Yell, Williams-Diehm, Rowe, Johnson, and Guilmeus (2018) completed a content analysis of 24 transition course syllabi primarily delivered within licensure programs (6 undergraduate only, 3 undergraduate/graduate, 15 graduate only), finding the potential for leaving entry-level practitioners without needed content and skills. Relevant transition standards and competencies were identified in only 21% ($n = 5$) syllabi, indicating a potential lack of awareness of transition standards and professional practices valued by educator preparation programs. Furthermore, the majority of the transition coursework addressed student-focused planning and development rather than implementation of specific EBPs, indicating the course included a substantial amount of time focusing on the legal requirements for transition planning and the IEP and less time promoting instructional strategies resulting in more positive postsecondary outcomes. To ensure that educators are prepared to develop and implement transition EBPs, it is critical to understand factors that promote the development and sustainability of transition educator preparation programs, along with the essential content and future trends.

Research continues to support the conclusion that graduates from educator preparation programs are insufficiently prepared to provide evidence-based transition practices. Practicing teachers have long confirmed the lack of preparedness to implement critical transition services to youth with disabilities. The results confirm long-held notions of the obstacles to preparing secondary special educators to facilitate effective transition planning and services. In this chapter, we will describe the

history of support toward transition educator preparation, outline critical features of transition educator preparation programs, and consider future trends.

Developing and Sustaining Transition Personnel Preparation Programs

Historically, there has been a reciprocal relationship between federal funding, states' credentialing structures, and the nature and scope of educator preparation programs (Kleinhammer-Tramill, Geiger, & Morningstar, 2003). Understanding the nature of transition-related federal funding and credentialing structures helps contextualize the development and sustainability of transition educator preparation programs.

Federal Funding

To promote sufficient preparation and qualification of special education professionals, the Office of Special Education Programs (OSEP) in the U.S. Department of Education (USDOE) has long provided assistance. Through the authorization of the Individuals with Disabilities Education Act (IDEA, 2004), OSEP assists states and local districts to improve services for children with disabilities from birth through age 21 through leadership initiatives and discretionary grant projects. One of the discretionary grant programs areas, *Personnel Development to Improve Services and Results for Children with Disabilities* discretionary grants (Catalog of Federal Domestic Assistance Number: 84.325), funds programs to help states ensure adequate numbers of fully certified personnel to serve children with disabilities.

The number of OSEP federally funded transition-focused educator preparation projects has steadily declined over the past few decades (Plotner & Simonsen, 2018). Kleinhammer-Tramill et al. (2003) found that the number of federally funded transition educator preparation projects declined from a high of 38 in 1983 to only 7 in 2000 ($M = 20.8$). More recently, from 2001 to 2016, only 41 transition-focused personnel preparation projects were funded (from 0 in 2008 to 9 in 2011; $M = 2.56$). The projects were funded to institutes of higher education (IHEs) in just 35% ($n = 18$) of states, indicating both a dearth in transition-focused personnel preparation and an inequitable distribution of trained transition specialists across the country (Plotner & Simonsen, 2018). Of note, only three funded projects were entirely online (Massachusetts; $n = 1$; Kansas, $n = 2$).

The funded transition-focused personnel preparation programs were designed to address the needs of a variety of pre-service and graduate-level teachers. While more than half of the funded transition-focused personnel preparation programs yielded master's degrees in transition ($n = 21$; 51.2%), others yielded transition endorsements ($n = 20$; 48.8%) and/or initial teacher licensure/certification ($n = 14$; 34.1%). These findings highlight the minimal focus on ensuring that transition-focused preparation is included in initial teacher licensure (Plotner & Simonsen, 2018). To expand access to high-quality transition-focused personnel preparation, it is important to identify variables that promote the development and sustainability of transition-focused personnel preparation programs.

Although it is important for all secondary special educators to understand how to provide transition services and supports for students with disabilities, the inclusion of a targeted concentration for OSEP funding (Focus Area E: Secondary Transition) in 2010 and 2011 was encouraging as a means of preparing transition specialists. Plotner and Simonsen (2018) interviewed project directors of OSEP funded transition educator preparation projects ($n = 10$). Several participants indicated that federal funding was critical to sustainability of the programs. Participants described the interplay of state-level credentials and federal funding status, suggesting that transition-related state-level credentials and/or standards shape both the scope of educator preparation programs and the demand

from potential applicants. For example, one participant stated, "When the money ended, so did the students . . . and since there wasn't an incentive from the state, in terms of licensures or endorsements, or anything, there was just not much interest" (Plotner & Simonsen, 2018, p. 43).

Credentialing Structures

Plotner and Simonsen (2018) found that the project directors they interviewed emphasized the importance of continuity in federal funding and its impact on existing personnel preparation programs in IHEs, generally indicating federal funding was critical to sustainability and the ability of IHEs to adjust to needs of the field. Of these 18 states with funded projects, only 6 (i.e., Illinois, Iowa, Massachusetts, Nebraska, Ohio, and South Carolina) were found to have a state transition-related credential or endorsement for special educators (Simonsen, Novak, & Mazzotti, 2018). Many participants believed that state-recognized credentials increased the demand for transition educator preparation programs and led to greater incentives to pursue specialized coursework in transition. Participants argued that a lack of state-recognized credentials affects transition educator preparation programs as well. Most respondents agreed that without unified credential requirements and with low program demand, IHEs are limited to offering only minimum numbers of courses related to transition. This was supported by one participant who stated, "If school systems required licensure or endorsement for transition specialists, then people would get it" (Plotner & Simonsen, 2018, p. 43). Another participant described the impact of credentialing on the program structure: "We don't include a practicum in part because [our state] doesn't have an initial licensure for transition" (Plotner & Simonsen, 2018, p. 43). Although the Council for Exceptional Children (CEC)'s Division on Career Development and Transition (DCDT) offers guidance in transition educator preparation by defining area-based standards, findings indicated that it was vital for states to recognize a certification/credential requirement that would inform the structure and content of the transition personnel preparation programs.

States vary widely in their levels of commitment and approaches to preparing pre-service professionals to meet the transition needs of young people with disabilities. While 16 states have a credential option in special education, CTE, and/or VR available to professionals who complete advanced educator preparation in secondary transition, most of those states do not require people who perform transition roles and responsibilities to hold the credential (Simonsen et al., 2018), and that number decreased between 2001 and 2016. Results also revealed that few state VR agencies have adopted credentialing structures that prepare rehabilitation counselors to meet the unique needs of transition-age youth. One positive trend is that between 2001 and 2016, there was a six-fold increase in the number states with CTE licensure requirements related to preparing pre-service teachers to provide appropriate modifications and accommodations to students with disabilities. This trend is especially encouraging given that CTE serves a disproportionate share of students with disabilities (Gordon, 2014).

Despite evidence that youth with disabilities continue to lag behind their peers without disabilities in terms of postsecondary outcomes (Newman et al., 2011) and a growing body of EBPs and predictors of postsecondary success (e.g., Mazzotti et al., 2016; Test, Fowler et al., 2009; Test, Mazzotti et al., 2009), states have not consistently responded by expanding pre-service educator preparation requirements in secondary transition (Simonsen et al., 2018). A survey of IHEs yielded discrepant findings related to the credentialing structures and indicated that state education agencies (SEAs) and IHEs have different information related to certification and licensure options offered by their states. This inconsistency suggests the need for increased collaboration among various stakeholders in transition-related personnel preparation, including SEAs, IHEs, and state VR agencies (Plotner & Simonsen, 2018).

Stakeholder collaboration can help shape the relevance, scope, and quality of the programs as the nature and quality of the personnel preparation programs are primarily shaped by faculty expertise

within an institution. Program directors indicated that the development and implementation of transition-focused personnel preparation programs are often initiated by faculty with specific interest, experience, and expertise in transition service delivery (Plotner & Simonsen, 2018). Because many of the transition-focused educator preparation projects were actually funded under disability-specific focus areas (e.g., low-incidence disability), the funding structure narrows the scope of graduates with the knowledge and skills required to support the transition needs of all youth with disabilities (Miller, Lombard, & Hazelkorn, 2000; Plotner, Trach, Oertle, & Fleming, 2014). Today's educators and transition specialists should expect to work with students with a broad range of disabilities and support needs. Therefore, regardless of the funding pattern and/or credentialing structure, disability-specific training should be secondary to a foundation in transition-related knowledge and skills, as graduates will likely work with a wide spectrum of students.

Standards and Competencies

Given that secondary special educators and transition specialists must plan and implement transition EBPs for students with a broad range of support needs, it is critical that educator preparation programs be framed around essential transition-related competencies. In 2003, DCDT issued standards in transition for special education (i.e., DCDT Transition Specialist Standards). These initial standards were based upon research current at that time and primarily utilizing the Transition Taxonomy framework (Kohler, 1996). That framework was organized around providing effective transition programs to achieve postsecondary outcomes by emphasizing five essential transition domains: (1) student development, (2) family involvement, (3) program structures, (4) interagency collaboration, and (5) student-focused planning.

Since then, and especially with the expansion of transition research summarized by Test and colleagues in 2009 associated with evidence-based practices to improve student skills, as well as identifying research predictors for students' postschool success (Test, Mazzotti, et al., 2009), there has been increased impetus to re-examine the Transition Specialist Standards. Beginning in 2012, CEC's Professional Standards and Practice Committee worked with DCDT to revise and validate a new set of advanced professional standards for special education transition specialists. The revised standards were those considered essential for teacher candidates preparing for both classroom-based and non-classroom-based roles in providing transition services. Since publication of the revised standards in 2013, DCDT has actively promoted the inclusion of these standards as part of advanced licensure programs. The intended outcome of this work is that high-quality educator education programs align with the DCDT Transition Specialist Standards, as well as adhere to revised content found in the Transition Taxonomy 2.0 (Kohler, Gothberg, Fowler & Coyle, 2016), to prepare educators who understand how to implement established transition EBPs (Morningstar & Mazzotti, 2014).

Critical Content to Be Taught Within Transition Educator Preparation

In recent years, significant progress has been made to identify evidence-based and promising practices correlated with improved transition outcomes for youth with disabilities (Test, Fowler et al., 2009; Mazzotti et al., 2016). With annual updates from the National Technical Assistance Center on Transition (NTACT), 179 evidence-based predictors of improved postschool outcomes have been identified (Mazzotti et al., 2016), most of which are implemented when students are in school, prior to their transition to adulthood. Despite this progress, young adults with disabilities continue to experience poorer postschool outcomes when compared to their same-age peers without disabilities, including college enrollment and completion, employment, and independent living (Newman et al., 2011).

Past research associated with the perceptions of special educators indicated they felt prepared to plan for transition but did not have the competencies necessary to implement effective practices

necessary to deliver high-quality transition services (Morningstar & Benitez, 2013). Such results have turned attention to educator preparation as an essential component of progress toward more positive postschool outcomes for youth with disabilities. Morgan, Callow-Heusser, Horrocks, Hoffman, and Kupferman (2014) argued that educator preparation programs may be "one of the strongest variables in ensuring successful postschool outcomes for students with disabilities" (p. 159). In the next section, we examine current research associated with critical content necessary to ensure that special educators exit educator preparation programs equipped to facilitate student transitions to positive adult outcomes.

Research has documented the importance of training and preparation as factors influencing transition practices. Li et al. (2009) found "pre- and in-service training on transition led to significant differences in special education teachers' involvement in transition assessment" (p. 168). In a survey of almost 200 pre-service teachers, Wandry et al. (2008) found transition coursework led to higher feelings of awareness and optimism toward an ability to implement transition practices. Similarly, Morningstar and Benitez (2013) found participants who enrolled in at least one transition course and/or participated in high rates of transition professional development not only felt more prepared but were more likely to implement transition practices.

Nationally, there is consensus regarding educator preparation programs addressing essential instructional content associated with evidence-based transition practices across all educators. A 2003 DCDT (Blalock et al., 2003) position paper recommended that higher education should increase inclusion of appropriate transition content across all personnel preparation programs while providing for specialized programs to adequately prepare transition specialists.

Early on, experts in the field identified content for educator preparation programs targeting transition education (Morningstar & Clark, 2003). More recently, these areas have been aligned with both the revised Transition Taxonomy 2.0 (Kohler et al., 2016) and emergent transition EBPs. Five broad areas have been identified. The first area focuses on principles and concepts of transition education and services. This includes possessing knowledge about the transition services requirements under the IDEA and their application, as well as the EBPs that impact transition planning and the development of the IEP (e.g., student-directed IEP planning, family collaboration during transition planning).

The second content area targets transition EBPs, including specific interventions for student-focused planning and skill development (Kohler et al., 2016). Transition assessment methods used to determine postsecondary goals and track student progress are considered within this content area. Also considered are programmatic models that use student-centered planning for determining programs and services.

Strategies for developing, organizing, and implementing transition education and services make up the third major domain. This includes strategies for community-referenced curriculum and instruction, particularly targeting identified EBPs (Alwell & Cobb, 2006; Test, Fowler et al., 2009). Content focused on career development curriculum and work-based experiences, community-referenced instruction, preparation for postsecondary education and independent living, and planning and support for transition within general education classes are all subsumed under this area.

Interagency collaboration forms the basis of the fourth content area, which includes learning about community agencies, programs, and services, as well as organizational and eligibility requirements. Maintaining professional ethics when interacting with outside agencies as well as families and other stakeholders are also considered in this domain. In addition, working with employers and the business community is an essential aspect of this domain area.

The fifth area of focus is related to addressing systemic problems in transition service delivery. This involves barriers inherent in planning, developing, and implementing transition services at the local, state, and federal levels. Examples include how governmental systems work and how to work within such systems, funding sources and skills in grant writing, policy issues and how to effect change, skills

in promoting individual student and program interests within the school and in the community, child and labor laws regarding employment, and skills for participating in systemic change.

Even a brief look at these content areas demonstrates that typical special educator preparation programs do not sufficiently provide transition knowledge and skills. This is particularly evident when examining the typical methods for delivering transition content, in which programs that prepare special education teachers across all grade levels (K–12) are less likely to adequately cover even the essentials of secondary education, let alone transition planning and services. As was mentioned previously, educator preparation program graduates reported feeling most prepared in domains associated with student development and instructional planning rather than implementing transition EBPs (Test, Fowler et al., 2009). Therefore, a critical next step is to examine the effectiveness of program evaluation strategies (Morningstar & Mazzotti, 2014) to identify program gaps and to gain access to resources and instructional strategies that focus on transition EBPs practices. Examining whether expanded transition content coverage will impact not only perceived levels of preparation among program graduates, but influence educator use in schools, is an important next step.

Delivering Transition Content

Transition-specific content most appropriate for teacher education has been validated by research over the past three decades (Blalock et al., 2003; Yell et al., 2018). Morningstar and Clark (2003), described four types of transition personnel preparation programs that stand today:

1. Transition master's programs (30 or more hours toward an advanced degree)
2. Transition specialization programs (15 or fewer credit hours; focusing on a state endorsement or licensure program for transition specialists)
3. Transition class or classes
4. Transition content infused within existing courses

Facilitative factors for *transition master's programs* have included both federal support for personnel preparation programs as well as higher education institutional commitment to faculty specialization. Albeit limited in numbers, longstanding transition master's programs are case examples of the importance of both federal and institutional support for training and preparation of graduate students in transition.

Transition specialization programs are most likely to emerge in direct response to federal support for personnel preparation or as a result of state transition certification programs. At this point in time, the field has little data that systematically describes how programs are developed, what courses and competencies are included, and how programs are sustained. Anecdotally, however, it appears that transition specialization programs typically consist of three to four classes and are based on the CEC standards for transition specialists (CEC, 2015). In states such as Ohio, Georgia, and Michigan, a critical factor is strong support for transition within state departments of education (personal communications, July 2002). In such states, teacher competencies for transition have been developed and incorporated into a stand-alone transition certification. Without both state department and institutional support, it is clear that faculty tend to diminish the amount of time devoted to transition content (Morningstar et al., 2018; Plotner & Simonsen, 2018).

Offering a *transition course* is the third delivery method consistently found across 15 years of research, with approximately half (45%–47%) of the IHEs responding to national surveys (Morningstar et al., 2018). The reported benefits to this delivery mode are that instructors are able to devote sufficient time to transition competencies if a specific course is established. Opportunities to offer single courses in transition are often tied to faculty interest and knowledge of transition, as well as transition-specific state teaching standards embedded within traditional special education licensure

requirements. The need to increase the availability of transition coursework cannot be overstated given the relationship between transition coursework and perceptions of educator preparedness, as found when faculty report significantly higher rates of student preparation across all transition content areas when they offered a transition-specific course (Morningstar et al., 2018).

Finally, *infusing transition content within existing courses* is the most common approach to offering transition content when training special education teachers (Morningstar et al., 2018). As states and educator preparation programs move toward K–12 non-categorical teacher standards, the increased pressures on higher education faculty to cover the breadth of information will mean that less time can be devoted to transition content. In addition, faculty who have limited transition knowledge are less likely to embed transition content into existing coursework. To illustrate, Morningstar et al. (2018) found that content such as *collaboration among multiple agencies in transition planning* was not taught when transition content was infused within other classes. Transition assessment competencies are also commonly neglected, primarily because faculty are not familiar with this area (Thoma, Held, & Saddler, 2002).

Unfortunately, course time devoted to transition content has been reduced due to increased pressure for faculty to cover a lot of information over a short period of time. Kohler and Greene (2004) suggested infusing transition content across educator preparation curriculum as an approach to accommodate the pressure to reduce program requirements while emphasizing the importance of transition content for special educators. Recommended activities that can be infused into existing coursework include: (a) having students analyze case studies containing transition assessment data; (b) using transition assessment data to create student-focused planning approaches; and (c) investigating how local districts implement transition planning, among others.

As a field, we have generated insights regarding how educator preparation programs deliver transition content. Similar to past research, methods by which programs convey transition content continue to be variable. Unfortunately, a clear delivery pattern for specific transition content remains sporadic, with the most likely method of teaching transition content being via field experiences (Morningstar et al., 2018). Clearly, research is needed to better understand this and to improve the types of experiences provided to future special educators to not only know about but practice relevant transition skills.

Emerging Content

As research points toward the predictive impact of inclusion in general education on student transition outcomes, it is critical that educator preparation incorporates inclusive practices into existing programs. In addition, transition educator preparation programs must emphasize models and services that promote college and career readiness for all students. Both of these critical topics will be discussed next.

Supporting Inclusion in General Education

Ensuring that all students are included in general education must be a critical focus of secondary educators. This is because we know that students with disabilities achieve better transition outcomes when they have participated in general education classes, as opposed to special education settings (Test, Mazzotti et al., 2009). Students who participate in the general education coursework are more likely to move on to postsecondary education and training and employment. Researchers have found that students who participated in general education were five times more likely to participate in postsecondary education (Baer et al., 2003). In addition, students with disabilities who were included with their peers were more likely to be engaged in postschool employment (Carter, Austin, & Trainor, 2012).

IDEA requires that students with disabilities be included with their nondisabled peers in the general education classroom to the maximum extent appropriate supported by supplementary aids and services provided in the least restrictive environment. Given this perspective, the general education classroom is the ultimate proving ground for enabling all students to engage in academic learning and participate in the range of non-academic experiences necessary to be college and career ready (Morningstar, Lombardi, Fowler, & Test, 2017; Turnbull, Turnbull, Wehmeyer, & Shogren, 2013). Longstanding support for access to general education exists among parents, researchers, school professionals, and advocates, and we now know that inclusion in general education leads to better outcomes. Effective inclusive practices occur when general educators and other education team members collaboratively design, implement, and evaluate the outcomes of instruction. Therefore, meaningful inclusion of students with disabilities in secondary general education classrooms requires transition coordinators, secondary special educators, general education teachers, and related services staff to work together.

Educator preparation programs need to incorporate critical content to support secondary special and transition educators to be prepared to collaborate with general educators to embed transition-related content while also supporting individualized goals for students with disabilities. This includes monitoring student mastery of academic standards through embedded instruction along with opportunities for learning in both academic and real-world settings. For example, secondary educators can provide opportunities to embed self-determination skills such as the Self-Determination Learning Model of Instruction (SDLMI) within general education curriculum (Raley, Shogren & McDonald, 2018).

The shift toward inclusive academic placements has necessitated transformations in how instructional methods are implemented to support students in general education secondary classrooms (Murawski & Goodwin, 2014). In particular, the co-teaching model has become a prominent approach to collaboration among school personnel (Villa, Thousand, & Nevin, 2013). Co-teaching has been defined as the partnering of a general education teacher and a special education teacher who jointly deliver instruction in general education settings to a diverse group of students, including those with disabilities (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010). Content associated with successfully supporting students with disabilities in general education through push in models such as co-teaching and co-planning are essential for educator preparation programs.

While co-teaching makes intuitive sense, it is challenging to operationalize, especially within high schools. Therefore, educator preparation programs must carefully consider how both general and special education faculty can collaborate to provide content and experiences addressing key elements of effective co-teaching (Murawski & Goodwin, 2014), including:

1. Developing strong interpersonal communication and problem solving
2. Possessing familiarity with curricular content and standards as well as differentiated instruction, individualized behavioral and instructional techniques, and data collection
3. Establishing respect and parity among co-teachers as well as complimentary personalities or teaching styles
4. Clearly defining roles with equity in decision making and planning
5. Providing administrative support including scheduling and co-planning approaches

Successfully supporting students with disabilities in general education also requires foundational knowledge of universal design for learning (UDL) to be able to:

(a) differentiate instruction; (b) provide learning strategies and meta-cognitive strategy instruction; (c) develop relationships with general education teachers, including career and technical

education teachers, to support students with disabilities; and (d) identify needed accommodations and assistive technology (AT) that can support students with disabilities in academic settings.

(Morningstar & Mazzotti, 2014, p. 17)

Educator preparation programs must respond to these changing roles and work to align transition services and interventions with general education initiatives.

College and Career Readiness (CCR)

Efforts to prepare adolescents to be college and career ready have been in place for several decades, using a wide range of terms including "career development," "vocational education," "school-to-work," and "workforce education." Arguably, CCR has been a longstanding priority of public schools to aim for high school graduation of all students, but, more recently, emphasis has been placed on also preparing students for postsecondary education (Dougherty & Lombardi, 2016).

The implementation of CCR has fallen primarily on the shoulders of secondary educators, and this is significant given that new models associated with both academic and non-academic elements must be established to personalize learning and meet the goals of students. Such personalization toward college and career readiness is particularly critical when considering the unique learning and support needs of students with disabilities. Improving postsecondary outcomes for youth with disabilities requires a duality of effort for secondary educators to ensure the use of evidence-based practices that increase student skills while at the same time engaging with all staff – administrators, student support staff, general and special educators – through schoolwide efforts toward college and career readiness. Given the high rates of youth with disabilities who spend the majority of their day accessing general education curricula and contexts, it stands to reason that the secondary experiences of youth with disabilities who are included in general education are similar to the instructional and educational experiences of the typical high school student. In this respect, focusing on CCR for *all* students will inevitably impact the critical subgroups for whom we are most concerned.

Morningstar et al. (2017) proposed a framework specific to youth with disabilities that is based upon prior research in CCR. This framework includes six domains, which are briefly introduced here to illustrate the expansion of content and skills needed by transition educators:

1. **Academic engagement:** Skills going beyond acquiring facts with the end result being engaged students understand the connection between everyday behaviors and long-term goals. Academic domain goes beyond core content by including essential knowledge from career and technical education. This requires special educators to collaborate and support career and technical education teachers (Schmalzried & Harvey, 2014). Behavioral engagement includes attendance, class participation, and completing homework assignments.
2. **Mindsets:** Emerged from research promoting student persistence and personal growth by supporting school belonging (Dweck, 2008). Fostering a growth mindset is often linked to perseverance. This CCR domain emphasizes self-determination (Wehmeyer, Field, & Thoma, 2012), which can be defined as a set of skills and experiences to promote student decision making, goal setting, self-awareness, self-advocacy, self-monitoring.
3. **Learning processes:** Skills and processes students use to access academic content such as test taking, note-taking, working collaboratively in groups, time management, etc. Certain learning processes support increased capacity to access academic content while others advance broader learning engagement (e.g., collaboration/group skills, non-verbal communication, listening and speaking). Technology, including assistive technology, is important for accessing content and engaging in learning especially for youth with disabilities.

4. **Critical thinking:** Impacts both academic and real-world arenas. For example, making infer-
ences, interpreting results, and analyzing sources (Conley, 2010) are equally relevant for problem
solving when in an algebra class, on the job, or when navigating the community. Without a
doubt, college freshmen are expected to think critically as soon as they arrive on campus, and
first-time employees are expected to quickly master job-specific problem solving (e.g., resolving
a work conflict, setting new production goals).

5. **Interpersonal engagement:** Skills such as interpersonal communication, empathy, social
awareness, respect for others, and responsibility have been identified characteristics associated
with this domain. Preparing students for the 21st-century workforce involves building inter-
personal skills, as well as dependability, teamwork, and persistence (Müller & VanGilder, 2014).
Research has established that students with disabilities who have had positive social experiences
during high school are two to three times more likely to be employed after high school and
were more actively engaged in communities, families, and friendships as adults (McConnell,
Martin, Juan, Hennessey, Terry, el-Kazimi et al., 2013).

6. **Transition competencies:** Students with disabilities must understand and be able to act
upon underlying processes leading to successful transitions from high school to college and
careers (e.g., college and job applications, awareness of scholarships, developing resumes).
Students must also understand differences between high school and college environments
(e.g., faculty and peer expectations, dormitory living, recreation and leisure), as well as career
environments (e.g., professionalism in the workplace, interviewing, co-worker/supervisor
relationships). This domain also includes preparing for adult living (e.g., financial literacy,
wellness, and transportation) and opportunities for self-advocating in school, at home, and in
the community.

Effective Modalities for Teaching Content

Quality educator preparation programs blend theory, pedagogy, and practice (Brownell, Ross,
Colón & McCallum, 2005). Transition educator preparation programs must integrate knowledge
and skills by setting high expectations for students with disabilities; providing authentic learning
opportunities; offering meaningful coaching, feedback, and assessment; and focusing on equity, access,
and cultural competency.

Authentic Learning Opportunities

Authentic learning is characterized by collaborative open-ended inquiry with integrated assessment
designed to address complex "real-world" problems through interdisciplinary collaboration (Lom-
bardi, 2007). It is essential that transition personnel preparation programs provide students opportu-
nities to *apply* their transition-related knowledge and skills with secondary students with disabilities
in classrooms and communities. Ideally, this should include dynamic field placement experiences that
are aligned with coursework (Plotner & Simonsen, 2018; Brownell et al., 2005). However, finding
high-quality field placement settings in which the students can implement EBPs may be a challenge
(Plotner & Simonsen, 2018). Another option is to facilitate project-based learning activities in which
students apply course content in practical ways in their own school or district, allowing students to
apply the program content and demonstrate progress toward mastery of requisite competencies. For
example, students may work collaboratively to develop an interagency resource guide or a parent
training related to accessing adult services in order to document their understanding of interagency
collaboration. Students could create a transition profile and develop transition goals after implement-
ing age-appropriate transition assessments with another student in the school to document his/her

competencies related to assessment and transition planning. To scaffold the practical experiences, educator preparation programs may include case-based learning and role-playing to provide students opportunities to collaborate with their peers and address authentic challenges in a simulated setting (Lombardi, 2007). Theoretical knowledge alone will not sufficiently prepare teachers to implement transition planning and services. High-quality educator preparation programs will prioritize practical application and promote authentic learning experiences that culminate in tangible, useful products (e.g., transition plans, interagency guides, teacher candidate portfolios).

Coaching, Feedback, and Assessment

Coaching, performance feedback, and meaningful assessments are critical components of any high-quality teaching program (Fallon, Collier-Meek, Maggin, Sanetti, & Johnson, 2015). Transition educator preparation programs should be designed so that teacher candidates have access to specific, positive, timely, and corrective feedback. Prioritizing coaching and feedback may have practical implications in terms of limited cohort or class size, advising and supervision structures, and program assessments. One effective approach to documenting progress toward mastery of learning objectives, including the DCDT Transition Specialist Standards, is to have students create portfolios aligned with the specific standards. The development of the culminating portfolio should be an iterative and ongoing process with frequent peer and faculty feedback. An e-portfolio that students can update and share with prospective employers after they complete their programs serves as a real-world product that adds saliency to the learning and assessment process.

Online Learning

Finally, as the field ensures equity of high-quality transition educator preparation so that transition-age students everywhere have access to highly prepared teachers with the requisite skills and knowledge to support them, it is critical to think about how online learning can be leveraged to increase access to high-quality transition educator preparation even for students in remote locations. Online learning is a modality that educators are choosing for advanced educator preparation as many students indicate that it allows them to learn at their own pace, save money on travel expenses, and spend less time out of the classroom (Bullock, 2018).

Online and blended educator preparation programs can leverage the ever-changing landscape of online learning technologies and tools to create dynamic, engaging, meaningful experiences for students while enabling them to collaborate with a diverse set of peers from around the world. That diversity is another benefit of online learning. Students from rural Midwest communities, urban coastal cities, and Native American reservations likely have different students, settings, and varied district-level policies, practices, and programs. Learning is enhanced through professional discourse with teachers with different experiences, perspectives, and assumptions (Darling-Hammond, 2008).

Cultural Competency

The commitment to diversity should be reflected throughout the program design, including courses, assignments, and field experiences (Brownell et al., 2005). While all educator preparation programs should be designed within a framework of culturally responsive teaching, this is especially critical for transition-focused programs. Understanding the strengths, values, goals, and support needs of transition-age students is the cornerstone of all transition planning and service implementation. Identifying ways in which culture, language, and identity shape the lived experiences of students and families is critical to understanding how to provide appropriate supports.

Future Directions in Transition Personnel Preparation

As the field endeavors to improve postsecondary outcomes for youth with disabilities, it is critical that IHEs prepare educators with the knowledge and skills needed to implement EBPs. It is critical that rigorous transition-related credentialing structures based on standards are widely adopted to ensure that professionals who are tasked with supporting the transition service needs of adolescents with disabilities are sufficiently prepared.

Professionalize Transition With a National Certification

Since the late 1970s, DCDT has been the national organization for secondary special education transition professionals. Given the limited opportunities for direct-service transition professionals to earn transition-related certification or licensure (Kleinhammer-Tramill et al., 2003; Simonsen et al., 2018), DCDT has identified a need for a nationally recognized transition certification. The proposed national certification will be aligned with the DCDT Transition Teacher and Specialist Standards organized around the following domains: (a) transition assessment; (b) transition curricular content and knowledge; (c) transition programs, services, and outcomes; (d) transition research and inquiry; (e) leadership and policy; (f) professional and ethical practices; and (g) transition collaboration (Council for Exceptional Children, 2015).

The establishment of a national certification will provide a rigorous framework for educator preparation programs to develop transition programs that are aligned with national transition standards. By offering a national certification, DCDT will offer guidance in transition educator preparation by shaping the development of current, relevant, high-quality courses, programs, and methods that ensure productive outcomes for students with disabilities. In conjunction with the accreditation of educator preparation programs that lead to national certification, DCDT is developing an individual-level certification process for transition professionals to document their mastery of the DCDT transition standards. A certification renewal process will be developed to facilitate and promote continuous professional development. DCDT's plan for national certification would allow educators to receive recognition and credibility for meeting rigorous transition-related standards and provide a framework for states to develop state-level credentials and career advancement opportunities and salary incentives.

Stakeholder Collaboration

States assume a central role in guiding the approach toward and the quality of personnel preparation in transition (Simonsen et al., 2018; Morningstar & Clavenna-Deane, 2014). It is therefore critical that states leverage their credentialing systems to take a lead in ensuring that direct-service professionals are equipped with the knowledge and skills to implement transition EBPs. SEAs that do not currently offer an advanced secondary transition credential should consider developing a credential based on DCDT's Transition Specialist Standards and *requiring* it for special educators who serve in secondary transition roles while creating credentialing structures that ensure that other direct-service transition professionals are sufficiently prepared to collaborate in the transition process for adolescents with disabilities. Given the interagency context of transition planning and the WIOA mandate that VR counselors should be integral in providing pre-employment services to students with disabilities (WIOA, 2014), Simonsen et al. (2018) recommended that states review credentialing requirements to ensure that, in addition to secondary special educators, CTE teachers and VR counselors have core knowledge and skills related to secondary transition. Given the reciprocal nature of state credentialing structures and the expertise and interest of faculty (Kleinhammer-Tramill et al., 2003), it is recommended that IHEs consider the development of collaborative pre-service preparation for

educators and rehabilitation counselors, providing opportunities for students to learn alongside colleagues from partner organizations (Plotner & Simonsen, 2018; Plotner et al., 2014) and, ultimately, work collaboratively to improve transition outcomes for youth.

Historically, educator preparation programs have been recognized as a key driver of systems change for education agencies (Blalock et al., 2003). Endorsement of the forthcoming national certification and closely aligned state credentialing structures can be used to shape high-quality educator preparation programs that prepare direct-service transition professionals to implement transition EBPs. Ensuring access to high-quality pre-service educator preparation and ongoing professional development opportunities will require the field to invest in online education and focus on meeting the needs of diverse learners. Increasing the efficacy and capacity of secondary special educators and transition specialist to deliver high-quality transition services is essential to the quest to improve postsecondary outcomes for youth with disabilities.

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Adolescent Transition Education for Students With Autism

*Nicholas W. Gelbar**

Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder that impacts social communication skills and includes the presence of repetitive behaviors and/or highly restricted interests (APA, 2013). ASD has received increased attention from researchers and the general public over the past 20 years as the prevalence of the disorder has increased substantially over this time from 1 in 150 in 2000 to 1 in 59 in 2016 (CDC, 2007, 2018). This increase in prevalence is likely attributable to better screening and diagnostic practices (King & Bearman, 2009). Regardless of the causes of this increased prevalence, an ever-increasing number of students with ASD will be entering high school and postsecondary environments over the coming years. These students face the dual challenges of navigating adolescence while concurrently managing the support needs associated with having ASD. One set of researchers described this interaction of this phase of life while also having ASD as a "perfect storm" (Odom, Duda, Kucharczyk, Cox, & Stabel, 2014). This chapter will provide an overview of the evidence-based practices for assisting students with ASD during this perfect storm.

Autism Spectrum Disorder

Before discussing how to best support students with ASD during secondary transition, it is necessary to understand ASD. The diagnostic criteria for ASD are defined by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; APA, 2013) and are divided into two main categories: social/communication difficulties and repetitive behaviors/restricted interests. The first category is defined as "persistent deficits in social communication and social interaction across multiple contexts" (APA, 2013, p. 50). Symptoms in this category include difficulties with social-emotional reciprocity, social nonverbal communication, and relationships generally. The second category is defined as "restricted, repetitive patterns of behavior, interests, or activities" (APA, 2013, p. 50). This category includes four symptoms: (1) stereotyped or repetitive motor or verbal behaviors, (2) routinized or ritualized

behaviors, (3) highly restricted interests, and (4) over- or under-reactivity to sensory information. To meet the criteria for this category, one has to manifest at least two of the four symptoms. The intricacies of screening and diagnosis using these criteria are beyond the scope of this chapter except to note that a comprehensive evaluation including a developmental history and research-based assessment procedures is essential to document the presence of these symptoms.

It is important to highlight that these criteria are incredibly broad, and they can manifest in multiple ways. For example, some individuals with ASD will have difficulty accommodating to loud noises and will try to avoid environments with loud noises while other individuals with ASD may seek noisy environments as they over-accommodate to loud noises. One can also imagine the plethora of restricted interests that are possible. The consequence of this diversity in symptom presentations is that individuals with ASD are an incredibly heterogenous group. This incredible variation is why ASD is conceptualized as a *spectrum*.

Further, individuals with ASD also demonstrate incredible variation on dimensions unrelated to the diagnostic criteria (gross and fine motor skills, intelligence, executive function, adaptive skills, etc.). The intellectual ability of individual with ASD varies across the range of potential scores; that being said, approximately 30% of individuals with ASD also meet the diagnostic criteria for intellectual disability (ID; CDC, 2014). Regardless of intellectual ability, individuals with ASD often have significant difficulties with acquiring and generalizing adaptive skills (Bölte & Poustka, 2002; Kanne et al., 2011; Klin et al., 2007; Perry, Flanagan, Geier, & Freeman, 2009). Adaptive skills have been defined as the "conceptual, social, and practical skills that have been learned and are performed by people in their everyday lives" (Tassé et al., 2012, pp. 291–292). These three domains have been established since the late 1950s and have continued to be empirically validated over time. Adaptive skills encompass a broad range of behavior and life skills (discussed in more detail in Chapter 12) that fall into three subdomains. Practical adaptive skills include employment, financial literacy, healthy living/safety, transportation, and time management skills. Conceptual adaptive skills involve the use of language and numeracy to navigate daily life. Social adaptive skills include not only interpersonal social skills but also a knowledge of social norms, the ability to avoid being taking advantage of by others, and how to solve problem in social situations. These three domains of adaptive skills are interrelated as skills in one domain can support or hinder the development of skills in the other domains (see Tassé et al., 2012 for a comprehensive discussion of the construct of adaptive skills).

In addition to support needs associated with adaptive skills, most individuals with ASD also have support needs in the areas of theory of mind and executive function. Theory of mind involves the ability to understand that other people "are intentional beings" (Wellman, 2002, p. 176). It involves the ability to speculate about the reasoning behind others' actions and responding accordingly. Some researchers have referred to individuals with ASD as having "mindblindness" (Baron-Cohen, 1997) because their ability to understand others' intentions is limited.

Executive function is an umbrella term for a set of skills "responsible for the control, integration, organization and maintenance of different cognitive skills, which, in turn, enable engagement in adaptive and self-organized behavior directed toward targets" (Czermainski et al., 2014, p. 86). Put differently, executive function involves the skills required to effectively and efficiently achieve one's goals. Difficulties with executive function, in a practical sense, lead to difficulties with prioritizing tasks, maintaining attention, and dividing a larger task (e.g., writing a book report) into its component parts. Many individuals with ASD struggle to develop executive function skills (Happé, Booth, Charlton, & Hughes, 2006).

It is also important to note that individuals with attention-deficit/hyperactivity disorder (ADHD) also have difficulty developing executive function skills and that many individuals with ASD also meet the diagnostic criteria for ADHD (Matson, Rieske, & Williams, 2013). Individuals with ASD are also likely to meet the diagnostic criteria for other mental disabilities (Ghaziuddin, Ghaziuddin, & Greden, 2002; Joshi et al., 2013; Kohane et al., 2012; Simonoff et al., 2013; White, Oswald,

Ollendick, & Scahill, 2009). Data from the National Longitudinal Transition Study-2 (NLTS-2) indicated that 60% of individuals with ASD reported a comorbid diagnosis (Roux, Shattuck, Rast, Rava, & Anderson, 2015). The most common co-occurring diagnoses for individuals with ASD are obsessive compulsive disorder, anxiety disorders, and depression (Lai & Baron-Cohen, 2015). Taken together, the incredible variation in symptom presentation and across other dimensions of the human experience means individuals with ASD are an incredibly heterogenous group with unique strengths and needs.

Before discussing how ASD manifests itself in adolescence, it is necessary to examine the differences between the diagnostic criteria and educational classification. The regulations of the Individuals with Disabilities Education Act (IDEA, 2004), the law governing special education in the United States, defines autism as:

> A developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.
>
> *(IDEA, 2004 regulations, Part B, Subpart A, Section 300.8.c.1)*

The key difference between this description and the diagnostic criteria used by medical providers is that special education law requires that the manifestation of the disorder impact educational performance. The law does not define educational performance solely as academic achievement but notes that the purpose of education is to ensure the "equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities" (IDEA, 2004 Section 1400.c.1). The law indicates that a team including the child's parents must decide if a child's disability is impacting his or her educational performance as a result of a comprehensive evaluation and, thus, qualifies them to receive special education services. This means that not all children with a medical diagnosis of ASD based on the DSM-5 criteria will meet this standard of requiring special education services. This distinction is important to consider when reviewing research concerning individuals with ASD as some studies utilize the medical criteria whereas others use the educational criteria, making it difficult compare the results of these studies.

Transition Outcomes for Individuals With ASD

Studies using the medical criteria have found that generally symptom severity reduces with age (Seltzer et al., 2003; Seltzer, Shattuck, Abbeduto, & Greenberg, 2004; Shattuck et al., 2007). For example, the presence of repetitive behaviors lessens over time (Fountain, Winter, & Bearman, 2012). While these symptoms may dissipate for many individuals with ASD, others will not experience this reduction. However, the complexity of the social world continues to increase during adolescence, which means that the improvements in social communication may not have true functional consequences (Wehman, Smith, & Schall, 2009) as the demands of the emerging adolescent/young adult social world can increase at a rate greater than the improvements made by individuals with ASD. The manifestation of secondary conditions such as anxiety and depression may increase during this phase (Ghaziuddin et al., 2002; White et al., 2009) due to this increasing social complexity.

Much of our understanding of the experiences of transition-age youth with ASD is a result of the NLTS-2 study, which was a comprehensive longitudinal study of high school–aged individuals receiving special education services that followed individuals for eight years. This study only included individuals with ASD who were receiving special education services. Several secondary analyses of the NLTS-2 data have specifically focused on the experiences of individuals with ASD as

they entered adulthood. From the beginning of the study, these data indicated that individuals with ASD were not experiencing successful outcomes as they transitioned into young adulthood (Newman et al., 2011). Their rates of postsecondary education/training attendance and employment are significantly less than other students with disabilities and the general population of students (Newman et al., 2011). An early secondary analysis of NLTS-2 data indicated that 34.7% of individuals with ASD had attended a two-year or four-year college and 55.1% had been employed within six years of graduating high school (Shattuck et al., 2012). Over half the sample had neither been employed nor participated in any postsecondary training within two years of graduating high school (Shattuck et al., 2012). The sample was more likely to attend a two-year college versus a four-year college. The sample attending college was actually so small that it is not possible to calculate a reliable college completion rate for this group. Other research (Gelbar, Smith, & Reichow, 2014; Anderson, Stephenson, Carter, & Carlon, 2019) indicates that individuals with ASD struggle in college environments socially, and many also struggle academically.

In general, individuals with ASD also struggle to attain competitive employment, which is defined as being paid at least minimum wage (Roux et al., 2013). While the exact percentages varied across secondary analyses over time, only 53.4% of individuals with ASD ever worked for pay at any point within eight years of graduating high school (Roux et al., 2013). This employment rate was the worst of any disability category. The average hourly rate for individuals with ASD was $8.10, which was also significantly lower than the other disability categories. Those who are employed are often not employed in jobs that are commensurate with their skills or education (Roux et al., 2013). These findings align with non-NLTS studies of adults with ASD that indicate poor employment outcomes for this group (Hendricks, 2010; Ohl et al., 2017).

Several studies using the NLTS-2 data have explored potential predictors of these poor postsecondary outcomes. Nasamran, Witmer, and Los (2017) found that greater scores on standardized academic achievement measures predicted participation in postsecondary education and that having better social skills predicted participation in postsecondary education and being employed. Previous studies had separately explored the relationship between social skills and academic achievement on postsecondary outcomes (Chiang, Cheung, Hickson, Xiang, & Tsai, 2012; Chiang, Cheung, Li, & Tsai, 2013) with similar results. Chiang and colleagues (2012) also found that a postschool goal related to postsecondary education, parental expectations, being educated in an inclusive setting, and household income were significant predictors of whether individuals with ASD participated in postsecondary education. Another previous secondary analysis found that functional and conversations skills were significant predictors of whether individuals with ASD participated in postsecondary education (Wei, Wagner, Hudson, Yu, & Javitz, 2015).

Another likely explanatory factor for these concerning young adult outcomes is that students with ASD were not likely to be active participants in their individualized education program (IEP) meetings or transition planning (Shogren & Plotner, 2012). Across the entire NLTS-2 sample, only 4.6% of students with disabilities did not attend their IEP meetings whereas 22.6% of individuals with ASD were reported to not attend their IEP meetings. When present, 44.7% of individuals with ASD were reported to not participate in the meeting while only 22.7% of the general sample were reported to attend but not participate. Only 66% of individuals with ASD were reported to be active participants in secondary transition activities. Students with ASD who participated in transition planning were significantly more likely to attend college (Wei, Wagner, Hudson, Yu, & Javitz, 2016).

Most parents of children with ASD did not report expecting their children to be competitively employed (Shogren & Plotner, 2012). A survey of parents of transition-age children in Tennessee aligned with this finding and found that parents of children with ASD or ID did not indicate that their children could not perform important self-determination skills (Carter et al., 2013). In addition, a recent study found that students with ASD performed differently on a measure of

self-determination in comparison to group of students with intellectual and learning disabilities (Chou, Wehmeyer, Palmer, & Lee, 2017). Specifically, students with autism had lower autonomy scores than both students with learning disabilities (LD) and students with ID. Students with ASD had comparable levels of self-regulation and self-realization to the other groups, but students with ASD and ID had significantly lower levels of psychological empowerment than students with LD.

Beyond participation in postsecondary education and employment, individuals with ASD were also found to struggle with other aspects of the transition to adulthood. Almost a quarter (24%) of the NLTS-2 sample were socially isolated, and almost a third (32%) did not participate in any community or extracurricular activities (Roux et al., 2015). Individuals with ASD were the least likely to have ever lived independently within six years of graduating high school (Anderson, Shattuck, Cooper, Roux, & Wagner, 2014), and none of the individuals who had graduated within two years had ever lived independently. While a large percentage (77.4%) of the sample were working on life skills during secondary transition, a significant majority of their parents (78%) indicated that they continued to have difficulties with life skills upon graduation (Chiang, Ni, & Lee, 2017). Finally, a worryingly low percentage of individuals with ASD (15%) participate in an active transition from pediatric to adult health-care providers (Cheak-Zamora et al., 2014).

Evidence-Based Practices for Adolescents With ASD

Odom and colleagues (2014) echo the findings of the previous section: "High school programs [for individuals with ASD] often lead to unemployment, inactivity, continued residence with the family in adulthood, and social isolation" (Odom et al., 2014, p. 123). Unfortunately, most research on individuals with ASD continues to focus on early identification and intervention (Howlin, 2000; Levy & Perry, 2011). It has become clear that while early interventions improve outcomes, it is necessary to provide services and supports to individuals with ASD across the lifespan (Taylor & Seltzer, 2011). However, limited research has been conducted on adolescents with ASD.

For example, Odom and colleagues (2010) found only three interventions that had some promise for promoting the employment skills of individuals with ASD: self-management, video modeling, and visual supports. In a similar vein, a systematic review (Bennett & Dukes, 2013) found only 12 studies that involved providing employment instruction to secondary students with ASD. This review also provides preliminary support for utilizing modeling (either video or picture prompting) and self-management as strategies for providing employment instruction. Another systematic review focused on behavioral and social interventions for developing employment skills found no studies met their inclusion criteria (Westbrook et al., 2015). A different research team conducted a systematic review of interventions for promoting social skills for transition-age individuals with ASD and/or ID and found only 13 studies (Hughes et al., 2012). They found 4 studies that supported the use of social problem-solving instruction and 9 studies that supported the use of social skill instruction to teach discrete social skills to individuals who also meet the criteria for ID.

Across all of these systematic reviews, no interventions met the criteria to be considered evidence-based interventions. The interventions that can be seen as promising practices all involved teaching discrete skills, which may not be robust enough to improve postsecondary outcomes globally. This sentiment was echoed by Odom and colleagues (2014), who stated, "Single interventions that focus on one behavioral issue or problem are unlikely to be sufficient" (p. 124). They proposed a model of transition programming for individuals with ASD that addressed four components: peer/social competence; academics (particularly literacy); promotion of self-management, responsibility, and independence; and family involvement. Each adolescent with ASD would have their skills in each area assessed to develop individualized programming to support their needs. The model of transition program was refined over several pilot studies (Steinbrenner, Odom, Hall, & Hume, 2019), so it is a promising practice for supporting individuals with ASD as they transition.

Recommendations for Developing Secondary Transition Programming for Individuals With ASD

While there are few empirical studies documenting effective interventions and models for working with transition-age youth with ASD, as noted in the previous section, the research from NLTS-2 and other research studies does indicate several areas that transition providers can focus on in order to improve the outcomes of this group. Fortunately, secondary transition has a robust set of interventions that have been found to be efficacious with other populations (e.g., students with learning disabilities) or with heterogenous samples of students with disabilities (Test et al., 2009). Several chapters of this volume highlight these evidence-based secondary transition practices across populations and domains. With the absence of evidence-based practices for youth with ASD, special educators and other school-based personnel must use their clinical judgement when applying interventions and strategies that have been developed for other populations. This section will offer recommendations for school-based practitioners to choose and adapt secondary practices for this group based on the unique characteristics of individuals with ASD.

Secondary Transition Assessment

The most important element of secondary transition is transition assessment as this process is utilized to gather information from family members and the students themselves to set long-term goals for the students as well as to gather information utilized to develop annual goals and objectives related to making progress toward these long-term goals. For students with ASD, it is essential for both educators and families to have high expectations (Shogren & Plotner, 2012). By striving, all stakeholders can support individuals with ASD to maximize their potential and to attain a high quality of life. The use of person-centered planning approaches may be an effective strategy for assisting those supporting the individuals to have high expectations (Hagner, Kurtz, May, & Cloutier, 2014).

It is also essential to involve the students themselves in the assessment process as decisions about their future are being made. Students who were more active in the process achieved better young adult outcomes (Wei et al., 2016). In order to prepare students to be a part of the process, students may need to participate in activities such as the ChoiceMaker curriculum (Martin & Marshall, 1995), which helps students learn how to set goals, to participate in their IEP meetings, and to take actions to achieve these goals.

Beyond involving students and families in the transition assessment process, it is also important for educators to utilize a robust and comprehensive transition assessment battery. As students with ASD have difficulties with social skills, adaptive skills, and executive function, their secondary transition assessment batteries need to be broader in scope than other students. Special educators will need to work with related service providers to assess these areas. It will be important to utilize both norm-referenced and criterion-referenced assessments. The norm-referenced assessments will provide information about the magnitude of the needs experienced by these individuals while the criterion-referenced measures will help to develop specific annual goals and objectives and to guide curriculum development. The Social Skills Improvement System (Gresham & Elliot, 2008) and the Assessment of Functional Living Skills (Partington, 2013) may be particularly useful tools. Tassé and colleagues (2012) review measures of adaptive skills that also may be useful to include in a comprehensive transition assessment.

It is also going to be necessary to consider the students' long-term goals when gathering data. For this reason, it may also be necessary to conduct situational assessments where a student's behavior in a specific context is observed to determine his or her current skills and needs in navigating this context. For students with ASD, this may involve assessing students in novel or contrived environments. For example, it may be necessary to bring the adolescent to a college environment to assess his

or her ability to self-advocate or to create a hypothetical work environment to ascertain the areas in which the individual needs to develop social skills to facilitate employment success. Other examples would be having the student participate in a mock job interviews or using public transportation to determine what skills need to be developed in these areas. It may not be possible to determine the individual's skills and needs unless his or her behavior is observed in a relevant context.

Secondary Transition Instruction

After conducting a comprehensive transition assessment, the adolescent's postsecondary goals in the areas of postsecondary education, employment, and independent living can be developed in concert with the adolescent and family. While IDEA requires postsecondary goals for education and employment, it also indicates that goals should be developed for independent living when necessary. It is very often necessary to develop postsecondary independent living goals for individuals with ASD due to the previously mentioned difficulties with adaptive living skills. Then, at least one annual goal with learning objectives in each of these areas can be developed. As a part of the comprehensive transition assessment, information regarding the adolescent's current skill level in each area (known as the present level of performance) will be collected that can be used to assist in the creation of the annual goals and objectives. Instruction to help the student develop the skills outlined in the annual goals and objectives then needs to be provided.

As indicated previously, students with ASD often need to develop the self-advocacy or self-determination skills to be successful in postsecondary environments. These environments require individuals to advocate for their needs as a person with a disability. In addition to the Choice-Maker curriculum mentioned previously, special educators should consider using evidence-based self-advocacy and self-determination curricula. In particular, the Self-Determined Learning Model of Instruction (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000) may be particularly useful to use as a foundation to teach these skills. Please see Chapter 14 of this volume, which discusses this model in more depth.

Students with ASD also have difficulties with executive function, which manifests as difficulties developing appropriate learning and study strategies; individuals with ASD will often require specific instruction and guidance in how to develop these skills. This may mean helping students to develop strategies for managing their time independently, for prioritizing tasks, and for dividing large academic projects into their component pieces. It also will likely involve helping the students to develop note-taking skills and study strategies for reviewing materials before an exam.

Many individuals with ASD will also require instruction to develop independent living and social skills as previously noted, which can be challenging to provide to students who have postsecondary education goals to attend college. As a part of the secondary transition process outlined in IDEA, students need to have a course of study that aligns with their postsecondary goals. In other words, they need to be taking appropriate courses to prepare them for their life goals. In the case of individuals who are college bound, this often involves taking a rigorous course load, which may not leave the time in their schedules to develop these skills. There are several solutions to this issue. The first is to work with families to prioritize which skills will be taught in school settings and to provide support to families to help to develop other independent living skills at home. The second option is to provide opportunities to develop these skills through an after-school program. The third option is to consider providing college-bound students with ASD with a "gap" year after graduation that focuses on developing these skills. IDEA indicates that students who still require instruction to develop transition skills in order to attain their postsecondary goals can continue to receive this instruction until they turn 21 years old. This provision in the law could be utilized to provide as many necessary years of transition-only services that would assist the student to develop the necessary independent living skills.

For all students with ASD, it is necessary to consider generalization when developing both annual goals and objectives and providing the requisite instruction in these areas. Individuals with ASD often have difficulty generalizing skills to novel contexts (Brown & Bebko, 2012). A person with ASD may learn how to use a particular phrase to greet people in a social situation and over-rely on this phrase. Another person with ASD may learn how to use a particular microwave to cook an item but may have difficulty learning how to transfer this skill to a new microwave made by a different manufacturer. Individuals with ASD may become very prompt dependent (Hume, Loftin, & Lantz, 2009), meaning that they will only engage in a behavior in very specific circumstances. Thus, it is essential to consider generalization when providing instruction to individuals with ASD. This can be done by varying the prompts utilized when teaching particularly behaviors. It can also be achieved by teaching multiple responses to prompts (e.g., providing instruction in multiple ways of greeting people) and by varying the instructional materials. In the previous example, this could be done by teaching individuals to use two different microwaves over time so they can begin to learn how to generalize their skills across microwaves. Another way that generalization can be fostered is by working with families to have students practice skills in home and community environments.

Connecting With State Agencies

Each state will have agencies that provide supports and services to individuals with disabilities. For example, vocational rehabilitation (VR) provides services to foster the employment of adults with disabilities. Individuals with ASD that connected with their VR agency after high school graduation were more likely to be employed than individuals from other disability categories (Rast, Roux, & Shattuck, 2019). Those who participated in postsecondary training as a part of their VR program were more likely to be employed, although individuals with ASD were less likely to receive postsecondary training as a part of their VR program. Previous research (Migliore, Timmons, Butterworth, & Lugas, 2012) indicates that participation in job placement services improved the employment outcomes for individuals with ASD. It also found that this service and postsecondary education were not commonly provided to individuals with ASD as a part of their VR supports. These research studies indicate that connecting individuals with ASD to these adult agencies as a part of the secondary transition process is essential and will likely improve their young adult outcomes.

Conclusion

The incredible heterogeneity across individuals with ASD coupled with their support needs related to social skills and adaptive living skills makes providing appropriate secondary transition programming challenging. Clearly, providing optimal secondary transition services for individuals with ASD is a challenging endeavor that requires specialized training that few special educators receive in their pre-service preparation. It is suggested that high-quality online training modules be developed to assist both pre- and in-service special educators in developing the competencies necessary to work with this population during secondary transition. The Center for Secondary Education for Students with Autism Spectrum Disorder (CSESA) has developed some training materials (please see https://csesa.fpg.unc.edu/materials).

Unfortunately, at the present moment, limited research has been conducted with adolescents with ASD, and much of it has focused on developing discrete skills versus providing a comprehensive transition program. As new research-based comprehensive interventions are developed, it will be necessary to develop training materials to make these approaches accessible to the field. Until then, it is thus essential that special educators recognize the uniqueness of each individual with ASD and provide individualized programming and supports as Test and colleagues (2014) noted that "no single configuration of transition education will work for all students [with ASD]" (p. 86). This

starts with conducting comprehensive secondary transition assessments that focus on each individuals' strengths, needs, and interests. These data can then be utilized to develop robust individualized programming and supports and to connect with families to foster the generalization of skills. While resource intensive, this comprehensive individualized approach is essential to improve the postsecondary outcomes of this group.

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Transition and Adolescents With Learning Disabilities

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Transition and Adolescents With Learning Disabilities

Transition services for adolescents with learning disabilities could be grounded in a philosophy stated by Yong Zhao (2018):

> I have been fortunate to be able to avoid virtually everything that I have no potential for being good at or I am not interested in. More important, I have been fortunate to have had the space to explore my passions and experiment with different undertakings to discover my weaknesses and strengths. Most people are not born knowing what they are interested in and can be good at. They can only find out through experiences.
>
> *(p. 6)*

That is, when students have an understanding of what they are passionate about and good at, transition plans may become more student centered, meaningful, and useful. Such plans can support exploration that uncovers both student limitations and strengths. Thus, structured transition planning is one process that may help adolescents with learning disabilities (LD) bring clarity to what they are passionate about and what they feel they're good at in terms of preparing to transition from high school to college, technical school, an apprenticeship, or the world of work and independent living. In this chapter we explore both the social-emotional learning and academic characteristics of adolescents with LD, discuss specific challenges to delivery of research-based transition services, and present promising programs and practices.

Although transition services have been mandated by the Individuals with Disabilities Education Act (IDEA) since its 1990 reauthorization, research has consistently shown that students with LD have poorer academic and employment outcomes than do their nondisabled peers (e.g., National Longitudinal Transition Study (NLTS-2), 2011) as well as difficulty in college and career readiness compared to students without disabilities (Daviso, Denny, Baer, & Flexer, 2011; Mellard & Lancaster, 2003). In the critical areas of math and reading proficiency, students with LD are scored significantly below their peers on the National Assessment of Education Progress. Specifically, reading proficiency scores show that close to 70% of students with LD are in the below basic performance level and only 11% score in the proficient or above levels. A similar situation exists for math, with 45% of students with LD scoring at a below basic level and another 38% scoring at the basic level. Unfortunately,

these low scores are persistent with the 2019 NAEP scores in reading and math, which show a slight decline from 2017 scores (McFarland et al., 2019). Researchers who analyzed the NLTS-2 found that the academic performance scores of adolescents with LD in reading were below or way below average in passage comprehension for 88% of the sample tested. In math applied problems scores on the NLTS-2 were 85% below or way below average for adolescents with LD (Wagner, Newman, Cameto, & Levine, 2006). Clearly, academic challenges exist for adolescents with LD as they strive to transition to postsecondary opportunities.

Characteristics and Outcomes of Adolescents With Learning Disabilities

According to the 2017–2018 National Center for Education Statistics, students aged 3 to 21 who receive special education services number about 7 million, or 14% of all public school students. Among those students who make up the population of students receiving special-education services, 34% are students with a specific learning disability. This is the category of students with disabilities within IDEA with the highest percentage of students served. Students with LD may present limitations in a variety of areas. These areas are often characterized as difficulties with academics, attention, motor abilities, information processing, and cognitive strategies for effective learning in reading, writing, math, and social skills (Cortiella & Horowitz, 2014).

Reports from NLTS-2 indicate that 11% of high school students with LD drop out of school annually. Students with LD were less likely to choose four-year colleges (15.5%) as compared to their nondisabled peers (37%). Although the number of high school graduates with LD entering college has increased slightly over the years (Lipscomb et al., 2017), students with LD who have received postsecondary education often need to take remedial classes on reading and math in their first two years of college (Daviso, Denney, Baer, & Flexer, 2011; Vogel & Adelman, 1992). Even worse, 86% of students with LD in postsecondary education report that they encounter difficulty and take longer to complete their education program (Lipscomb et al., 2017). Further, data show that students with LD lack self-determination skills and strategies (Field, 1996; Field, Sarver, & Shaw, 2003; Pierson, Carter, Lane, & Glaeser, 2008; Schreiner, 2007). The college completion rate for young adults with LD is 41%, compared to 52% in the general population (Lipscomb et al., 2017).

Other studies of high school graduates with LD have indicated that only 38% transitioned to full-time employment (Collet-Klingenberg, 1998; National Organization on Disability, 2004; Wille-Gregory, Graham, & Hughes, 1995). Further, research has suggested that students with LD who have completed college typically have careers in areas with lower average salary or are less likely to be competitively employed three to five years after graduation (Greenbaum, Graham, & Scales, 1996; Sanford et al., 2011). Young adults with LD are more likely to live in poverty, and 55% of youth with LD have been involved with the criminal justice system within eight years of exiting school (NLTS-2). Thus, challenges related to high school graduation, transition to postsecondary education, and employment in well-paying careers persist for many adolescents with learning disabilities.

Transition Services

IDEA defines "transition services" as:

A coordinated set of activities for a child with a disability that –

(a) is designed to be a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including postsecondary education, vocational

education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation;

(b) is based on the individual child's needs, taking into account the child's strengths, preferences, and interests.

(IDEA, 2004, p. 118)

The 2004 amendments also specified 20 compliance indicators, including 2 that are relevant to transition planning and services. School districts must monitor and report the provision of specific transition planning components (Indicator 13) as well as students' attainment of postschool goals (Indicator 14). Special education programs are also shaped by the Elementary and Secondary Education Act (ESSA), commonly referred to as No Child Left Behind (2001), which increased the expectations of academic rigor for students with disabilities, emphasized "high stakes" testing, and required schools to prepare all students to be "college and career ready." College and career readiness is generally defined as the academic and non-academic skills that are crucial for being be successful in postsecondary education and employment (College and Career Readiness Success Center, https://ccrscenter.org/) and includes academic engagement, mindsets, learning processes, critical thinking, interpersonal engagement, and transition competencies (Morningstar, Lombardi, Fowler & Test, 2017). Both IDEA and ESSA require states to develop plans to ensure students with disabilities have access to programs and services that will prepare them for positive postschool outcomes.

Transition Planning for Students With Learning Disabilities

Despite the current poor outcomes for students with LD, researchers have identified a series of predictors of postschool success (employment, postsecondary education, and independent living), including metrics of academic achievement (e.g., GPA, attendance, etc.), participation in career development opportunities (e.g., career technology education and work-based learning experiences), and social-emotional learning skills (e.g., self-determination, self-management, etc.). Educators tasked with supporting students with disabilities to transition successfully to positive postschool outcomes can draw from a growing body of evidence- and research-based practices that are aligned with these predictors and frequently organized within the framework of Transition Taxonomy 2.0 (Kohler, Gothberg, Fowler, & Coyle, 2016). Evidence-based practices, specific structural and contextual barriers, and recommendations are discussed in the following organized around the Taxonomy 2.0 domains: (a) program structures, (b) student development, (c) student-focused planning, (d) family involvement, and (e) interagency collaboration.

Program Structures

Program structure refers to the systemic elements (e.g., program curriculum, resource allocation, etc.) that ensure effective transition service-delivery models. Research has identified various school programmatic elements that are correlated with positive postschool outcomes, including access to highly qualified teachers, rigorous coursework in inclusive settings, flexible pathways, and opportunities for career development (Test, Mazzotti, et al., 2009; Podmostko, 2007). Although "least restrictive environment," a core requirement of IDEA, specifies that students with disabilities – to the maximum extent possible – must be educated with their peers who do not have disabilities, students with LD are spending more and more of their school day in general education classrooms. As a result, 66% of students with LD spend 80% or more of their school day in general education classrooms, up from 47% a decade ago (Cortiella & Horowitz, 2014). Since meeting benchmark scores on state

and national assessments is correlated with postschool success, lack of access to rigorous coursework limits preparation for postsecondary education (Cumpton, Schexnayder, & King, 2012). Due to lack of preparation, students with LD are more likely to require remedial, non-credit coursework, which adds cost and time to degree completion.

Burbank and Tilson (2019) note that the benefits of inclusion carry over to participation in robust work-based learning career preparatory programs, including career and technical education (CTE). Numerous studies have identified work-based learning, specifically paid work opportunities, as a significant predictor of postschool employment (Simonsen, Fabian & Ethridge, 2013), and students with disabilities who are enrolled in a concentration of CTE courses have better attendance, graduation rates, and employment outcomes (Mazzotti et al., 2016; Test, Mazzotti et al., 2009). Regardless of classroom setting, the focus on mastering academic content with high school diplomas and the high-stakes academic testing in secondary schools limits flexibility and choice in coursework. Students with LD may have limited opportunities to participate in CTE, enroll in electives aligned with career interests, and benefit from direct instruction in self-determination/advocacy. Successful transition from high school to postsecondary outcomes for students with LD depends on a combination of *rigorous academic instruction* and meaningful *career development activities*. Ensuring access to both for students with disabilities will require district-level collaboration and may require significant restructuring in program delivery.

Student-Focused Planning

Student-focused planning involves student-led transition planning (based on age-appropriate transition assessments) and a focus on self-determination skills, including decision making, self-regulation, goal setting, problem solving, and self-advocacy. Students are better able to navigate the transition to postsecondary settings if they can advocate for their support needs. Unlike in high school, students who enroll in college are responsible for navigating the disability support services unit on campus and communicating directly with faculty/instructors about accommodation needs. Low college completion rates may also be due to the fact that students with LD are often unprepared to navigate the disability support services in higher education to access necessary accommodations. Only 19% of college-age students with LD (Cortiella & Horowitz, 2014) received accommodations and supports as compared to 94% of students in high school. Common barriers to receiving the necessary supports include fear of stigma, documentation requirements, and a lack of information about how to access the services. Given that college students with disabilities who request disability support services have higher GPAs and graduation rates, high school students with LD should learn about the disclosure and have opportunities to learn how to access supports on campus. Similarly, young adults entering the workforce will need to understand how to advocate for necessary accommodations in the workplace.

In addition to self-determination, research has identified other social-emotional learning (SEL) skills that are correlated with higher rates of employment and postsecondary education enrollment (e.g., self-awareness, self-management, social awareness, relationship skills, etc.) (ACT, 2011; Dymnicki, Sambolt, & Kidron, 2013; Hein, Smerdon, & Sambolt, 2013). However, students with LD often express feelings of anxiety and hopelessness when discussions focus on their future life, and they have a harder time thinking of long-term goals for that future (Deshler, Ellis, & Lenz, 1996) and of advocating for themselves in postsecondary settings (Deshler et al., 1996; Wilson, 1994). A host of self-determination related curriculum has been developed to provide direct instruction around self-determination skills and to help prepare students to lead their own individualized education programs (IEPs), but there has not been widespread adoption across general education settings, thus limiting the opportunity for exposure for many students with LD.

Student Development

The student-focused transition planning process should be used to identify specific skills, behaviors, and knowledge needs related to a student's postsecondary goals in employment, postsecondary education, and independent living. Students with LD are a heterogeneous group of learners who vary tremendously in their strengths and support needs, and implementing evidence-based practices to meet these diverse needs in a challenge (Morningstar et al., 2017). Preparing students with LD to be "college and career ready" will require schools to creatively embed related college and career readiness (CCR) skills into daily instruction (Monahan, Lombardi, & Madaus, 2018). For example, to enhance academic engagement and learning processes, teachers may incorporate mnemonics or computer-assisted instruction and teach to enhance academic engagement, such as teaching specific study skills (e.g., distributed practice). Incorporating group work and expectations for collaboration can help to build interpersonal skills. Providing opportunities to learn and practice self-management strategies can help students increase independence on transition/job-specific skills. Teaching these skills and strategies will increase the likelihood that they will be apply to use these strategies in college and at work after graduation. Framing instruction for all students around CCR will help to ensure that students with LD have opportunities to gain the skills and experiences they need to reach their individual postsecondary goals.

Family Engagement

Families serve as role models and logistical and moral supports (Simonsen & Neubert, 2013; Simonsen et al., 2013) to youth throughout school and the transition process. Family members expose students to career fields, set expectations for postschool employment (Simonsen & Neubert, 2013), help form the student's social network, and facilitate involvement in the community. Family expectations are significant predictors of postschool success (Simonsen & Neubert, 2013). Educators can support families to set high expectations by ensuring that youth and families have ready access to models of success. Schools can invite students who have successfully transitioned to college and/or work to share their experiences and address specific concerns.

A number of sociocultural factors may frame family engagement in the transition planning process. Early interactions with service-delivery systems (i.e., Social Security, Child Welfare, etc.) may shape the family's engagement with the school. Culturally responsive transition planning will require educators to help youth and families identify postsecondary goals that are aligned with their values and to critically examine the barriers to meaningful participation, especially for families who are culturally or linguistically diverse. Schools should prioritize meaningful family engagement in all aspects of the planning process.

Interagency Collaboration

Early linkages to postschool agencies and supports (e.g., colleges, vocational rehabilitation, mental health providers, etc.) is an often-overlooked component of transition planning for youth with LD. In addition to involving postsecondary agency personnel in the transition planning process, transition planning teams should work to ensure that students have the supports and services in place to work toward their postsecondary goals prior to exiting school. Students who are pursuing college need to understand the documentation requirements, learn how to navigate the accommodation request, and explore other learning supports on campus. Students who are entering the workforce may be eligible for services from vocational rehabilitation (VR) or community employment provider services. Students and families may need help to understand issues of guardianship, public assistance,

benefits management, transportation, etc. Schools can help link families up to the available community resources and supports through transition fairs/expos, family workshops, newsletters, etc.

Promising Practices and Exemplar Programs

Despite the growing evidence base for specific practices related to transition education and services discussed earlier, implementation is inconsistent, and educators report low levels of efficacy around implementing transition services (see Chapter 26). It is important that educators have access to teacher-friendly curriculum and resources that they can use to help develop academic and non-academic skills. In this section, we briefly describe a few exemplar programs designed to address both.

Here, we describe three transition programs: (1) the Possible Selves: Nurturing Student Motivation (PS) program (Hock, Schumaker, & Deshler, 2003), a widely implemented transition program; (2) the Self-Determined Learning Model of Instruction (SDLMI) (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000), an evidenced-based transition program; and (3) the Strategic Tutoring model (Hock et al., 2000), which is designed to provide students with academic strategies for learning content.

Possible Selves

Briefly, PS is an intervention grounded in goal theory that includes multiple activities to help students identify current "possible selves," focused on future hopes, expectations, and fears, thus working through an identity development process. These possible selves can be motivating when clearly defined, analyzed, and included in detailed goal-attainment plans (Markus & Nurius, 1986).

Teachers and researchers regularly report that student motivation (or the lack thereof) plays a critical role in learning and transition. Research finds that students who are motivated to learn are willing to put forth effort, engage in learning activities, and persist in completing tasks and usually have a higher rate of success in school than those who are not motivated to do so (Biancarosa & Snow, 2004; Curtis, 2002; Kamil, 2003; NRP, 2000; RAND, 2002). Hattie (2003) found that what students bring to the educational environment accounts for about 50% of their success. In other words, learners play a critical and active role in learning. Improving transition outcomes may be directly related to our ability to engage all learners, including students who have disengaged from instruction (Guthrie & Wigfield, 2000).

Since student motivation is a key factor in learning, including learning related to transition, the success of transition education depends on increasing student motivation to engage in transition learning. One motivational program that has evidence of its capacity to do this is Possible Selves. Possible selves are defined as "the representations of individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming" (Dunkel, 2000, p. 520). Possible Selves: Nurturing Student Motivation is a widely used research-based practice designed to increase student motivation by having students examine their futures and think about goals that are important to them.

The concept of "possible selves" was first introduced by the pioneering American psychologist William James in 1897. Hazel Markus (1986) used the term "possible selves" in relation to motivation. She defined "possible selves" as "ideas about what one might become in the future" (Markus & Nurius, 1986). Ideas about one's self in the future can be very motivating. That is, youth with clear ideas and goals about what they want to be often seem willing to put forth the effort needed to attain these personal goals. Additionally, Markus reported that some people will work just as hard to avoid the "possible selves" they fear. For example, students who have thought about living on little money to support a family may be more likely to work hard in school to avoid that future than students who have not considered such an outcome. In either case, the concept of "possible selves,"

when put into practice, can increase motivation to work hard to attain specific and personal goals (Cross & Markus, 1994; Leondari et al., 1998; Markus & Nurius, 1986; Oyserman & Markus, 1990a, 1990b). Some researchers have extended the possible selves concept as a visual metaphor – a Possible Selves Tree that bears the fruit of hopes and dreams (Borkowski et al., 1992; Day, Borkowski, Dietmeyer, Howsepian, & Saenz, 1994; Estrada, 1990). In the Possible Selves program described in this chapter (Hock, Brasseur-Hock, & Deshler, 2012; Hock et al., 2003), students are invited to create their Possible Selves Trees as a reflection of themselves as learners and as unique individuals whose qualities and fears are depicted as roots and branches. From this visual depiction, students can identify future hopes and related goals that they desire and believe they can attain. In this way, students understand the connection between becoming proficient learners and achieving personal goals. In the following, we describe Possible Selves and its components.

Possible Selves Program Components

The PS program is typically implemented in late adolescence, during the time in which identity development is a critical developmental task. As suggested by Cross and Markus (1991), students in late adolescence generate more positive possible selves than other age groups of students. In the PS program, all lessons are specifically designed to (a) help students define success; (b) help students define who they are; (c) guide students to determine who they want to become; (d) support students to reflect on their goals; (e) help students develop action plans for attaining their goals; and (f) monitor students' action plans and aid in revising them. There are six components in PS, each of which has detailed lessons for teachers.

The first component, **DISCOVERING**, helps the student answer the question, "What are my strengths and interests?" During this phase, teachers engage students in activities designed to help them identify areas in which they have interest and skills and feel good about themselves. The goal is to find an area in which each student has had positive experiences and is willing to share those experiences. By finding an area about which the student feels positive, the "pump is primed," and the student becomes more willing to share information related to areas about which he or she may not feel as positive (e.g., learning). For this project, students will describe themselves as learners, as persons, and in a postsecondary transition capacity (e.g., college student, technical school student, worker in a chosen career area that represents a strength area). **THINKING** is the second component of the PS program, and it is designed to support the student to answer the question, "Who am I?" Here, the student completes a structured but open-ended interview with a teacher or counselor, either individually or as part of a group. In the interview, students are asked to identify words or phrases that describe them in targeted areas (as a learner, a person, and in a postsecondary transition area). They are also asked to define their hopes, expectations, and fears for the future in each area. An outline of the current self and possibilities for the future is developed within each area. Once the interview has been completed, the third component of the PS program is introduced, **SKETCHING**. It supports the student to answer the question, "What am I like and what are my possible selves?" During this activity, the student draws a Possible Selves Tree. The counselor begins by stating, "You've listed a lot of important information about yourself. From that information, you're going to create a Possible Selves Tree. The tree will have limbs that represent you as a learner, person, and in a postsecondary transition area. It will have branches that represent your hoped-for and expected possible selves in those areas. You will represent your feared possible selves with dangerous conditions for your tree (e.g., lightning, termites, poison in the soil). You'll use the exact words you recorded in the interview to add branches and roots to the tree and the dangers around it. Later, I'll ask you to evaluate your tree and tell me if it really represents the ideas you shared." Next, the tree is drawn and evaluated, and preliminary goals are discussed concerning how to keep the tree strong, make it fuller, protect it from fears, and provide it with nourishment. The fourth component of the program, **REFLECTING**,

helps students answer the question, "What can I be?" It provides an opportunity for the student to evaluate the condition of his or her tree and set goals for the future. The fifth component, **GROW-ING**, helps the student answer the question, "How do I get there?" It is utilized to get the student to start thinking about specific ways to nurture and "grow" his or her tree and attain identified goals. If, for example, a student identified the hope for a career as an owner of a retail business, the student and counselor can identify short- and long-term goals that are necessary to attain this "possible self" and develop a plan to reach these goals. In addition, students may discover that these same goals help them avoid the "feared selves" that have been identified (e.g., no job, no money, no friends). In short, during the GROWING activities, a well-developed action plan is constructed by the student and counselor. The action plan provides "pathway" to support the attainment of long-term transition goals and hopes for the future. The sixth and final component is **PERFORMING**. It helps students answer the question, "How am I doing?" During this phase, the Possible Selves Tree, the goals established to "nurture" the tree, and the action plans are revisited regularly. Task completion is reviewed, goals and action plans are modified, goal attainment is celebrated, new goals are added, and hopes, expectations, and fears are continually examined. The PS program is taught by explicit instruction. That is, teachers explain and provide rationale for each skill, model the skill or activity for students by sharing their possible selves and PS trees and action plans, and guide students through each activity and lesson. Finally, teachers monitor student progress toward goal attainment.

Research to Support the Implementation of Possible Selves

Before reviewing research on the PS program, it is worth noting that there is research on the importance of the "possible selves" concept for high school transition outcomes outside of the PS program. A longitudinal study (Packard & Nguyen, 2003) investigated whether and how 41 high school girls perceived themselves as future scientists and the stability of science career–related possible selves from high school to college after exposing them to summer science programs. Results showed the positive impact of these activities on transition outcomes, with participants maintaining their science career aspirations over time. Pizzolato (2007) found that students who have highly elaborative "possible selves" are more likely to set higher career goals and put actions in place to achieve them, leading to better transition outcomes. Oyserman and Fryberg (2004, 2006) found that "possible selves" predicted more positive performance on academic goals, improved grades, and more positive transition plans.

Information on the impact of the PS program has accrued from studies with middle school and university-level students with learning disabilities or ADHD or who were not well prepared for the academic demands of school or college. One study involved 52 middle school students, including students with disabilities, who attended an urban school serving a diverse population. Students in the experimental group ($n = 31$) participated in the PS program over the course of the fall semester during two class sessions a week for 12 weeks. Students in the comparison group received the traditional career orientation curriculum. Results showed that students who participated in the PS program identified significantly more roles they hoped to play in the future than did students in the comparison group. Additionally, these students identified significantly more goals in academic and personal domains. The difference in specificity of goal statements was also significant. Finally, the experimental group teacher and students were highly satisfied with the program. Some students reported using the goal and action plan information they learned during IEP and transition conferences held at the school (Hock et al., 2012).

In another study, 60 university students were randomly assigned to one of three conditions (Hock, Schumaker, & Deshler, 2002). For the control condition, 20 students received tutorial support from trained tutors and academic advising from counselors. In the career-counseling condition, 20 students received the same tutoring and counseling services as students in the control group with the addition of six to eight hours of career-counseling activities over the course of a semester provided

by staff at the university's Counseling and Psychological Services (CAPS). The 20 students in the PS condition received the same tutoring and counseling services as the control group and participated in the PS program that consisted of the Thinking, Sketching, and Reflecting components (the Discovering, Growing, and Performing components were not developed yet). The PS program was presented to students in one-to-one interactions with a counselor. The results showed that, at the end of the first semester freshman year, students in the PS group scored significantly higher than students in the control group on measures of goal identification; that is, they identified more goals as possible in life. The number of goals identified by students in the other conditions actually declined over the course of the first semester while the PS group's goals increased slightly or were maintained. Also, at the end of six years, the PS students had earned higher GPAs than students in the other groups. Moreover, 75% of the PS group had graduated from the university, compared to 45% of the control group and 60% of the career-counseling group.

Hock, Deshler, and Schumaker (2002) augmented the original PS program components implemented in the study described prior. The new steps included developing elaborate goal-directed action plans (GROWING) and periodic monitoring and feedback on the completion of tasks and action plan goals (PERFORMING). Researchers randomly assigned 32 freshmen student athletes, matched for ACT scores, sport, gender, and high school GPA, to either a comparison or experimental group. Education graduate students were recruited and taught how to guide the athletes through the PS program. Two peer mentors were assigned to each group of four to six athletes who had been assigned to the experimental group. Each group met for one hour a week for 12 weeks during the fall semester. The peer mentors taught the Possible Selves lessons during that time. The control students met individually with sport counselors during the same time period and for the same number of hours. Students in the PS program significantly outperformed the control group on measures of role identification and goal setting in the areas of academics and personal life. Additionally, they identified more goals for themselves as learners and persons, and the goals they identified were more specific than the goals identified by the comparison group. Finally, retention of students at the university was greater for the PS group than for the comparison group. After six years, 75% of the students in the PS group were on track to graduate or had graduated, and 56% of the students in the comparison condition were on track to graduate or had graduated.

Research on the PS program shows promise as an intervention to enhance academic motivation and improve student education outcomes across different instructional levels on key academic and transition outcomes.

The second program is called the Self-Determined Learning Model of Instruction. The SDLMI is a self-regulated problem-solving process enabling students to set goals, create action plans, and attain their goals, adjusting their action plans or goals as necessary.

The Self-Determined Learning Model of Instruction

The Self-Determined Learning Model of Instruction (Mithaug, Wehmeyer, Agran, Martin, & Palmer, 1998; Wehmeyer et al., 2000) was designed to provide a model of teaching to enable educators to teach students to self-direct the educational goal setting and attainment process. Models of teaching are derived from theories about human behavior, learning, or cognition, and teachers employ multiple models of teaching, taking into account the unique characteristics of the learner and types of learning. The SDLMI is a model of teaching derived from theory in self-determination, the process of self-regulated problem solving, and research on student-directed learning. It is appropriate for students with and without disabilities across multiple content areas and enables teachers to increase student opportunities to self-direct learning. It is important to emphasize that while the SDLMI is based on theory in self-determination, it is intended as a teaching model to enable teachers to teach students to set and attain goals in multiple content areas, from academic to transition. It

is not a model solely to promote self-determination, although one outcome is that students acquire goal setting, problem solving, self-monitoring, and other skills that enhance self-determination.

Implementation of the SDLMI consists of a three-phase instructional process that is repeated over time. Each instructional phase presents a problem to be solved by the student. The student solves this problem by posing and answering a series of four Student Questions (SQs) per phase that students learn, modify to make their own, and apply to reach self-selected goals. Each question is linked to a set of Teacher Objectives (TOs). Each phase includes a list of Educational Supports (ESs) that teachers use to enable students to self-direct learning. In each phase, the student is the primary causal agent for choices, decisions, and actions, even when eventual actions are teacher directed. The SQs in the model are constructed to direct the student through a problem-solving sequence. The solution to the problem in each phase leads to the problem-solving sequence in the next phase. Their construction was based on theory in the problem-solving and self-regulation literature that suggests there is a sequence of thoughts and actions, a means-ends problem-solving sequence, which must be followed for any person's actions to produce results that satisfy their needs and interests. Teachers implementing the model teach students to solve a sequence of problems to construct a means-ends chain – a causal sequence – that moves them from where they are (an actual state of not having their needs and interests satisfied) to where they want to be (a goal state of having those needs and interests satisfied). The SDLMI constructs this means-ends sequence by having students answer the questions that connect their needs and interests to their actions and results via goals and plans.

To answer the SQs, students must regulate their own problem solving by setting goals to meet needs, constructing plans to meet goals, and adjusting actions to complete plans. Thus, each instructional phase poses a problem the student must solve (What is my goal? What is my plan? What have I learned?). The four questions differ by phase but represent identical steps in the problem-solving sequence. That is, students answering the questions must: (a) identify the problem, (b) identify potential solutions to the problem, (c) identify barriers to solving the problem, and (d) identify consequences of each solution. These steps are fundamental to any problem-solving process and form the means-end problem-solving sequence represented by the SQs. Because the model is designed for teachers to implement, the language of the SQs are, intentionally, not written to be understandable by every student, nor does the model assume that students have life experiences that enable them to fully answer each SQ. The SQs are written in first-person voice in a relatively simple format with the intention that they are the starting point for discussion between the teacher and students.

The first time a teacher uses the model, the initial step in the implementation process is to read a question with or to students, discuss what the question means, and, if necessary, change the wording to enable different students to better understand the intent of the question. These wording changes must be made so that the problem-solving intent of the question remains. Going through this process once with the student results in a set of questions a student accepts as his or her own. The TOs within the model are the objectives a teacher will be trying to accomplish by implementing the model. In each phase, the TOs are linked directly to the SQs. These objectives can be met by utilizing strategies provided in the ES section of the model. The TOs are a road map for the teacher to enable students to solve the problem stated in the student question. For example, with the first SQ (What do I want to learn?), the TOs are to enable the student to identify his/her specific strengths and instructional needs related to the core content area; identify and communicate his/her preferences, interests, beliefs, and values about the content area and its link to adult outcomes; and prioritize his/her instructional needs. As teachers use the model, they can generate more objectives that are relevant to the question, and they are encouraged to do so.

Because implementing the model requires teachers to teach students to self-direct learning, it is important to identify strategies and supports that can be used to successfully implement the model. The majority of these supports are derived from the self-management literature. A variety of strategies, like antecedent cue regulation, self-instruction, self-monitoring, self-evaluation,

self-reinforcement, and goal setting, have been used to teach students how to manage their own behavior across academic and functional content areas. The emphasis in the model on the use of ESs that are student-directed provides another means of teaching students to become causal agents in their lives. As important as it is to utilize the student-directed learning strategies, however, not every instructional strategy is student directed. The purpose of any teaching model is to promote student learning. Sometimes the most effective method or strategy to achieve a particular educational outcome will be a teacher-directed strategy. Within the SDLMI context, students are active in determining these educational plans, whether self- or teacher directed.

Supporting Evidence

The SDLMI has been subjected to multiple randomized control trial (RCT) studies and has been shown to have efficacy with regard to student education outcomes (access to the general education curriculum; transition empowerment, knowledge, and skills; academic and transition goal attainment). Further, instruction using the model has been shown to significantly improve self-determination, which, in turn, has been causally linked to more positive adult outcomes.

A quarter century of model development and research in transition has established that among the most important behavioral and social skills leading to more positive school and postsecondary transition outcomes are knowledge and skills associated with enhanced SD − including self-regulated problem solving, goal setting and attainment, self-monitoring and evaluation, and others. The SDLMI has substantial evidence for its efficacy to impact SD, school, and postschool outcomes. In defining SD and conceptualizing the SDLMI, Causal Agency Theory (Shogren et al., 2015) guides our work. Causal Agency Theory is the latest iteration of the theoretical model that has driven our research since 1992 (Wehmeyer, 1992, 1996, 2005) and focuses on how to teach skills and create opportunities for youth with (and without) disabilities to learn skills that enable them to be causal agents and to go after their goals.

Within Causal Agency Theory, we define SD as a "dispositional characteristic manifested as acting as the causal agent in one's life" (Shogren et al., 2015). A dispositional characteristic is an enduring tendency that develops over time. As a dispositional characteristic, SD can be measured, and variance can be observed across and within people over time, particularly as the context or elements of the context change (e.g., supports and opportunities are provided for self-determined action). Specifically, as interventions such as the SDLMI are implemented, we can assess changes in SD, and we hypothesize that increased opportunities to engage in self-determined actions, specifically in self-regulated problem solving through the SDLMI, will lead to enhanced SD and academic outcomes. Research has suggested this is an important area to prioritize for secondary students given its impact on outcomes (described subsequently) as well as findings that the skills generalize across settings. For example, Shogren, Palmer, Wehmeyer, Williams-Diehm, and Little (2012) found that when skills leading to enhanced SD were taught through the SDLMI in self-contained or resource rooms, students showed increased access to the general education curriculum in general education classes, even without direct instruction in those classrooms. This suggests the power of the intervention.

There is causal evidence that promoting SD results in enhanced SD, access to the general education curriculum, and goal attainment. An initial RCT study of the use of the SDLMI to promote access to the general education curriculum (Lee, Wehmeyer, Palmer, Soukup, & Little, 2008) examined the impact of the SDLMI on access. Using an RCT design with 45 high school students with intellectual or learning disabilities, students in the treatment group learned and implemented the SDLMI to set and attain goals related to core content areas in the general education classroom. Classroom observations using momentary time-sampling software (Access CISSAR) were conducted, as were data on student goal attainment using the Goal Attainment Scaling (GAS) process. Results from this small sample provided preliminary support for the impact of the SDLMI on SD, access to

the general education curriculum, and academic goal attainment for students in the treatment group. Wehmeyer, Shogren et al. (2012), with funding from an IES "Goal 2b" Efficacy grant (2006–2008), expanded these findings, conducting a group-randomized, modified equivalent control group design study of the efficacy of the SDLMI to promote SD with 312 high school students with intellectual or learning disabilities. There were significant differences in SD after two years of intervention between the control and treatment group. As an outcome of the same study, Shogren et al. (2012) examined the impacts of the SDLMI on academic and transition goal attainment and access to the general education curriculum and found that students in the treatment group had greater academic and transition attainment and greater access to the general education curriculum, even as instruction occurred in self-contained or resource rooms rather than general education classrooms. Shogren, Plotner, Palmer, Wehmeyer, and Paek (2014) also examined the impact of the SDLMI on teacher views of student capacity and opportunity for SD and found that when teachers were trained and supported to implement the SDLMI (versus teachers continuing in control group), there were significant increases in their views of student capacity and opportunities.

These studies provide clear evidence that the SDLMI has an impact on behavioral, functional, and academic skills while students are in school, if instruction is provided over time. Research has also suggested that enhancing students' SD while they are in school impacts postschool transition outcomes. Wehmeyer, Palmer et al. (2012) and Shogren et al. (2015) provided a causal link between promoting SD, self-determination status when exiting high school, and more positive postschool transition outcomes. Shogren et al. (2015) conducted a follow-up study of the students involved in the Wehmeyer, Shogren et al. (2012) randomized control trial and found that SD status when exiting high school predicted more positive employment outcomes one year after school (and employment status at one year predicted employment status two years after school) and community access at year one and two. These studies also confirm that students who leave school more self-determined achieve more positive postsecondary transition outcomes.

In summary, the SDLMI is a fully developed intervention, based on an empirically validated theoretical foundation, and has been shown by multiple research studies to contribute to positive school and postschool transition outcomes for students with intellectual and learning disabilities. This research has, however, also suggested the benefit of ongoing exposure to the SDLMI, which is consistent with the theoretical framework of SD, namely, repeated opportunities to learn and apply the skills are needed to become more self-determined and impact academic and transition outcomes. This is why, in the present study, we are initiating intervention with the SDLMI in the tenth grade in our treatment group and tracking outcomes over a three-year period.

Strategic Tutoring

Strategic Tutoring (ST) (Hock, Deshler, & Schumaker, 2000) is an instructional program designed to teach students strategies for learning how to learn and perform *while* they receive help with class assignments. The main focus of ST is ensuring that students learn the techniques that allow them to perform independently in their classes. Strategic tutors co-construct, explain, model, and practice strategies with students. They also support students as they apply newly acquired skills and strategies in the context of homework and assignment completion. Eventually, the goal is for students to apply strategies independently in a variety of contexts and with a variety of materials.

During instructional sessions, tutors guide students through four key instructional phases:

Assessment

The tutor determines the student's prior knowledge of the assignment and content and the effectiveness of the student's current approach to the task. If the current strategy is ineffective or

inefficient, the tutor gains the student's commitment to learn a more efficient strategy and moves to the next phase.

Constructing

The tutor co-constructs a new strategy with the student. In most cases the newly constructed strategy includes elements of the student's current strategy that have been enhanced by the tutor's strategy. The new strategy is applicable to the task at hand but can also be generalized to other similar tasks.

Teaching Phase

The tutor explicitly and systematically teaches the strategy to the student by providing clear explanations, modeling how to use the strategy with authentic material, checking the student's understanding of the strategy, and providing guided support as the student applies the new strategy to the assignment. When tutors model strategies for students, they demonstrate how to use each step of the strategy and also model the metacognitive thinking associated with monitoring and evaluating the effectiveness of the strategy. Finally, the tutor checks to ensure that the student understands each of the strategy steps and has taken notes over the strategy so that he or she can refer to the notes when using the strategy independently.

Transferring

The tutor helps the student plan for independent application of the strategy in a variety of learning circumstances including classrooms and other learning environments. For example, the tutor might cue and help the student plan to use a reading strategy on an upcoming assignment in social studies. The tutor might also cue the students to use the strategy in non-school settings.

Some of the students in studies of Strategic Tutoring have had LD and have benefited from the strategies taught. Strategic tutoring has been successful with upper elementary, middle and high school, and college settings. Whenever students have assignments that require skills and strategies beyond the student's current skill level, strategic tutoring may appropriate.

Supporting Evidence

Several studies have been conducted with ST. In one study, results indicate that strategic tutoring is effective in improving the quiz and test performance of students enrolled in transition math, Algebra I, and biology classes. In general, students improved their semester grades from Fs and Ds earned during a traditional tutoring condition to Cs and Bs after strategic tutoring began. Student knowledge of specific strategies also increased markedly (Hock, Pulvers, Deshler, & Schumaker, 2001). In another study of ST, the mean GPA of the ST group in increased by 0.37 after four months of tutoring. Students in ST also improved their achievement test scores in reading comprehension, written expression, and basic math skills as measured by the Woodcock Johnson Achievement Test Battery (Saunders, 2009). Finally, grade-level achievement score increased by ten months during a four-month instructional period (Staub & Lenz, 2002). In a study of university student-athletes, significantly underprepared students obtained grades in English 101 and other gateway courses that were similar to those of well-prepared students, learned a strategy for writing themes, and earned an overall GPA that supported "on track" academic performance (Hock, 1998). Finally, in studies of after-school programs in six middle schools, students in the strategic tutoring program significantly outperformed peers who participated in a traditional homework help program. Students in strategic tutoring earned higher grades, had significantly higher scores on measures of hope for the future,

and learned more strategies than did the comparison group (Hock, 2003; Saunders, 2009; Staub & Lenz, 2002).

The interventions and programs described here are examples that address support for successful transition through teaching both social–emotional learning skills and academic learning strategies. Both areas of learning are closely linked and mutually supportive of adolescents with LD and their transition success. Returning to our opening quote from Yong Zhao (2018), we feel that transition services for students with learning disabilities might best begin with an examination of the hopes, expectations, and fears of adolescents with LD as they begin to think about life after secondary school. These thoughts about what one might become and what one wants to avoid in life have the potential to make the transition planning process student centered. When students have a clearer picture of what is possible for them in the future and have internalized self-determined skills, successful transition from secondary school to a variety of options for continued education or involvement in a career might be more plausible. Therefore, an overarching goal of transition planning and support services might be targeted at helping students think about what they are good at, passionate about, and, most importantly, skilled at – the self-determined behaviors necessary to achieve one's goals in life.

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Adolescent Transition Education for Students With Intellectual Disability

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Intellectual disability is defined based on intellectual functioning (i.e., IQ score) and adaptive behavior manifesting in the developmental period (birth to 18). Specifically, according to the American Association on Intellectual and Developmental Disabilities (AAIDD), "intellectual disability is characterized by significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social, and practical adaptive skills. This disability originates before age 18" (Schalock et al., 2010, p. 1). With the AAIDD definition, intellectual disability generally includes people with an IQ below 70 to 75, although the majority of states designate 70 as the upper end for IQ to qualify a person as having intellectual disability relative to public schooling and special education (Polloway, Auguste, Smith, & Peters, 2017). Adaptive behavior involves conceptual, practical, and social adaptive behavior and is evaluated based on age appropriateness (Greenspan, 2017). According to the Individuals with Disabilities Education Act (IDEA, 2004), intellectual disability refers to "significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance."

Within the heterogenous category of intellectual disability, there have been attempts to classify different groups or individuals who share characteristics. One classification system involves levels of impairment with regard to intellectual functioning and adaptive behavior. This model includes mild, moderate, severe, and profound intellectual disability (Gargiulo & Bouck, 2018). A mild intellectual disability is generally associated with an IQ of 55–70, moderate an IQ of 40–55, severe 25–40, and below 25 is labeled profound. Of course, as noted, all must have simultaneous challenges related to adaptive behavior. The AAIDD also has worked to classify intellectual disability based on the level of support needed. This classification also includes four levels: intermittent, limited, extensive, and pervasive (Luckasson et al., 1992). An intermittent level of support involves as-needed or short-term supports. Limited supports are more consistently needed than intermittent but are less intensive in nature than the extensive level of support, which is characterized by regular supports in one or more areas of one's life (e.g., work, home). Finally, a pervasive level of support involves high-intensity and consistent supports across all of one's environments (Luckasson et al., 1992).

Transition Outcomes and Youth With Intellectual Disability

Transition refers to a passage from one phase to the next. Students with intellectual disability experience multiple vertical transitions across their time in education, from starting preschool to moving

from elementary to middle school (Polloway, Patton, Serna, & Bailey, 2018; Wehmeyer & Shogren, 2017). However, perhaps the most salient and emphasized transition is that from PK–12 school to adult life. The transition from schooling to postschool life is one of the most prominent educational experiences in the life of an adolescent with intellectual disability, not unlike the experiences or lives of all students in general.

The need for attention on school–to–adult life transition for students with intellectual disability is highlighted by their historically poor postschool – or adult – life outcomes. While we will primarily focus on employment, postsecondary education, and independent living as key adult outcomes in this chapter, we will also attend to measures of life satisfaction and graduation rates. The most recent data from the U.S. Department of Education (U.S. Department of Education, 2017) suggest students with intellectual disability graduate high school with a diploma at lower rates than students with other disabilities. Specifically, the graduation rate with a traditional high school diploma for students with intellectual disability was 42.4%, in contrast to the average for all students with disabilities at 69.9% and for all students with and without disabilities at 84.6% (U.S Department of Education, 2019). Students with intellectual disability may also exit high school with a certificate of completion or attendance in lieu of a standard diploma. Data suggest this certificate is earned by slightly more than one-third of students with intellectual disability (National Center for Educational Statistics, https://nces.ed.gov/). The certificate of attendance is concerning as it is distinct from a diploma and can negatively impact an individual's ability to earn a job or other postschool outcomes (Erickson, Kleinhammer-Tramel, Thurlow, 2007; Prince, Plotner, & Bridges, 2018).

Students with intellectual disability experience some of the more unsuccessful transitions to adult life, such as low rates of employment, independent living, and attendance at postsecondary education (Lipscomb, Lacoe, Liu, & Haimson, 2018). Researchers suggested students with mild intellectual disability experience postschool employment rates at less than 50% (Bouck, 2014). For students with moderate or severe intellectual disability, roughly two-thirds report never being employed after leaving high school (Bouck, 2012). These rates are generally below what is reported for students with disabilities in general as well as students without disabilities (Bouck & Park, 2018; Newman, Wagner, Cameto, & Knokey, 2009; Wagner, Newman, Cameto, Garza, & Levine, 2005). Students with intellectual disability also report working fewer hours than students in the majority of other disability categories, and they report the lowest average hourly wage, which is $2.50 below the average hourly wage for young adults with disabilities aggregated (Newman et al., 2011). The most common job held by young adults with intellectual disability was food preparation and service related, which is consistent for students with disabilities in general (Newman et al., 2011).

Historically, low rates of participation in postsecondary education were reported for students with intellectual disability. Bouck (2014) found attendance at four-year colleges was under 6% for students with mild intellectual disability while at two-year colleges it was under 15%, and attendance at technical or vocational programs was at a rate of 25%. The data for students with moderate or severe intellectual disability are less positive; over 90% of these students reported never attending a two-year, four-year, or technical/vocational postsecondary program (Bouck, 2012). However, it should be noted that these data are nearly a decade old and may not entirely reflect the current outlook. More recently, greater attention has been paid to postsecondary education programs for students with intellectual disability, suggesting higher rates of attendance. Specifically, Think College (2019), a national organization devoted to inclusive experiences for students with intellectual disability at institutions of higher education, reported a current total of 265 postsecondary education programs targeting individuals with intellectual disability. During the 2017–2018 academic year, 843 students were served in these programs (Grigal, Hart, Smith, Papay, & Domin, 2018).

A low frequency of young adults with intellectual disability report living independently after high school, defined as living without a family member (i.e., living alone, with a roommate, or with a significant other). Specifically, Bouck (2014) reported less than one-third of individuals with mild

intellectual disability lived independently while Bouck (2012) found 3% of young adults with moderate or severe intellectual disability lived independently.

Transition Services and Youth With Intellectual Disability

Continued attention is needed on transition programs and services for students with intellectual disability. The percentage of adolescents with intellectual disability age 17 or older, from the National Longitudinal Transition Study 2012 (NLTS 2012), who reported meeting with school staff to develop a transition plan was below that of all students with disabilities (67% as compared to 69%; Lipscomb et al., 2017). Less than 50% of parents of adolescents with intellectual disability 17 years of age or older indicated they were provided information on the child's transition planning and individualized education program (IEP). The 42% of students with intellectual disability who provided input was the fourth lowest – only students with autism (41%), students with multiple disabilities (32%), and students with deaf-blindness (25%) reported lower frequencies. The 42% was also lower than the average of all students with disabilities (59%; Lipscomb et al., 2017).

Data from the recent NLTS 2012 found students with intellectual disability were less likely to have a paid job in high school than students with other disabilities (Lipscomb et al., 2017). In terms of the seven key experiences in high school researchers linked to postschool success, generally students with intellectual disability were below the average for students with disabilities in general except for one – never suspended (Lipscomb et al., 2017). Youth with intellectual disability were deemed to be engaging in the following behaviors at lower rates: performing activities of daily living well, getting together with friends weekly, participating in a school sport or club, taking a college entrance or placement exam, paid work experience, and parental expectations of living independently (Lipscomb et al., 2017).

Yet, on a positive note, the recent data from the NLTS 2012 (Lipscomb et al., 2017), suggested students with intellectual disability are engaging in some transition practices and services at higher rates than students with disabilities in general; 80% of students with intellectual disability aged 17-plus attended their most recent IEP, in comparison to 78% of students with disabilities in general. The percentage of students with intellectual disability who had school staff and community service agency staff involved in their transition plan exceeded that of students with disabilities (50% as compared to 38%) and was the third highest frequency following students who identified with blindness or deaf-blindness (Lipscomb et al., 2017). During the transition planning IEP and process, high rates of students with intellectual disability had their interests, strengths, and preferences discussed (91%). While lower, a higher frequency of youth with intellectual disability aged 17 and above reported receiving information on postschool education, career, and living options than the average for all students with disabilities (66% as compared to 64%; Lipscomb et al., 2017).

Research-Based and Evidence-Based Transition Practices for Youth With Intellectual Disability

The National Technical Assistance Center on Transition (NTACT) released evidence-based, research-based, and promising practices relative to transition and adult life outcomes (i.e., employment, education, and independent living) for students with disabilities in general. The NTACT reported 11 evidence-based practices, 47 research-based practices, and 73 promising practices (NTACT, 2016). However, the effectiveness of identifying evidence-based practices and predictors hinges on implementation in practice (Plotner, Mazzotti, Rose, & Carlson-Britting, 2016). Researchers repeatedly identified the gap between research and practice with regards to evidence-based practices for transition (Kohler & Greene, 2004; Mazzotti, Rowe, & Test, 2012). A major challenge with implementing such practices is the lack of awareness of practitioners regarding

such practices, which suggests future avenues for teacher preparation and professional development (Plotner et al., 2016).

The NTACT (2018) effective practices and predictors matrix allows users to determine evidence-based, research-based, and promising practices for disability-specific groups – like adolescents with intellectual disability – to some degree (please see Table 29.1). Evident from Table 29.1 is greater attention in research to issues of transition for students with intellectual disability with regards to independent living compared to employment or education. For evidence-based, research-based, and promising practices for students with intellectual disability, the vast majority attend to the adult life outcome of independent living.

Evidence-Based Practices

In terms of evidence-based practices – the highest standard for practices – the Self-Determined Learning Model of Instruction for the purpose of teaching goal attainment was considered as such for education, employment, and independent living (NTACT, 2018). The Self-Determined Learning Model of Instruction aims at helping students to be more self-determined, which means they make decisions and cause events to occur in their lives, rather than being passive and allowing others to solve problems and set goals (Shogren, Wehmeyer, Burke, & Palmer, 2017).

Other evidence-based practices included instructional strategies or approaches for teaching specific content to students with intellectual disability, such as time delay for teaching science or food preparation, response prompting for teaching home maintenance skills, simulations for teaching purchasing skills, and video modeling for teaching home maintenance (NTACT, 2018). Time delay involves providing a prompt after a specific period of time – even gradually increasing the time (i.e., progressive time delay) or with a fixed number of seconds (i.e., constant time delay; Neitzel & Wolery, 2009). With time delay, students receive a cue, they respond, and then feedback is provided (Neitzel & Wolery, 2009). Response prompting strategies are prompts provided after a student engages in a behavior or activity – generally incorrect – to aid in correcting the student (Bouck, Taber-Doughty, & Savage, 2015). Response prompting is often associated with the system of least-to-most prompting or the system of most-to-least prompting and can include such prompts as verbal, gestures, modeling, and physical assistance within the hierarchy (Bouck et al., 2015). Finally, video modeling is an antecedent strategy, meaning it comes before a student engages in a behavior or attempts a task (Bouck et al., 2015). In this case, the student watches a video of someone

Table 29.1 Evidence-Based, Research-Based, and Promising Transition Practices for Adolescents with Intellectual Disability

Level of Evidence	Education	Employment	Independent Living
Evidence Based	• Self-Determined Learning Model of Instruction to teach goal attainment • Time delay to teach science	• Self-Determined Learning Model of Instruction to teach goal attainment	• Self-Determined Learning Model of Instruction to teach goal attainment • Constant time delay to teach food preparation skills • Response prompting to teach home maintenance skills • Simulations to teach purchasing skills • Video modeling to teach home maintenance • Whose Future Is It Anyway? to teach self-determination

Level of Evidence	Education	Employment	Independent Living
Research Based	• Published curricula to teach student involvement in the IEP • Schema-based instruction to teach mathematics	• Published curricula to teach student involvement in the IEP • Self-Directed IEP to teach students involvement in the IEP meting • Computer-assisted instruction to teach job-specific skills • Constant time delay to teach job-specific skills • Response prompting to teach employment skills • System of least-to-most prompts to teach job-specific skills	• Published curricula to teach student involvement in the IEP • Self-Directed IEP to teach students involvement in the IEP meting • Backward chaining to teach functional life skills • Community-based instruction to teach banking • Community-based instruction to teach community integration skills • Community-based instruction to teach purchasing skills • Community-based instruction to teach safety skills • Computer-assisted instruction to teach grocery shopping skills • Constant time delay to teach banking • Constant time delay to teach functional skills • Constant time delay to teach leisure skills • Forward chaining to teach functional skills • One-more-than strategy to teach money counting • One-more-than strategy to teach purchasing skills • Progressive time delay to teach functional skills • Progressive time delay to teach purchasing skills • Progressive time delay to teach safety skills • Response prompting to teach food preparation skills • Response prompting to teach laundry tasks • Response prompting to teach social skills • Simulations to teach banking skills • Simultaneous prompting to teach functional life skills • System of least-to-most prompts to teach grocery shopping skills • System of least-to-most prompts to teach functional life skills • System of least-to-most prompts to teach safety skills • Total task chaining to teach functional life skills • Video modeling to teach food preparation

(*Continued*)

Table 29.1 (Continued)

Level of Evidence	Education	Employment	Independent Living
Promising	• Simultaneous prompting to teach math • Technology to teach reading comprehension	• Community-based instruction to teach employment skills • System of least prompts procedures with video prompts to teach office tasks • System of least-to-most prompts to teach job-specific skills	• Constant time delay and SMART board technology to teach grocery store vocabulary • Forward chaining to teach functional skills • One-more-than strategy to teach purchasing skills • Response prompting to teach travel skills • Role-play to teach workplace social skills • Self-management to teach social skills • Simulated instruction and video modeling to teach selecting a bus stop • Simulated instruction to teach basic finance skills • Video modeling to teach iPod and iPhone use

Source: National Technical Assistance Center on Transition. (2018). *Effective practices matrix*. Retrieved from https://transitionta.org/epmatrix. This product is in the public domain.

engaging in the behavior (e.g., completing home maintenance) and then attempts the same tasks him- or herself.

Research-Based Practices

One research-based transition practice that supports all three major adult life outcomes is use of a published curriculum to teach student involvement in their individualized education program (IEP; NTACT, 2016). Student involvement in the IEP is the goal but as previously indicated is not yet fully realized. Encouraging students – even before they reach the age of transition – with intellectual disability to become involved in the IEP (and ideally leading their IEP in time) helps students to set goals, become a self-advocate, support self-determination, and self-assess (IRIS Center, https://iris.peabody.vanderbilt.edu/). Student involvement in the IEP also allows students to practice public speaking, which is a soft skill for employment (IRIS Center, 2017). Student involvement in the IEP is related to person-centered planning, where the adolescent is centrally involved in his or her current and future life decisions (Claes, Van Hove, Vandevelde, van Loon, & Schalock, 2010). Researchers suggested a positive association between person-centered planning and postschool outcomes (Hagner, May, Kurtz, & Cloutier, 2014).

Strategies determined to be evidence-based for particular transition areas are also considered research-based for other transition areas, such as time delay and response prompting, including the system of least prompts for such transition skills as learning employment and job skills, banking, functional skills, and leisure skills (NTACT, 2018). Other strategies determined to be research based for particular independent living transition skills include community-based instruction and chaining. Community-based instruction (CBI) involves the instruction of independent living skills – such as

banking or safety skills – within the context of the natural community settings in which they occur (e.g., a bank or crossing a street; Bouck et al., 2015; McDonnell, 2010). Chaining includes backward or forward chaining and is connected to a task analysis (National Professional Development Center on ASD, 2015). Backward changing involves teaching the steps of a task analysis in the opposite order (i.e., starting with the last step); forward chaining involves teaching the task analysis steps in sequential order (National Professional Development Center on ASD, 2015).

Transition Intervention and Predictors for Adolescents With Intellectual Disability

Beyond evidence-based, research-based, and promising practices, individual researchers as well as the NTACT (2016) suggested predictors – or key factors and specific opportunities and supports – that result in positive postschool transition outcomes (i.e., successful employment and access to post-secondary education, as well as community living and participation) for students with disabilities, including those with intellectual disability (see Table 29.2). These predictors include well-informed and engaged families, regular and meaningful opportunities to build community orientation skills, school and related community resources links, work training and experience, inclusive education, and high-quality instruction and support (NTACT, 2016). Generally, students who have ample opportunities to access and engage in the community, in all of its aspects from working to playing to living, will become adults with the skills and connections to continue and strengthen their engagement for the enrichment of their own lives and that of the communities in which they live (e.g., Bigby, 2012; Kozma, Mansell, & Beadle-Brown, 2009; Wehmeyer & Bolding, 2001).

Table 29.2 Evidence-Based Predictors of Adult Life Outcomes

Predictor	Employment	Education	Independent Living
Career awareness	X	X	
Community experiences	X		
Exit exam requirements/high school	X		
Goal setting	X	X	
Inclusion in general education	X	X	X
Interagency collaboration	X	X	
Occupational courses	X	X	
Paid employment/work experience	X	X	X
Parent expectations	X	X	X
Parental involvement	X		
Program of study	X		
Self-advocacy/self-determination	X	X	
Self-care/independent living	X	X	X
Social skills	X	X	
Student support	X	X	X
Transition program	X	X	
Travel skills	X		
Vocational education	X	X	
Work study	X		
Youth autonomy/decision making	X	X	

Source: National Technical Assistance Center on Transition. (2016). *Evidence-based practices and predictors in secondary transition: What we know and what we still need to know*. Charlotte, NC: NTACT. This product is public domain.

Family Expectations and Involvement

Family expectations make a significant impact on the transition-related outcomes for students with intellectual disability (Simonsen & Neubert, 2013; Test, Terrell, Clark, & Rusher, 2018). In general, fewer than half of parents of students with intellectual disability surveyed in the NLTS 2012 expected their children to be living independently by the age of 30, as compared to 78% for parents of children with all disabilities (Lipscomb et al., 2017). It can be said that prior to the age of typical independence, parents of children with intellectual disability may have a heightened focus on the challenges and barriers of independent living (e.g., Lemay, 2009; Reed et al., 2014). Positive family expectations, however, contribute to postschool outcomes, such as employment opportunities (Test et al., 2018; Wehman et al., 2015). Parent advocacy, such as direct involvement with and specific requests to school decision makers on behalf of their children with disabilities, increased both work experience opportunities in the community within secondary transition programs as well as subsequent community-based employment at or above minimum wages (Simonsen & Neubert, 2013). School professionals may be able to assist in encouraging family involvement and advocacy in the transition process and therefore reap the benefit of individually tailored programming to optimize success (Cook, Hayden, Wilczenski, & Poynton, 2015; Hirano & Rowe, 2016; Martinez, Conroy, & Cerreto, 2012). Test, Fowler, Richter, et al. (2009) found such successes through teaching families about the transition process.

Community Linkages and Orientation

Orientation in the community refers to the ability to navigate within one's local area in order to live, work, and play (Wagner, Newman, Cameto, & Levine, 2006). Many students with intellectual disability experience difficulty doing this without a great deal of support (Lipscomb et al., 2017). Intentional and regular exposure, practice, and support of students in understanding and accessing the community for their daily needs can help build both the skills and confidence needed for the more substantial access needed in adulthood (Wehmeyer & Bolding, 2001). Living in the community, as opposed to in a segregated environment, results in increased community participation for individuals with intellectual disability (Kozma et al., 2009; Verdonschot, De Witte, Reichrath, Buntinx, & Curfs, 2009). Even more so, the length of time living in the community is directly proportional to the ease and depth of community orientation (Verdonschot et al., 2009).

During secondary school, programs and events such as community-based instruction, social activities with friends, and extracurricular participation positively impact postschool transition outcomes (Gilson, Carter, & Biggs, 2017; Lipscomb et al., 2017). Students who are more accustomed to accessing and engaging in the community – such as holding a part-time job, using the ATM, participating in shopping – become more prepared for the demands of integrated and competitive employment (Simonsen & Neubert, 2013).

In transition-related education law, interagency collaborations are an essential and required component of the transition plan and the ultimate transition process (IDEA, 2004). Services, instruction, and supports are not meant to completely cease the day after graduation. Instead, the transition process in education is meant to help students plan and prepare for their ideal future, which may occur immediately or some years down the road after additional experiences, training, and support outside of school (Kohler & Field, 2003). For this to happen, schools are to work in tandem with community-based outside agencies such as vocational rehabilitation or living support agencies (Cihak, O'Reilly, Krile, & Eshbaugh, 2019). Such collaborations can help schools better understand the available supports postschool and adjust their programming accordingly for maximized student success. Also, in this arrangement, community agencies are able to more acutely recognize a student's

previous and current supports as well as future goals and trajectory (Kohler & Field, 2003). Students with intellectual disability should, at minimum, be provided with relevant outside community agency (e.g., vocational rehabilitation, career supports, disability accommodation) links prior to exiting high school (Test, Fowler, Kohler, & Kortering, 2010). While the research on specific strategies regarding successful interagency collaborations among schools, parents, and non-school community agencies is scarce, it is considered important, if not essential, to improving student opportunities and life outcomes (Carter et al., 2016; Cook et al., 2015). Test, Fowler, White, Richter, and Walker (2009) found career awareness and interagency collaboration were among the activities with a distinct positive effect on education and employment outcomes for individuals with disabilities.

Work Experience and Training

Researchers linked training and experience in work-related skills and settings during high school to positive postsecondary employment for students across disability categories (Cobb et al., 2013; Test, Fowler, White, et al., 2009; Test, Mazzotti, et al., 2009; Wehman, 2013). Conversely, high unemployment in adulthood is closely associated with a lack of adequate work-related skills instruction in school (Gilson et al., 2017). Employment skills instruction can include programmatic training such as career and technical education or school-based vocational training (Cobb et al., 2013). Work experiences during secondary school can include job exploration, apprenticeships, volunteering, or paid work (Test, Fowler, White, et al., 2009; Test, Mazzotti, et al., 2009). While general experiences such as job exploration and job shadowing are intended to provide a student with an overview or sample of the context as well as universal ideas about work environments, more specific and long-term experiences such as volunteering and paid work are focused on opportunities to hone specific skills and learning the specific job contexts (Flexer, Baer, Luft & Simmons, 2013). Although only about one-fifth (22%) of students with intellectual disability surveyed in the NLTS 2012 had paid school-based work experience, it remains, nonetheless, an effective predictor of postschool transition outcomes (Lipscomb et al., 2017; Mazzotti, Rowe, Cameto, Test, & Morningstar, 2013).

Experience alone may not be the best form of preparation for a future of paid employment for youth with intellectual disability. Regular, paid employment opportunities prior to exiting high school is a stronger predictor of positive postschool outcomes than non-paid work for students with disabilities (Cobb et al., 2013; Simonsen & Neubert, 2013). Students who participate in such paid experience as a component of their secondary schooling are more likely to work as an adult in the community at or above minimum wage (Simonsen & Neubert, 2013). While paid work experience is an important component of secondary transition programming, students with intellectual disability can also reap the benefits of such employment experience through summer work experiences outside of their educational program (Test et al., 2018). These opportunities can provide experiences with the demands, skills, and tools needed in the workforce while being relatively short in duration.

Inclusive Education and Supports

In general, students with disabilities who are included in high school experience better postschool outcomes in such areas as postsecondary education, independent living, and employment (Baer, Daviso, Flexer, Queen, & Meindl, 2011; Cobb et al., 2013; Lipscomb et al., 2017; Mazzotti et al., 2013; Test, Mazzotti, et al., 2009; Test, Fowler, White, et al., 2009; Wehman et al., 2015). The research clearly points to transition-related experience and exposure as an effective learning tool. Given appropriate supports and services, students with access to spaces, peers, and content often respond positively through adaptation and learning (Thompson et al., 2009). This includes student access to

the general context of the school, including social peer networks and extracurricular opportunities as well as engagement in academic and vocational offerings with peers without disabilities and school faculty. Although not without its challenges, inclusive education for students with intellectual disability typically results in access to higher academic standards (Bouck & Park, 2016).

In inclusive contexts, students with intellectual disability can benefit from peer tutoring, one effective instructional mode to assist learning of transition-related skills (Gilson et al., 2017). Peer tutoring refers to the delivery of support from a classmate without a disability via modeling, prompting, or other such aid to help students with disabilities learn or perform a skill (Gilson et al., 2017). Due to the nature of typical instructional supports and strategies being intensive and teacher directed, students with intellectual disability can be slow to develop independent learning, problem solving, and generalization skills (Smith, Shepley, Alexander, & Ayres, 2015). Use of peer tutoring among other naturalistic supports in inclusive settings can help students with intellectual disability become more self-reliant and less adult dependent (Giangreco, Halvorsen, Doyle, & Broer, 2004).

Instructional Strategies, Supports, and Content

In terms of specific instructional strategies, many of the longstanding empirically based techniques for teaching and supporting students with intellectual disability are equally relevant to improving transition outcomes through employment, postsecondary education, and community living–related skills instruction. These include such practices as systematic instruction, picture supports, direct instruction, task chaining, modeling, prompting, time delay, reinforcement contingency, and social skills training (Cobb et al., 2013; Gilson et al., 2017; Park, Kim, & Kim, 2016). Similar to teaching skills communication or mathematics, for example, researchers found such strategies successful in teaching students with intellectual disability skills related to transition (Cobb et al., 2013; Gilson et al., 2017; Park et al., 2016). It should be noted, however, that researchers caution against the overuse of teacher-directed supports in instruction of life-long skills; in addition to specific skills, it is important that students with ID learn to self-instruct, problem solve, and apply learning from one context to another through generalization (Smith et al., 2015).

Another such strategy in which training and support can produce beneficial transition outcomes involves self-management. Greater ability to self-manage behaviors and learning leads to more independence and more successful outcomes in employment, education, and independent living (Gilson et al., 2017; Simonsen & Neubert, 2013; Test, Mazzotti, et al., 2009). Students who are taught to problem solve and regulate their behaviors often find more success in retaining competitive employment and experience successful engagement in the community (Simonsen & Neubert, 2013). Additionally, students who learn to exhibit self-determination skills experience benefits in terms of employment, academic, and civic engagement during and after school (Landmark, Ju, & Zhang, 2010; Test et al., 2018). Self-determination, as described by Wehmeyer (1998), refers to the topics of self-awareness, decision making, self-advocacy, and goal setting. In terms of transition, this can involve active student participation in matters that pertain to their current and future life (Test, Fowler, White, et al., 2009). Test, Fowler, Richter, et al. (2009) found evidence that students who are active participants in their IEP and transition plans were more likely to be advanced in their postsecondary transition-related ventures than those who were not involved.

In general, supports for student progress in transition programs lead to positive transition outcomes (Mazzotti et al., 2013; Test, Fowler, White, et al., 2009; Test, Mazzotti, et al., 2009). This could include assistance in individualized transition planning and supports or adaptations for accessible learning and community participation. It could also include the training and use of assistive technology (Cobb et al., 2013; Test et al., 2018). For example, Gilson et al. (2017) found a strong positive

effect for such assistive technology as video and audio supports (e.g., recorded audio prompts, video modeling) and alternative and adaptive communication on learning employment skills among secondary students with intellectual and developmental disabilities.

In terms of content, teaching life skills, and, in particular, purchasing skills, was found to have a strong evidence base in the research (Test, Fowler, Richter, et al., 2009). This type of daily life–focused content has been found to have a moderate correlation to successful postschool outcomes (Test, Fowler, Richter, et al., 2009). In other words, students who have been taught to do or at least participate in their daily life activities such as cooking dinner, doing laundry, or paying bills while in school are more likely to carry those skills into adulthood, resulting in more success and independence in their daily life.

Conclusion

Transition is an essential part of secondary education for students with intellectual disability, as it should be for all students with disabilities. Attention to programming – including activities and services – that aids students and results in increased adult outcomes is important. Secondary educators should implement evidence-based, research-based, or, at a minimum, promising practices relative to transition for students with intellectual disability to result in positive employment, postsecondary education or training, or independent living outcomes.

As noted, the effectiveness of secondary education and services for students with disabilities is often evaluated relative to employment, education, and independent living adult life outcomes. Also, as noted, historically, students with intellectual disability have experienced poor – and often poorer than other students – outcomes in these areas. Students with intellectual disability have historically been pigeon-holed into a focus on employment and independent living, to a lesser extent, after exiting PK–12 schooling (Bouck, 2012, 2014). Yet recent effort and attention to postsecondary education access and opportunities are positively changing the landscape for students with intellectual disability and making postsecondary education a reality (Grigal et al., 2019).

As suggested in this chapter, greater attention and emphasis should exist on students with intellectual disability attending and graduating from postsecondary education or training programs. Researchers found students with intellectual disability who attend postsecondary education experience greater access to employment opportunities and higher salaries than those who do not attend (Migliore, Butterworth, & Hart, 2009; Wehman, 2013). Postsecondary education can include multiple options for students with intellectual disability. This can include enrollment in a university or college degree-granting program, trade or vocational schooling, occasional coursework, and/or a life skill–focused program on a college campus (Cook et al., 2015). Programs such as the latter can include separate, hybrid, or inclusive coursework (Cook et al., 2015). Thoma et al. (2011) suggested such college-based postsecondary education provides advantages, in regard to postschool employment opportunities, over remaining in high school until age 21 for students with intellectual disability. Not only are students in these programs embedded in typical college life and the social, recreational, and experiential opportunities within, but they also report increased learning in academic and non-academic subjects compared to those students who remained in high school (Thoma et al., 2011). Access to college-based programming or postsecondary education in general should be supported through preparation in secondary school focused on related skills and opportunities, as well as through guidance from academic school counselors (Cook et al., 2015). These individuals can and should work directly with students and their families through counselling and consultation for future planning and preparation. They also can work to bring related stakeholders together as well as advocate on behalf of students with intellectual disability in pursuance of postsecondary education ambitions and opportunities (Cook et al., 2015).

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Adolescent Transition Education for Deaf Students

Carrie Lou Garberoglio and Stephanie W. Cawthon

The transition from high school to beyond is a fraught time for all young adults, particularly in a time of uncertainty about the future related to changing job expectations, global warming, systemic inequities, costs of postsecondary education, and much more. Disabled youth experience the same uncertainties about their future, on top of daily stressors related to inaccessible settings and negative assumptions about their potential. For deaf youth, these daily stressors are compounded by language and communication barriers. These language and communication barriers may negatively impact opportunities for deaf adolescents to develop key transition skills (Luft & Huff, 2011). In this chapter, we use the term "deaf" while also recognizing the multifaceted and multilayered identities within deaf communities, which may include some of the following: deaf, Deaf, deafdisabled, deafblind, hard of hearing, hearing impaired, and late-deafened. We also choose to use identity-first language, in allyship with the preferences of deaf, disabled, and deafdisabled communities and as deaf scholars ourselves.

Deaf youth have to navigate through settings heavily influenced by a historical landscape of medical–pathological and deficit perspectives of deafness, which continues to be prevalent today. Deaf scholars and their allies have shifted the landscape toward a cultural and linguistic perspective of the deaf experience (e.g., Padden & Humphries, 1988; Simms & Thumann, 2007), moving toward strengths-based and positive psychology frameworks (e.g., Zand & Pierce, 2011). This movement aligns with larger conversations within disability theory that recognize disability as a mismatch between individual capacity and the demands of the environment, in person-environment models of disability (e.g., Wehmeyer & Shogren, 2017). Instead of a medical–pathological focus on loss of hearing, which implies passivity and things "happening to" deaf people, strengths-based models of deaf experiences recognize culture and language as something "emerging from" deaf people, in a more active and formative understanding of the human experience.

Within the field of transition, similar shifts in theoretical understandings have moved beyond older models of development that are more passive, to newer models that are built on an understanding of how young people actively construct their lives. This life design model recognizes and values that people design their lives through an active and ongoing construction of their experiences, selves, aspirations, and behaviors (Nota, Ginevra, & Santilli, 2015). This model honors people's selfhood, which is particularly important for disabled people, as their selfhood is often disregarded in the light of societal expectations to become a "contributing member of society," whether or not those societal expectations align with one's personal aspirations. Personal aspirations are deeply individual

and change throughout the course of one's life. Those aspirations are also formed as a result of one's life experiences. Life experiences related to being deaf are part and parcel of all the experiences that form our understanding of ourselves and our aspirations for the future. Deaf people need, and value, the freedom to create our own goals and decide how to reach those goals in ways that align with our life experiences.

Transition Outcomes for Deaf Individuals: The Current Landscape

National large-scale datasets can be one way to reach a current understanding of experiences and outcomes that serve as transition milestones and endpoints, including gaps between deaf and hearing communities and within deaf communities (Garberoglio, 2017). More than 11 million people of all ages in the United States, or 3.6% of the population, are deaf, but many of these people are senior citizens who become deaf later in life (Erickson, Lee, & von Schrader, 2017). Although deafness is considered a low-incidence disability based on federal definitions, people with hearing losses disclose deafness at different stages in their transition from secondary to postsecondary settings and beyond; thus an accurate understanding of the demographics of deaf people can be a moving target. In 2017, around 0.1% to 0.7% of secondary students were deaf, depending on how they were identified. Of all enrolled students between pre-kindergarten and 12th grade, 0.1% of students received Individuals with Disabilities Education Act (IDEA) services and were identified as being deaf (U.S. Department of Education, 2019a). However, a higher percentage of young people (0.6%–0.7%) in the United States between the ages of 4 and 20 reported having hearing difficulties (Erickson et al., 2017). In secondary school systems, deaf students can receive accommodations in the classroom under Section 504 of the Rehabilitation Act even if they do not receive IDEA services. Some students with milder hearing losses may choose not to disclose their disability and are not identified as deaf within the school system. Disclosure of deafness may occur after students have exited secondary settings and need different types of support for postsecondary settings that are more demanding.

High school graduation rates for deaf people are higher than their disabled peers, on average, but lower than their hearing peers. Among deaf students between the ages of 14 and 21 who exited secondary school in the academic year of 2016–2017, 80% graduated with a regular diploma and 10% received an alternative certificate, compared to 71% and 10%, respectively, of all disabled students who received IDEA services in that same year (U.S. Department of Education, 2019b). Only 9% of deaf students dropped out in that same academic year, compared to 17% of students with disabilities (U.S. Department of Education, 2019b). The adjusted cohort graduation rate in 2016–2017 for all high school students was 84.6% (U.S. Department of Education, 2019c). Among people between the ages of 25 and 64 in the United States, 83.7% of deaf adults had successfully completed high school, compared to 89.4% of hearing adults (Garberoglio, Palmer, Cawthon, & Sales, 2019a). Generally, high school completion rates for deaf people in the United States show promise, with only around 5% fewer deaf people than hearing people completing high school.

Once deaf people have left high school, it appears that many enroll in college, with 74.7% of deaf young adults who identified as being deaf during high school and had been out of high school for up to eight years having ever enrolled in any type of postsecondary school (Newman et al., 2011). Based on national longitudinal studies of transition for students with disabilities, the enrollment rate for deaf youth was higher than average enrollment rates for comparable age disabled youth (60.1%) and youth without disabilities (67.4%) (Newman et al., 2011). However, national enrollment rates from the U.S. Census show us that only 5% of deaf adults were currently enrolled in postsecondary institutions of any type, compared to 11% of hearing people (Garberoglio et al., 2019a). Enrollment rates vary across type of institution. Most deaf young adults enrolled in two-year colleges (51.5%) or vocational, business, or technical schools (42.9%), with fewer (33.8%) enrolled in four-year colleges (Newman et al., 2011). In contrast, enrollment rates among young adults in the general population were higher

at four-year colleges (40.2%) than at two-year colleges (20.6%) or vocational, business, and technical schools (20.3%; Newman et al., 2011). College enrollment rates may be high among deaf people, but fewer enroll in four-year colleges than the general population. This is particularly relevant when considering that employment rates are stronger among people with at least a four-year degree; the educational gaps that emerge at this transition point will impact employment opportunities later in life.

While a high percentage of deaf young adults do enroll in college, making up 1.3% of the population of undergraduate college students in 2016 (Garberoglio, Palmer, & Cawthon, 2019), many of them do not successfully complete their education. Deaf students may arrive at college less prepared (Luft & Huff, 2011), having completed less rigorous coursework during high school than their nondisabled peers (Nagle, Newman, Shaver & Marschark, 2016), and taking longer periods between leaving high school and enrolling in college (Garberoglio et al., 2019). Many deaf students navigate college settings without receiving accommodations; only 59.4% of deaf college students disclose information about their deafness (Newman et al., 2011). Datasets that track young adults who identified as deaf and received accommodations and supports during high school show that 52.9% of deaf students who were working toward a diploma, certificate, or license had successfully completed it within eight years of leaving high school, compared to 52.4% of people in the general population (Newman et al., 2011). Among currently enrolled undergraduate students, 18.2% of deaf students had successfully completed their program in 2016, compared to 21.5% of hearing students (Garberoglio et al., 2019). However, the national datasets that we rely on to track college enrollment and completion among disabled students, the second National Longitudinal Transition Study and the National Postsecondary Student Aid Study, do not track students who have never enrolled or dropped out of college or those who did not disclose deafness during college. To identify overall college completion rates, we return to data from the U.S. Census. This data shows us that college completion rates among deaf people are significantly lower than among hearing people. Only 27.7% of deaf adults had completed an associate's degree and 18.8% had completed a bachelor's degree, compared to 43.3% and 34%, respectively, among hearing adults in the United States (Garberoglio et al., 2019a).

Educational attainment gaps that occur throughout the transition period impact employment outcomes later in life. In 2017, only 53.3% of deaf people were employed, compared to 75.8% of hearing people (Garberoglio, Palmer, Cawthon, & Sales, 2019b). For deaf people, employment rates increase as their educational attainment increases, from 31.7% among deaf people without a high school degree, 48.6% among those who had completed high school, 63.9% among those who had completed an associate's degree, and 70.5% among those who had completed a bachelor's degree (Garberoglio et al., 2019b). Many deaf people (42.9%) have opted out of the labor force entirely, compared to 20.8% of hearing people (Garberoglio et al., 2019b). Those people may be in school, taking care of family members, or in early retirement. However, many deaf people experience challenges in the workplace that may lead to leaving the workforce, such as fatigue from requesting accommodations, limited opportunities for advancement, or communication challenges with co-workers and supervisors (Perkins-Dock, Battle, Edgerton, & McNeill, 2015). Stronger transition preparedness should, theoretically, contribute to better employment outcomes for deaf individuals and increased capacity to navigate those workplace challenges.

Transition Outcomes: A More Nuanced Understanding of Outcome Data

The outcome data described previously show us symptoms of underlying systemic problems. Historically, outcomes-based data about deaf individuals have been interpreted as individual-level limitations and gaps directly related to deafness. We, along with other deaf scholars and allies, are shifting that perspective to recognize systemic barriers that prevent deaf individuals from maximizing their potential and meeting their goals. This perspective is one in which "deafness may be a risk indicator,

but is not of itself a risk mechanism" (Young, Rogers, Green, & Daniels, 2011, p. 5). Deafness is not a direct cause of lower educational attainment and employment rates among deaf communities, but it influences multiple proximal processes involved in the transition period (Cawthon & Garberoglio, 2017). A root cause analysis of literature and data identified four underlying root causes of educational and employment disparities within deaf communities: limited access to language and communication, reduced social opportunities, negative attitudes and biases, and the lack of qualified and experienced professionals (National Deaf Center on Postsecondary Outcomes, 2018).

Limited Access to Language and Communication

Deaf individuals use a variety of communication modalities to navigate the world, changing throughout the lifespan and across settings. Those modalities may involve signed or spoken languages, with a variety of communication tools and supports. Regardless of the communication modality being used, many deaf individuals do not experience consistent and effortless access to language and communication. Deaf people who rely on listening and spoken languages continue to experience comprehension gaps and lag behind their peers on language acquisition, even with support from amplification or cochlear implants (Hyde et al., 2009; Peterson, Pisoni, & Miyamoto, 2010). Deaf people who rely on signed languages have minimal access to signing family members, peers, professionals, and role models across all settings. This reduced access to language and communication has severe lifelong implications for the well-being of deaf individuals (Hall, Levin, & Anderson, 2017). Reduced access to language and communication means that deaf individuals have fewer opportunities to strengthen their funds of knowledge; deaf students often arrive to classrooms with less knowledge than their hearing peers (Marschark, Sapere, Convertino, & Pelz, 2008). Language and communication are crucial tools for building funds of knowledge and social capital that can be relied on to help individuals progress through the transition period.

Reduced Social Opportunities

Communication barriers, negative attitudes, isolation, and insufficient accommodations all converge to limit opportunities for deaf youth to develop a strong sense of self through formative social situations and build social networks. Even when appropriate accommodations are available, deaf youth experience limited access to social opportunities (Hopper, 2011; McKee, 2008). Lack of access to social opportunities for deaf youth negatively impacts the development of self-concept and autonomy, well-being, and academic achievement (Listman, Rogers, & Hauser, 2011). Social networks are critical for future success as a source of social capital that connects us with people and resources within communities (Yosso, 2005). For marginalized communities such as deaf communities, community cultural wealth is a particularly valuable resource for strengthening individuals' resilience in the face of obstacles that can, and will, appear throughout the transition period (Listman et al., 2011). Opportunities for deaf youth to build relationships with other deaf people are invaluable strategies for strengthening resilience and well-being (Hauser, Listman, Kurz, & Contreras, 2014; Hintermair, 2007; Jambor & Elliot, 2005). Stronger social skills also increase the likelihood of deaf adolescents successfully completing postsecondary education and training later in life (Schoffstall, Cawthon, Dickson, Bond, Ocuto, & Ge, 2016). Deaf youth who are building their transition goals need to be able to rely on the strength of their social networks to help them achieve these goals.

Negative Attitudes and Biases

For deaf youth, negative biases and low expectations about deaf individuals run rampant across multiple settings. For many families, their deaf child is the first deaf person they have ever met. This lack

of knowledge may contribute to parents discouraging their deaf children to pursue higher education or challenging careers (Danermark, Antonson, & Lundström, 2001; DeCaro, Mudgett–DeCaro, & Dowaliby, 2001). In secondary school systems, lower expectations of deaf students may be related to findings that demonstrate a higher likelihood of deaf students being placed on vocational tracks and taking less rigorous coursework than their hearing peers (Garberoglio et al., 2019b; Nagle et al., 2016). In popular media, narratives about deaf people being "in a world of silence" continue to be prevalent despite increased positive press about successful deaf people and the popularity of sign language. Deaf individuals who internalize these negative biases about deafness are less resilient to stress and adversity (Hauser et al., 2014). Qualitative and quantitative studies indicate that positive expectations by parents and professionals are important contributors to the success of deaf individuals (Cawthon, Garberoglio, Caemmerer, Bond, & Wendel, 2015; Smith, 2013). Negative attitudes and biases across a range of settings can have a cumulative effect, making deaf individuals less equipped to tackle challenges in high school and beyond.

Lack of Qualified and Experienced Professionals

As deafness is a low-incidence disability, the number of qualified professionals with experience in serving deaf populations is sparse. Deaf education teacher training programs across the United States are closing, resulting in a severe shortage of deaf education teachers (Luft, 2019). As programs close, and budgets are cut, professional demands are increasing. Vocational rehabilitation counselors who work with deaf clients now have caseloads that average 154 deaf clients (Honeycutt, Thompkins, Bardos, & Stern, 2013). Beyond shortages and increasing demands, professional qualifications are also a concern. The majority of educational interpreters working in K–12 settings have skills that are only adequate, and many have below adequate skills (Schick, Williams, & Kupermintz, 2006). Deaf people have a wide range of needs, preferences, and goals; professionals need to be familiar with this diversity within deaf communities in order to meet those needs, adapt to preferences, and support goal attainment.

Intersectional Oppressions and Compounding Factors

A more nuanced understanding of outcome data must recognize additional compounding factors for multiply marginalized communities and the intersectional oppressions at play for deaf people of color (Crenshaw, 1991). Deaf people of color and deaf people with additional disabilities face persistent and multilayered oppressions that manifest in educational and employment disparities. The root causes previously discussed are only compounded by biases and oppressions that occur in the everyday lives of deaf people of color, deafdisabled people, and deafdisabled people of color.

Educational attainment and employment data show significant disparities within deaf communities, specifically for deafdisabled people and deaf people of color. Deafdisabled people were twice as likely not to complete high school as their deaf peers without additional disabilities and less likely to complete college degrees (Garberoglio et al., 2019a). Educational attainment rates also vary across race and ethnicity, with lower completion rates among Black, Latinx, and Native American deaf people than their Asian and White peers (Garberoglio et al., 2019a). Within deaf communities, the lowest employment rates are found among deafdisabled people (35%), Black deaf people (38.7%), and Native American deaf people (39.3%), with even lower employment rates among deaf women of color (Garberoglio et al., 2019b). Employment disparities also emerge when reviewing data on median earnings, with lower earnings among deafdisabled people and deaf people of color (Garberoglio et al., 2019b). These data points related to educational attainment and employment need to be framed within a perspective that recognizes how systemic barriers place people of color at risk for poorer educational and employment outcomes (O'Connor & Fernandez, 2006).

Deaf people of color, deafdisabled people, and particularly deafdisabled people of color experience multiple systemic barriers and intersecting oppressions in the transition period that make it even more challenging to construct and achieve their desired goals. The literature that discusses the experiences of deaf people of color, especially if emic perspectives are included, acknowledges that negative attitudes and biases in the system are interfering with expected developmental trajectories for deaf people of color (Moore & Mertens, 2015; Simms, Rusher, Andrews, & Coryell, 2008; Stapleton, 2016). In secondary school settings, differential placements are visible as early as in elementary school, with greater placement in special education settings and vocational tracks for deaf students of color when compared to White deaf students (Foster & Kinuthia, 2003; Kluwin, 1994; Wilkens, 2009). Within school settings, many deaf students of color feel that their racial and ethnic identities are not recognized and supported (Foster & Kinuthia, 2003; Stapleton & Croom, 2017; Wolbers, 2002). Professionals who serve deaf individuals are overwhelmingly White, including teachers, administrators (Simms et al., 2008), and interpreters (Garcia-Fernandez, 2019). When Black deaf individuals receive employment support through vocational rehabilitation services, they are more likely to be placed in noncompetitive job settings than their White counterparts, thus earning less money on the job (Moore, 2001). There is very little research on the experiences of deafdisabled youth in the transition period, but it would be easy to say that there are very few deafdisabled professionals who could serve as role models and mentors and significant limitations in the extent of specialized services available for deafdisabled youth.

Best Practices for Transition: How Do We Know What Works for Deaf Adolescents?

As educational researchers, we must rely on the best available evidence at hand to guide decision making about implementation of policies and practices designed to narrow achievement gaps. What constitutes the "best available evidence" can be a challenge when considering low-incidence populations, where randomized control trials, quasi-experimental studies, and replication studies are rare and often impractical (Odom et al., 2005). In deaf education, randomized control trials (RCTs) and quasi-experimental studies are few and far between (Luckner, 2017; Luckner & Handley, 2008; Trezek & Wang, 2017). Conducting RCTs and quasi-experimental studies with deaf populations is challenging due to small sample sizes and significant within-group variability (Luckner, 2006). Meta-analyses and reviews of the research have largely been unable to make robust recommendations for evidence-based practice for deaf populations (Luckner & Handley, 2008). Beyond methodological challenges, broader conversations about evidence-based practices, especially in health-care fields, encourage us to think deeper about what constitutes evidence and who makes those decisions (Satterfield et al., 2009; Wall, 2008). A consideration about best practices for marginalized communities must not only consider the best available evidence but also cultural relevance (Engebretson, Mahoney, & Carlson, 2008). A laser focus on evidence-based practices as defined by the What Works Clearinghouse and other guides can risk further marginalization of communities that are already marginalized.

It may be more valuable for the field to consider policies and practices that have real potential for implementation (National Deaf Center on Postsecondary Outcomes, 2019a). After all, the most rigorously investigated evidence-based practice cannot make an impact on student outcomes if it is not actually feasible in real-life settings (Cook & Odom, 2013). Implementation considerations require thinking through relevance and fit for real-life settings for the specific population of interest. This may involve broadening the scope of what constitutes "evidence" to include other research approaches such as correlational studies and single-case designs (e.g., Antia, Guardino, & Cannon, 2017; Garberoglio, 2017). This also involves listening to the perspectives and lived experiences of deaf community members and professionals (Kovarsky, 2008). Historically, research with deaf populations

has been led by hearing people who interpret findings within their own lens, potentially influenced by biases about deaf people (De Clerck, 2010). Qualitative data and professional experience can be highly insightful in terms of determining what practices are culturally relevant and have the highest likelihood of "sticking" within deaf communities (Singleton, Jones, & Hanumantha, 2017). Thus, the discussion in this chapter about best practices in transition for deaf adolescents relies on many sources of evidence, including deaf experiences and perspectives.

Best Practices for Transition: Access as a Foundational Need

Before discussing best practices for transition, it is necessary to acknowledge access as a foundational need. Effective and well-designed transition services have little benefit for deaf youth unless they are truly accessible. For instance, vocational and on-the-job training that is accessible leads to stronger employment outcomes for deaf individuals (Moore, 2001). When we discuss accessibility, we are encouraging a deeper and more holistic view of accessibility than what may be expected by legal mandates. Providing the minimum accommodations as required by law, then walking away, is not enough. Deaf students miss information and do not feel actively involved in classrooms and training programs even when appropriate and high-quality accommodations are provided (Marschark, Sapere, Convertino, & Seewagen, 2005; Napier & Barker, 2004). Professionals in the field often misinterpret the provision of accommodations as being full and equitable access, neglecting to consider other opportunities to increase accessibility beyond having accommodations available (Schley, 2014).

Accessibility means there are real opportunities for growth, relationship building, capitalizing on cultural capital, learning from peers and role models, and more. This level of accessibility requires applying universal design approaches with a holistic and systemic perspective, moving beyond the limited provision of accommodations within highly constrained settings. Traditionally, models of accessibility involve structures where requesting accommodations falls on the shoulders of disabled people, accommodations are considered on a case-by-case basis, and requests are met for specific settings only. Broadening the concept of access moves us past accommodations and toward designing for access, using universal design models. Access is also not only a physical construct but also a psychological construct. People need to feel like they fit, like they are truly welcomed, and like there is room for them to grow.

A systemic perspective of accessibility for deaf individuals involves thinking through complex factors such as service provision, physical access, technology supports, attitudes, communication, and social capital. Accessibility, after all, is not unidimensional (Finnis, Howell, & Gorrie, 2014). These considerations require a systemic and strategic approach to increasing accessibility across campuses and programs. This approach recognizes that accessibility is necessary on an individual level but that an investment on the institutional level is required (Cawthon, Schoffstall, & Garberoglio, 2014).

Service Provision

Accessibility services involve accommodations in the most direct way; the provision of accommodations for deaf individuals may include interpreting, speech-to-text services, modified instruction, tutoring, and extra time for tests. Needed accommodations for deaf individuals vary across individual needs and preferences and often change across settings (Cawthon & Leppo, 2013). Yet access considerations involving the provision of services are crucial. How do organizations and institutions budget for access services? How do deaf students request services? Are there opportunities for student feedback related to those services? Does the process of requesting services involve additional burdens for deaf students? Deaf youth need to understand how to request accommodations effectively and recognize that the process of requesting accommodations changes significantly after they leave secondary settings and enter postsecondary settings, where different laws are applicable. Organizations

and institutions have an obligation to walk through considerations about how services are requested, implemented, and adjusted, ensuring that the student experience is centered.

Physical Access

Physical access involves ramps, automatic doors, curb cuts, and wide sidewalks but also sight lines, accessible doorbells, visual alarms, and accessible notification systems. Deaf people exist in environments that are, by and large, designed for hearing people (Hope, 2017). Beyond accessible doorbells, alarms, and notification systems, the concept of "deaf space" is an essential component of access for deaf individuals. Deaf space asks us to think deeper about how deaf people navigate physical space, considering visual space, sight lines, light, color, and acoustics (Edwards & Harold, 2014). Rather than focusing on homogenous solutions to physical accessibility, deaf space asks us to engage with the diverse experiences of deaf communities in designing accessible spaces (Edwards & Harold, 2014). These considerations can involve simple fixes like ensuring students can easily view interlocutors who use signed or spoken languages or more complex approaches involved with designing gathering spaces that are deaf friendly.

Technology Supports

Deaf individuals have historically been among the earliest adopters of new and innovative technologies that improve access and communication (Barak & Sadovsky, 2008). Even though technology does not level the playing field entirely for deaf individuals, new technologies serve as a highly useful tools across many settings (Garberoglio, Dickson, Cawthon & Bond, 2015). Technology that is useful in the transition period for deaf individuals may include assistive listening devices, video remote interpreting, remote speech-to-text services, and text-based communication platforms. Technology can allow for greater innovation and flexibility in approaches to accessibility, like enabling the provision of remote accommodations in rural settings or using text communication devices as a personal accessibility tool across settings. Ideally, accessibility should be individualized and flexible, and technology can be utilized to reach those goals.

Attitudes

Attitudes and beliefs, however intangible, play a large role in systemic approaches to accessibility. The attitudes of parents, teachers, and professionals influence how deaf individuals view themselves and construct their goals (Cawthon et al., 2015; Crowe, McLeod, McKinnon, & Ching, 2015; Smith, 2013). The attitudes of nondisabled students also influence student integration in social and academic activities (Vignes et al., 2009). When hearing people are more familiar with deafness, deaf people, and deaf culture, interactions between deaf and hearing people are more positive (Hung & Paul, 2006). For instance, educating internship programs about how to hire qualified interpreters, using accommodations, and communication strategies led to a more positive attitude about deaf applicants (Hauser, Maxwell-McCaw, Leigh, & Gutman, 2000). Increased familiarity with deaf people and general awareness can be developed through exposure to deaf people in addition to educational workshops, courses, and training activities (Foster, 1988). A warm and welcoming climate, where people are familiar with deafness, is a key component of accessibility for deaf people.

Communication

For deaf individuals, accessibility is inextricably tied with communication. Communication access involving access to direct instruction and support, as well as incidental learning opportunities, is

critical for academic, employment, and social functioning (Brackenbury, Ryan, & Messenheimer, 2005). Opportunities for deaf individuals to receive direct access to communication are invaluable, inside or outside of formal training settings. For deaf individuals who use signed languages, this means opportunities to engage with peers and professionals who also use signed languages. For deaf individuals who use spoken languages, this means that engagement with peers and professionals who use spoken languages is accessible. This may involve accommodations and supports or modifications to the communication environment to ensure that speech is as comprehensible as possible. Creative approaches to maximizing communication access allow for multiple, and accessible, entry points across a range of settings and timelines during the transition period.

Social Capital

Social capital allows for sharing values, building relationships, and exchanging resources within social networks (Yosso, 2005). For deaf individuals, social networks, when accessible, are particularly valuable sources of information that offer concrete tips, strategies, and tools for navigating inaccessible settings (Hintermair, 2007). Stronger community connections contribute to psychosocial well-being for deaf individuals (Hintermair, 2007; Jambor & Elliot, 2005) and persistence toward degree completion (Danermark, 1995; Stinson et al., 1987). It is important to note that deaf role models and mentors play an important role in these social networks for deaf individuals (Cawthon, Johnson, Garberoglio, & Schoffstall, 2016). Real accessibility for deaf individuals means that social networks in their immediate environment are accessible, both in formal and informal settings.

Best Practices for Transition: The Importance of Assessment and Transition Planning

Transition planning seeks to provide a solid "tool box" of information, resources, and experiences that young people can then draw from in the years ahead. While there is no one prescription for adult life, students who engage in both formal and informal transition planning increase the likelihood that they are prepared to explore options that are a good fit with their aptitudes, values, and interests. Transition planning and transition assessments are a part of all career counseling and transition supports for students in both middle and high school. Yet for deaf students, transition planning can be even more critical both in the capacity to support postsecondary goal attainment but also in the potential pitfalls and barriers that poor transition planning can pose. Gaps in education and employment for deaf people can be tied to lack of preparation and support across many areas, including the quality of transition planning.

Transition assessments are an integral part of transition planning as well as the accountability for its success in supporting students in their postsecondary goals. Assessment can mean many things – we often think of a standardized test as assessment, which is true, but assessment can also be a self-report, an interview, observations, a portfolio of work, or a performance-based task. Transition assessment can be both formal and informal but is typically thought of as the collection of information to understand the answer to a question. Regardless of approach, the information that is gathered in assessment needs to be broad enough and deep enough to provide users with confidence about the accuracy and strength of those findings. A quality assessment both identifies strengths and progress as well as gaps and areas that need further attention. Assessment in transition planning, and for deaf students specifically, can be very challenging! There are very few, if any, assessments that are designed to capture both the developmental and contextual factors that influence transition planning for deaf students. All young people are experiencing important milestones in their lives related to different facets of their identity: race, class, gender, sexual orientation, and so forth. One's experience as a deaf person also has many layers that intersect with many aspects of who we are and how we

navigate the transition from high school to postsecondary settings. A quality transition planning and assessment process provides space for these aspects of a deaf student's experience to be recognized and explored in an authentic way.

Transition assessment seeks to bring together information to support short- and long-term decision making after high school. Although transition assessment includes thinking about academic trajectories, transition assessment goes beyond simply examining a student's course transcript. Transition assessment may also include measures of preparedness for community living and what supports may help that individual thrive into adulthood. This may include assessments of functional living skills, "soft skills" for job searching, knowledge of one's rights under the Americans with Disabilities Act (ADA), working with interpreters, requesting accommodations in workplace settings, and other ancillary skills that can play an important role in transition for deaf students. What may be missing from some transition assessments is a discussion about how to identify strategies for navigating the hearing world, not just in terms of access, but also in terms of understanding the "hearing norms" of postsecondary settings. These strategies often come from the deaf community itself. These navigation skills may not be explicitly named in transition assessments but hold great value. Quality assessment rests upon the idea that the information gathered is both valid and reliable, covering content that aligns with planning needs, and that the results are an accurate reflection of the person's experiences.

There are many reasons why assessment results may not be fully accessible for deaf students, both in the format that they are administered and in their content. First and foremost, the majority of assessments are designed and administered by hearing professionals, and rarely do these professionals have experience or clear understanding of the type and range of deaf experiences. This is true for both formal, standardized assessments as well as informal information gathering. There are few professionals in the field with substantive knowledge about deaf students. As noted earlier, there are specific contexts and nuances to the deaf experience that may be overlooked or underrepresented unless they are brought to light within the assessment process. This is particularly relevant for measures that involve observations or informal assessments; the administrator's own lens becomes a possible frame on the resultant data that cannot be accounted for in the same way as with a standardized test. A quality assessment process takes in multiple perspectives, offering the chance to "triangulate," or see where ideas overlap, as well as where different people involved have had different experiences, and why. Without input from deaf adults, or those with a strong level of awareness of the deaf experience, individualized education program (IEP) teams may inadvertently create a biased set of assessment results.

On the other hand, standardized tests are typically delivered in written English, often using an academic approach to language. Not all deaf students are native users of English, and like other English learners, may face barriers when taking such tests. This is true for both academic assessments and measures of personal interests and career goals. Questions about a student's personal life and preferences, vocabulary and word choices made by test developers may be different than what deaf students use and experience in their everyday lives. Providing assessments in a student's preferred language, such as ASL, may reduce this mismatch between how information is provided on the measure and a student's own use of those terms. One example of an ASL assessment related to transition is the Self-Determination Inventory (see Chapter 14), translated to ASL through a collaboration between the Kansas University Center on Developmental Disabilities and the National Deaf Center on Postsecondary Outcomes. The extent that assessments can be done directly, without the use of an interpreter or other access supports, may influence the extent to which deaf students have the opportunity to provide a full and accurate representation of their transition-related goals.

Assessments are only as valid has how the resultant scores are used. Test scores or summaries of observations do not have meaning on their own. We assign meaning to assessment results, offer interpretations of what they represent, and use that information to make decisions. In the context of transition assessments, IEP teams, parents, teachers, and deaf students use these data to set goals for

students and identify possible supports and resources to attain those goals. One caution is that assessment data can often be "spun" to confirm one's point of view, bias, or preconceived notion of what students "should" be thinking about in their future plans. It takes a holistic perspective, as well as a sense of reasonable but high expectations for students, to examine transition assessment data within the context of what opportunities they have had to build skills and prepare for life after high school.

A view toward long-term goals, and not just short-term objectives, is also a challenge when professionals do not have experience supporting deaf people through the transition period. Particularly in academic content areas, deaf students may need more time than their hearing peers to build skills that are needed to be successful in college and the workplace. Just a one-time snapshot of that information, without knowledge of how those competencies can continue to build and grow, can lead an IEP team to make decisions based only on current skill sets and not potential skills. How assessment data are used is therefore high stakes for deaf students and must be approached with caution and care.

It can be very tempting for IEP teams to review transition assessment data and make decisions based on their professional experiences without fully considering the perspectives of deaf students themselves. Recent research emphasizes the need for deaf youth to develop self-determination skills as part of their transition journey. This is perhaps no more salient in school settings than in the decision making about what to pursue after high school. Student engagement in the discussion about assessment data is thus critical. Student-led IEP team meetings are one way to provide opportunities for students to guide the conversation around information about themselves, pose questions, and offer nuanced points of view. Scaffolding is often required to gain these skills; in reality, student-led IEPs and conversations about assessment results are experiences that need to be embedded in the early years of transition planning.

Best Practices for Transition: A Student-Centered and Systemic Approach

Effective transition planning for deaf, deafdisabled, and disabled adolescents needs to be student centered and student led. The foundational premise of a life design transition framework centers students' causal agency in the active construction of transition plans. Plans for the future are not static; plans must adapt to unexpected life circumstances, new opportunities, personal growth, economic change, and more. This is real life. Disabled young people are not exempt from real-life changes, even if adults want to protect them from potentially adverse circumstances. If anything, disabled, deafdisabled, and deaf people must be *more* prepared for adverse circumstances, not less. Navigating the world as a deaf person requires constant advocacy and decision making, often on the fly. Multiple day-to-day decisions need to be made, including the following: disclosing deafness, requesting accommodations, choosing what battles to fight, and navigating social situations. Transition planning that honors deaf adolescents' causal agency is foundational to building skills that are needed throughout the course of people's lives.

Causal agency is central to the self-determination theoretical framework (Shogren et al., 2015). People with stronger self-determination skills are better equipped to make their own choices, manage their time, solve problems, advocate for themselves, set goals, and make plans to reach these goals. Self-determination, more generally, and the Self-Determination Learning Model of Instruction, more specifically, has emerged as a robust evidence-based practice within the field of transition as an important contributor to key transition outcomes (Landmark, Ju, & Zhang, 2010; Shogren, Wehmeyer, Palmer, Rifenbark, & Little, 2013; Test et al., 2009; Wehmeyer et al., 2012). Among deaf youth, higher levels of self-determination and autonomous motivations have been linked to stronger postsecondary outcomes such as positive self-beliefs, living independently, college enrollment, earning higher wages, and having more opportunities for career advancement (Garberoglio, Schoffstall, Cawthon, Bond, & Caemmerer, 2017; Garberoglio, Schoffstall, Cawthon, Bond, & Ge, 2014). Deaf

college students with higher levels of self-determination feel more integrated with their university, socially and academically (Cheng & Sin, 2018). Self-determination development thus needs to be an integral part of transition planning for deaf adolescents.

For deaf youth to develop self-determination skills, opportunities to exercise those skills must be present across multiple interactions and settings (Nota, Ferrari, Soresi, & Wehmeyer, 2007). Deaf youth have fewer opportunities to exercise self-determination skills in situations where they experience barriers to communication and social interaction. All people have the *potential* for developing a strong sense of self-determination, but intentional and strategic planning may be necessary to create authentic, and accessible, space for that development. This requires a systemic approach to transition planning that centers the deaf student in decision making. Deaf students should be encouraged to set their own goals, develop action plans, and evaluate their progress (Loman, Vatland, Strickland-Cohen, Horner, & Walker, 2010; Wehmeyer et al., 2012). This requires that students assess their knowledge of themselves and their rights as deaf people and make concrete plans that reflect alignment between their skills and personal aspirations. For disabled students, familiarity with their disability and knowledge of their rights are valuable components of building self-concept and self-determination (Campbell-Whatley, 2008). The self-determination framework should be embedded in a systemic approach to student-centered transition planning for deaf adolescents. This approach involves multiple components, but we focus on three key activities here: raising expectations, leveraging community resources, and developing collaborative and integrated systems.

Raise Expectations

Deaf youth encounter low expectations and negative biases about deaf people across a range of settings. Raising expectations about deaf adolescents involves encouraging independent decision making, scaffolding increasing challenges, and allowing space for making mistakes. This can happen many different ways, depending on time, setting, and context. Achieving one's goals is more likely in supportive environments where people truly believe that these goals can be met and when their actions reflect those beliefs. Those actions are key across three contexts: home, school, and the workplace.

At home, parental expectations are crucial components of postsecondary success. Across multiple secondary analyses of data from the National Longitudinal Secondary Transition Study–2, parental expectations was the most robust predictor of postsecondary success for deaf young adults (Garberoglio, 2017). If parents believed that their deaf child would go to college, complete college, live independently, and be employed, their child was more likely to do so later in life and actually *exceed* parents' expectations in many cases (Cawthon et al., 2015). Deaf adolescents whose parents had higher expectations about their future potential had a stronger sense of autonomy, were more likely to find jobs independently, and had more work experience during high school (Garberoglio et al., 2017). Parents of deaf youth with more optimistic expectations about their future appear to encourage independence and autonomy development. Parent expectations are malleable and can be strengthened several different ways, including the following:

- Interactions with deaf mentors can help parents learn more about deafness, become more familiar with the resources available for deaf adults, and have an increased sense of hope about their child's future (Watkins, Pittman, & Walden, 1998). Building a strong support network that includes deaf community members gives parents invaluable resources that can be relied on throughout the transition period.
- Informal conversations at home are deeply valuable opportunities for parents to learn more about their deaf child's hopes for the future and for their child to learn more about real-life career experiences shared by their parents. The "dinner table syndrome" is a very real phenomenon experienced by many deaf people who miss out on informal dinner table conversations

(Hauser, O'Hearn, McKee, Steider, & Thew, 2010). Those conversations are a key part of transition preparedness and planning.

- Many resources are available for parents to learn about strategies for supporting self-determination development of their deaf adolescents at home as part of transition planning. For example, parents can encourage their deaf child to do household chores and schedule appointments independently (National Deaf Center on Postsecondary Outcomes, 2019a). Parents can access valuable resources from organizations like the National Deaf Center on Postsecondary Outcomes, Laurent Clerc National Deaf Education Center, or Hands & Voices.

At school, there are many strategies that can be implemented in order to raise expectations for deaf students. Teachers with more optimistic expectations for their deaf students' achievement are able to support socioemotional development and teach them to advocate for themselves (Smith, 2013). Deaf education teachers can strengthen their expectations about deaf students if they have opportunities to learn from deaf experiences during special education teacher training and preparation (Johnson & McIntosh, 2009). High expectations for deaf students can be made visible in school settings through several approaches, including the following:

- Rigorous and academically challenging coursework is an important component of college and career readiness and should be encouraged for deaf students. Deaf students who take college-level coursework in high school are less likely to need developmental coursework upon arriving to college (U.S. Department of Education, 2016).
- Student-led IEP meetings are an established evidence-based practice in transition (Martin et al., 2006; Seong, Wehmeyer, Palmer, & Little, 2015). Deaf students can take a leadership role in their IEP planning from an early age, with appropriate scaffolding and accommodations as needed.

During employment preparedness and training, there are numerous opportunities to raise expectations for deaf youth. Work experiences during high school help deaf youth increase confidence about entering the workplace. Deaf youth with more work experience during high school had jobs as young adults that earned higher wages and had greater opportunities for career advancement (Garberoglio et al., 2017). A climate of high expectations related to employment can be created through the following:

- Vocational rehabilitation staff can maximize training opportunities for clients through the increased scope of services enabled through pre-employment transition services (Pre-ETS) funding. Deaf individuals can thrive in competitive work environments with the right preparation and placement. Competitive work settings have the potential for being more sustainable over the long term, with robust opportunities for advancement and increased earnings.
- Autonomy and self-direction are important considerations during employment planning. Although systems are present to facilitate employment preparedness, those systems can do more to support the development of employment goals that are based on individual motivations and facilitate self-direction in the employment search. Deaf high school students who looked for their jobs on their own had stronger employment outcomes later in life than those who found their jobs with support (Garberoglio et al., 2017).

Leverage Community Resources

Transition planning teams should involve transition professionals, teachers, psychologists, and vocational rehabilitation staff, among others, but also include those who are familiar with strategies that

are specific to deaf adolescents' transition needs. The transition planning team should be aware of community resources that are available for deaf individuals as a part of the planning process (NADSDE, 2018). Those resources may include local nonprofit organizations that serve deaf individuals, interpreter agencies, peer support programs, and networking events. Businesses and organizations in the community are also potential sites for internship and job opportunities, especially those with experience working with deaf employees. Community knowledge is a valuable resource for strengthening transition outcomes for disabled people (Trainor, Carter, Swedeen, & Pickett, 2012). Leveraging community resources in the transition planning process for deaf adolescents can be accomplished through some of the following strategies:

- Role models and mentors, especially those who are deaf, are valuable community assets who can contribute to the development of identity, language, and social skills (Cawthon et al., 2016). Deaf role models and mentors can share concrete strategies and tips for navigating inaccessible settings based on personal experience. The Internet makes it possible for more deaf youth to learn from the stories of deaf professionals with diverse career experiences through videos on social media. Learning from the experiences of deaf adults is also beneficial to hearing parents (Watkins et al., 1998).
- Extracurricular activities outside of school such as athletics, religious activities, youth groups, or performing arts groups can deepen links to community networks (Newman, Barabasi, & Watts, 2006). For deaf youth, extracurricular involvement during high school contributes to stronger postsecondary outcomes (Schoffstall et al., 2016).
- Community conversations that bring together people who represent different segments of the local community (disabled youth, families, service providers, teachers, vocational rehabilitation staff, employers, and policy makers) can be a highly effective strategy for identifying and sharing community resources with the goal of improving transition outcomes for disabled youth in the community (Trainor et al., 2012). Community conversations hosted across the country by the National Deaf Center on Postsecondary Outcomes bring together people who are rarely in the same room; those connections need to happen to a greater extent for deaf communities (Garberoglio & Guerra, 2019).

Develop Collaborative and Integrated Systems

Collaborative approaches to transition planning involving students, families, teachers, and community members can improve postsecondary outcomes for disabled students (Kohler, Gothberg, Fowler, & Coyle, 2016). The specific services that need to be implemented as a part of transition planning require a team effort from all service providers involved (Morningstar, Kim, & Clark, 2008). Transition teams need to be able to respond to the diverse needs of deaf students, especially deaf-disabled students or English language learners (Bruce, Dintale, & Ford, 2008). This means intentional involvement from professionals with expertise in additional disabilities or familiarity with students' home languages. This intentional and integrated approach to transition planning involves multiple dimensions, with some considerations:

- Transition planning teams should include vocational rehabilitation professionals. Pre-ETS regulations encourage increased involvement from vocational rehabilitation during high school, enabling increased representation in IEP planning teams. Many deaf students continue to be unfamiliar with vocational rehabilitation services; only 0.6%–3.8% of deaf college students report utilizing vocational rehabilitation services during college (Garberoglio et al., 2019).
- Special education teachers and vocational rehabilitation counselors rarely collaborate in great depth, possibly due to differences in practices, systems, philosophies, and perspectives. Joint

training can improve collaboration between vocational rehabilitation professionals and special education teachers (Taylor, Morgan, & Callow-Heusser, 2016).

- Connecting data between core systems (e.g., early learning, K–12, postsecondary, workforce) can make it easier to track students throughout the transition period and ensure that they receive necessary services across multiple timepoints (Perez, 2016). Connected data systems can also serve as useful resources for identifying gaps and strengths in systems and can drive decision making (Perez, 2017). For deaf students, it is necessary to clarify how they are identified and tracked within data systems, as that varies from system to system.

Transition for Deaf Adolescents: Looking Ahead

Despite improvements in transition policy and access for deaf students, educational and employment gaps between deaf and hearing individuals have not changed significantly over time (Garberoglio et al., 2019a, 2019b). Over time, more deaf people are completing high school and college, but that growth is not robust enough to narrow educational attainment gaps that are prevalent across race, ethnicity, and gender. From 2007 to 2018, there was no demonstrated growth in employment rates among deaf people (Garberoglio et al., 2019b). This indicates that there remains much work to be done in order to facilitate successful transition outcomes for deaf youth. Many deaf youth continue to fall through the cracks during the transition period, especially those who are further marginalized, as indicated by poorer outcomes that are demonstrated in national data reports. Ultimately, the goal is to eliminate the educational and employment gaps between deaf and hearing people. To eliminate outcome gaps, a systemic overhaul is needed to invest in real changes in the services offered to deaf youth.

Each of us is part of the system. Each of us has the obligation to assess our role in the system and how we can personally contribute to dismantling systemic barriers that are blocking the progress of deaf people in attaining their goals. The transition period is long and complicated, with multiple entry points where we can make a difference. Consider your entry point and how you can make a difference in the future lives of deaf people. Think about ways you can encourage higher expectations for deaf adolescents, capitalize on community-level resources, and engage in intentional collaborations with other professionals and organizations. Throughout this work, deaf people need to be front and center of all decisions being made about our lives. Think about ways to deepen your relationships with deaf people by asking questions, listening to real-life concerns, building professional collaborations, and identifying opportunities to let us lead. Deaf people need the space to be change agents for constructing our future.

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Transition Education for Adolescents Who Are Blind or Have Low Vision

Karen Wolffe and Jane Erin

The provision of services to young adults in transition from school to work and adult life is not a new concept. Projects have focused on this population for many years within the education and rehabilitation communities. Beginning in the mid-1970s, the federal government passed numerous pieces of legislation that demonstrated a commitment to the career development of people with disabilities and mandated their inclusion in meaningful education and rehabilitation experiences (for example, P.L. 93–112, Rehabilitation Act of 1973; P.L. 94–142, Education for All Handicapped Children Act of 1975; P.L. 94–482, Vocational Education Act of 1976; and P.L. 95–207, Career Education Incentive Act of 1977). Both the Rehabilitation Act and the Education for All Handicapped Children Act, which became the Individuals with Disabilities Education Act, have been consistently improved over time through the reauthorization process, and the federal government's intent to promote full inclusion of people with disabilities in society has thus been reinforced legislatively.

The Americans with Disabilities Act (ADA) (P.L. 101–336) extended protections under the provisions of the Rehabilitation Act to all people with disabilities and guaranteed access to public buildings, programs, transportation, telecommunications, and employment. The ADA was signed into law in 1990 and revised in 2010 and again in 2016. The most recent legislation impacting youth with disabilities in the United States is the Workforce Innovation and Opportunity Act (WIOA), which supersedes the Workforce Investment Act of 1998 and amends the Adult Education and Family Literacy Act, the Wagner-Peyser Act, and the Rehabilitation Act of 1973. WIOA increased the role vocational rehabilitation agencies can play in the transition of youth with disabilities from secondary to postsecondary endeavors. Under WIOA, 15% of public vocational rehabilitation (VR) funds now can be used for pre-employment transition services (Pre-ETS) as defined within the act. Pre-ETS include job exploration counseling, work-based learning experiences, counseling related to postsecondary opportunities, workplace readiness training, and self-advocacy training. In addition, other services are allowed if funds are available.

However, in spite of these legislative efforts, positive employment outcomes for young adults who are blind or have low vision have remained elusive. Cornell University maintains the Disability Statistics website, which collects and analyzes data specific to people with disabilities collected nationally in the American Community Survey (ACS), Current Population Survey (CPS), and Equal Employment Opportunity Commission (EEOC) Charge Data and makes these data available to the public. According to ACS data, non-institutionalized individuals with visual disabilities of both genders, all races, and all educational levels are employed in this sample as follows:

- Between 16 and 20 years of age, 28.8% (plus or minus 2.42%), or 69,000 young adults out of 239,700
- Between 21 and 64 years of age, 44.2% (plus or minus 0.67%), or 1,643,100 adults out of 3,714,400

There are 1,133,700 adults between 21 and 64 years of age (30.5% [plus or minus 0.63%] out of 3,714,400) who are employed full-time/full-year in this sample (Erickson, Lee, & von Schrader, 2017).

For many years, the Department of Education funded longitudinal studies of special education students, graduates, parents, and educators. These studies compared results from the department's first supported study, the National Longitudinal Transition Study (NLTS), with the second study, NLTS-2. The comparison indicated that fewer youth who were blind or had low vision were working at the point they were interviewed during NLTS-2 than those interviewed in NLTS (Wagner, Newman, Cameto, & Levine, 2005). In the 2009 NLTS-2 final outcomes report, which analyzed results from 2005 interviews that occurred at the height of U.S. economic prosperity, youth with visual impairments were employed at a rate of 43% compared to 66% of nondisabled youth. Other than youth with mental retardation, emotional disturbance, orthopedic impairments, or deaf-blindness, youth with visual impairments were the least likely to be employed. In addition, they worked the fewest hours per week (22.8) of any of the youth with disabilities who were employed (Newman, Wagner, Cameto, & Knokey, 2009). These low employment rates are particularly disappointing when one considers that these same young adults with visual impairments were almost as likely to graduate from high school and attend postsecondary training as their nondisabled peers (Newman et al., 2009; Newman, Wagner, Cameto, Knokey, & Shaver, 2010; Wagner, D'Amico, Marder, Newman, & Black-orby, 1992; Wagner et al., 2005). Added to this documented concern in the NLTS and NLTS-2 is the fact, long in evidence, that the number of students reported by school districts to the federal government and categorized as visually impaired does not include students with other disabilities, who are likely not doing as well as the 25% or so represented in these studies (Kirchner & Smith, 2005).

In 2017 and 2018, IES published results from a third NLTS study, referred to as NLTS 2012, in three volumes under the title *Preparing for Life after High School: The Characteristics and Experiences of Youth in Special Education*. The second volume in the series (Lipscomb et al., 2017) compared youth across disabilities and indicated how well students with visual impairments were performing in comparison to other students in special education. Of all youth with an individualized education program (IEP), students with visual impairments and those identified as deaf-blind reported the most positive views of school. They stated that they felt part of the school, were happy to be at school, and felt safe at school. Likewise, these students felt positively about school staff and teachers and indicated that an adult at school felt they would be successful.

In terms of IEP participation and active engagement in transition planning, students with visual impairments were more likely than any other special education students to attend their IEP meetings (86%) and meet with school staff, parents, and community service agency staff to develop transition plans. Community service agency representatives were most likely to participate in transition planning meetings for youth with visual impairments in contrast to students with other disabilities (68%, according to parent reports). Visually impaired students themselves were the most likely of special education students to have provided input on their IEPs and transition planning (69%). As in previous studies, these students were the most likely special education students to expect to obtain postsecondary education (88% of youth and 79% of their parents expected them to obtain postsecondary education); 73% of the youth with visual impairments expected to obtain a four-year degree, and 60% of their parents expected them to do so as well (Lipscomb et al., 2017).

Although 80% of parents believed their children with visual impairments would live independently by age 30, there was little evidence that they had encouraged or supported their children into employment. Only 38% of students with visual impairments had participated in paid work experience in the year before they were interviewed for NLTS 2012 (IES, 2017). The parents' expectations for independence seem to be driven by their confidence in their children's ability to find work following

postsecondary studies. However, research indicates that employment while in high school is one of the best predictors of future employment for individuals with disabilities, including people with visual impairment (Connors, Curtis, Emerson, & Dormitorio, 2014; Mazzotti et al., 2015; McDonnall, 2011).

Students with Visual Impairments

Students with visual disabilities are occasionally totally blind but more often have low vision (Corn & Lusk, 2010). Many of the students served as visually impaired have additional disabilities as well. Depending on the source and method of counting, estimates range from 50% to 70% of the population of students with visual impairment are identified as having additional disabilities (Silberman, 2017). There are no data available that give unequivocal population numbers because the national data collected on special education students capture those students with visual impairments only, and those with visual impairments and additional disabilities are typically coded as students with multiple disabilities. Consequently, data from a variety of sources is necessary to understand the incidence of blindness or low vision in children and adolescents.

The Cornell website, disabilitystatistics.org, reports prevalence rates for non-institutionalized individuals, including males and females, all races, regardless of ethnicity, with all education levels in the United States who reported a visual disability by age range. The following data, were collected from responses to the 2017 American Community Survey. The prevalence rates reported are broken down by age ranges:

- Ages 4 and under: 0.4% (plus or minus 3.29 percentage points), or 88,700 out of 19,719,100 children
- Ages 5–15: 0.9% (plus or minus 3.29 percentage points), or 387,300 out of 45,320,000 children and youth
- Ages 16–20: 1.1% (plus or minus 3.29 percentage points), or 239,700 out of 21,674,500 young adults

Data collected by the American Printing House for the Blind (APH) in fiscal year 2017 indicated that 63,357 students who were legally blind and attending a documented program in education or rehabilitation for at least 20 hours per week at less than the college level were in receipt of services through federal quota funding (APH, 2017). Students who are legally blind and have concomitant cognitive, physical, or sensory disabilities are included in this estimate. Students with low vision less severe than legal blindness or students who were not voluntarily reported to the APH by education or rehabilitation programs were not included in this estimate.

What all of these data imply is that while estimates of the population can be extrapolated from existing data sources for transition-age youths with visual impairments, those numbers are likely to underestimate the number of young adults with visual impairments and additional disabilities – a number that could easily be half again as large. What is critical for practitioners to understand is that most students with visual impairments who are readers use visual materials. Data from APH indicates that 32.3% of legally blind students served in fiscal year 2017 were print readers, 10.8% were auditory readers, and 7.8% were braille readers (APH, 2017). The remaining students were nonreaders due to age or the presence of additional disabilities. It is likely that the proportion of print readers with low vision is higher since many students served as visually impaired are not legally blind.

In this chapter, young adults with visual impairments and additional disabilities are discussed as well as individuals who are only blind or have low vision. However, the primary focus of the chapter is on youth from these populations who are eligible for rehabilitation services. The estimated size of this population can be derived from annual Rehabilitation Administration Services (RSA) rehabilitation case service reports. According to RSA data from program year 2017 (July 1, 2017 to

June 30, 2018), 15,809 individuals with visual impairments between 16 and 25 years old at application were referred to VR, and 13,828 received VR services. Services included career services such as support to attend college or university programs, on-the-job-training, apprenticeships, job readiness training, disability-related skills training, and basic academic remedial or literacy training. Career services received by these young adults included assessment, diagnosis and treatment of impairments, vocational rehabilitation counseling and guidance, job search and job placement assistance, short-term job supports, supported employment, benefits counseling, and so forth. They also received miscellaneous services such as help with transportation, maintenance funding, rehabilitation technology and technical assistance, reader services, interpreter services, and the like. For the same aged group of rehabilitation clients in program year 2017, 3,179 individuals exited from VR and 1,080 successfully obtained competitive integrated employment (Y. Shieh, personal communication, July 8, 2019). While the reauthorization of IDEA in 2004 changed the minimum age from 14 to 16 years when transition planning is required for students in the public schools, the act left in place the provision that students with more severe disabilities could receive transition services earlier if determined appropriate by the IEP team.

The Unique or Disability-Specific Needs of Students With Visual Impairments

Youth who are blind or have low vision need instruction in both the standard academic or general curriculum and in disability-specific skills such as braille and travel skills since their visual impairments change the way they obtain information about the world around them. These disability-related skill sets are known in the field of education for visually impaired children as the Expanded Core Curriculum (ECC). Nine content areas constitute the ECC: compensatory skills (also known as academic access skills), orientation and mobility, social interaction, independent living, recreation and leisure, career education, use of assistive technology (AT), sensory efficiency, and self-determination (Allman & Lewis, 2014; Hatlen, 1996; Holbrook, McCarty, & Kamei-Hannan, 2017; Huebner, Merk-Adam, Stryker, & Wolffe, 2004). Each of these areas is described briefly here.

ECC skill areas are described individually here to ensure consideration. In reality, instruction in these areas usually overlaps with and supports education in both the general and specialized curricula. Teachers of students with visual impairments may conduct individualized instruction when mastery requires a specialized skill or conceptual instruction related to visual impairment (McCarthy & Holbrook, 2017). However, regular communication among members of the educational team is necessary to allow students to learn and apply skills in several contexts. For example, a student may receive instruction in the use of speech access from an AT specialist or a teacher of students with visual impairments, but the student may apply the skill when traveling with a GPS device under the supervision of an orientation and mobility specialist or when using the Internet in the regular classroom.

Compensatory Skills

These are the critical skills that students with visual impairments need to be successful in accessing the general education curriculum. They may include concept development, organizational skills, and communication skills (speaking and listening, reading and writing with braille or print, or using alternative communication systems such as sign language, pictorial systems, or calendar box systems). Also included is skill development in using tactile graphics, raised-line drawings, maps, or graphs as well as recorded materials (digital books, reading machines, recording devices). Students with low vision may access print in several ways, including use of low-vision devices such as magnifiers, enlarged print, video magnifiers, and braille. Educational team members work with the student to determine appropriate approaches for different contexts (Erin & Topor, 2010).

Orientation and Mobility

These skills enable children and adolescents who are visually impaired to orient to their surroundings (i.e., to determine where they are in relationship to the things and people in their environment). Travel skills enable them to move independently and safely in the environment, use sighted guide techniques, or travel with a long cane or dog guides. Students are also taught techniques for travel using any remaining vision they may have, which may include the use of optical devices such as hand-held telescopes known as *monoculars*.

Social Interaction

These are skills needed to respond appropriately to others and participate actively in social situations. Children with visual impairments are unable to casually observe how people interact and socialize with one another so typically need to be taught these skills. Social interaction skills that may require instruction include learning when and how to use nonverbal communication (body language and facial expressions) such as smiling, frowning, nodding, winking, shrugging, and so forth. This also includes instruction in specific social skills such as shaking hands; turning toward others when speaking or being spoken to; using language to make a request, decline assistance, or express a need; expressing emotion and affection appropriately; participating appropriately in conversations in various situations; etc.

Independent Living

These skills enable individuals to manage their home environments and personal lives. The chores they are expected to perform, depending on their ages and abilities, include personal hygiene and grooming (including clothing care), eating properly (with appropriate utensils and table manners), planning and preparing meals, taking care of the household (organizing and cleaning living spaces, taking out the trash or washing dishes, etc.), money and time management, and other related skills. Typically sighted students learn these skills from observing others. Many of these skills, such as washing clothing or sweeping, are not regularly performed in school. For this reason, team members will need to communicate with families and seek out opportunities for the student to learn these skills in a natural setting (Zebehazy, Fox, & Peel, 2017).

Recreation and Leisure

These skills help adolescents identify and choose from the array of options available to them in recreation and leisure To be aware of options, students need to be taught games and activities at an age-appropriate level and encouraged to actively participate in physical and social recreational activities. They need to be aware of and exposed to physical activities that are specially designed for individuals with visual impairments (goal ball, for example), activities that require little or no adaptation (playing Dominoes, wrestling, or swimming, for example), and activities that require adaptation for full enjoyment (e.g., playing cards or board games).

Sensory Efficiency

These skills help students maximize the use of their senses, including any functional vision, hearing, touch, smell, and taste. Examples of sensory efficiency skills include learning to use touch, vision, hearing, or smell to identify people, places (kitchen, living room, gymnasium, or swimming pool), or personal items; learning to use optical devices effectively; learning to use auditory aids appropriately;

learning how to discriminate between tastes or smells to tell the difference between similar things such as salt and sugar or shampoo and conditioner; or learning how to differentiate between textures and colors to sort laundry.

Assistive Technology

In this area, students learn to use AT (devices designed with speech or braille output and/or screen magnification) effectively to access mainstream technology such as computers or other electronic equipment with standard visual displays. AT includes reading and writing devices, calculators and other math and science tools, and navigation devices. Such devices make it easier for students with visual impairments to function effectively in school, at home, and in the workplace.

Career Education

These skills enable students to recognize that they can contribute to their families and the larger society in a meaningful way and become workers as adults. Relevant skills include assuming responsibilities at home and school, understanding the concept of working for a reward, exploring and expressing preferences about career/life roles, learning about job tasks and career paths, developing interests and abilities that are vocationally related, and finding and securing employment. There is evidence that career counseling while in school has a positive impact on student employment outcomes, as does mastery of disability-specific skills (Wolffe & Kelly, 2011). Current literature also reports a strong relationship between paid work experiences during adolescence and later employment; when young people found their jobs independently, the relationship was stronger (Connors et al., 2014; McDonnall & O'Mally, 2012).

Self-Determination

These skills enable students to become effective advocates for their own needs and goals. Skills include learning to make choices, expressing preferences to others, describing one's disability, and explaining the adaptations or accommodations needed to function efficiently and independently. The components of self-determination include self-knowledge, self-advocacy, assertiveness, informed decision making, problem solving, and goal setting, as well as self-directed and self-regulatory behavior (Wolffe & Rosenblum, 2014). Although there is some evidence that self-determination skills are related to later employment, working with students on skills in this area does not receive as much attention as other ECC skills (Cmar & Markoski, 2019).

Many of the aforementioned skills may seem critical for all students with disabilities rather than just students with visual impairments. What is different for students with visual impairments is how the content is presented. Most general and special education instruction is presented visually: teachers demonstrate skills they want students to emulate; they point to pictures and text describing skill sets under discussion; they show videos and films of concepts; they place students at computer stations where they can interact with material presented visually; they present information in writing, pictorially, or graphically so students can see what is expected of them. For students without sight or with severely impaired sight, this visual teaching technique does not work well. Students with impaired vision must receive their instruction via alternative modalities – specifically with tactual, auditory, and kinesthetic techniques. Or the visual medium must be made accessible to the students using their remaining, functional vision, typically through enlargement or enhancement of images. Instructional staff working with students with visual impairments must understand the content in the Expanded Core Curriculum and be able to modify the learning environment or adapt the teaching materials.

Professionals Who Provide Educational Services to Students With Visual Impairments

Students who are blind or have low vision are usually educated in public schools in classrooms with their sighted peers (American Printing House for the Blind Distribution of Eligible Students, 2017). Only a few require more intensive services from specialized schools for students who are blind or have low vision or from separate classrooms in the public schools. Special education services that are needed because of a visual impairment are provided by two types of professionals: teachers of students with visual impairments (TVIs) and certified orientation and mobility specialists (COMS). These professionals are usually itinerant (traveling to students' neighborhood schools), and they provide educational support for a designated amount of time each week, as specified on the students' IEPs. They may work directly with a student in or out of the classroom, or they may support the classroom teacher by consulting and providing materials for a student. When students with visual impairments enter high school, they assume more responsibility for obtaining their own specialized equipment and materials. At that point, the teacher of students with visual impairments and the orientation and mobility instructor might not need to conduct instruction at a specific time but instead be available, as needed, to support the student in planning and implementing appropriate educational adaptations.

TVIs are responsible for meeting the student's general educational needs related to a visual impairment. They have received university instruction, usually at the graduate level, to qualify for their state's teaching certificate in visual impairment. They provide instruction and adapted materials to support the student's academic needs; examples are tactile graphics for mathematics, instruction in the use of magnification devices to read the whiteboard, or instruction in braille. They also provide instructional support in non–academic areas that are affected by a visual impairment, including social skills, career development, and use of technology (Holbrook & Blankenship, 2017).

When a student nears the end of high school, the TVI is responsible for assuring that career planning is taking place and that the student is developing skills to lead to a future occupation. TVIs are familiar with ways in which a visual impairment can affect a student's ability to apply for a job and be employed. Specific instruction in social skills, such as entry and exit from a conversation, eye contact, body orientation, and describing one's own visual impairment, can be helpful in preparing a student to interact in the workplace (Erin & Wolffe, 1999; Sacks & Wolffe, 1992). When the student has additional disabilities that make competitive employment difficult, the TVI participates with other educational personnel to identify possible postsecondary options, including supported employment or participation in community and residential activities (Wolffe, 1998; Wolffe & Kelly, 2011).

COMS receive a degree or post-degree certification to teach orientation and travel skills to people who are blind or have low vision. They are nationally certified by the Academy for Certification of Vision Rehabilitation and Education Professionals (www.acvrep.org/). Their roles include instruction in basic concepts and skills such as body awareness and orientation in familiar environments as well as travel skills in all of the environments in which a student participates (Griffin-Shirley, Trusty, & Rickard, 2000). While younger children usually require more emphasis on concept development and travel within the immediate school and home environments, older students will need to travel independently in the community and be able to familiarize themselves with new environments. The orientation and mobility instructor often provides instruction beyond the school or agency campus in natural settings in the community (Holbrook & Blankenship, 2017). For adolescents making a transition to job roles, this can include practicing and selecting routes that will enable them to travel independently to job-related sites.

Some students will learn to use a long cane, the slender white extended cane used for travel by many people who are blind, under the guidance of an orientation and mobility instructor. Not only is cane travel essential for students who have little or no vision, but it is often useful to students who

have usable vision, who may prefer the use of a cane in crowded or poorly lighted areas or when they want others to be aware that they have a visual impairment. In addition, students with low vision may benefit from the use of low-vision devices such as monoculars to view distant information such as a bus number or a sign.

Often an orientation and mobility instructor will assess older high school students in future environments such as a community college campus. Tactile, visual, or auditory maps may be introduced to provide an understanding of the layout of a new environment so that students can travel without assistance once they are familiar with the location of desired destinations. Orientation and mobility instructors will also provide instruction in how to manage transportation since most people with visual impairments do not drive. They teach travel by bus as well as other options for transportation such as shared rides or paratransit systems. For students with some vision, techniques for travel will be assessed and taught; these can include scanning at intersections, following markings on the street, and making decisions about traffic conditions (Fazzi & Naimy, 2010). For a young person who is visually impaired and preparing to enter the workforce, independent travel is an important skill for obtaining and continuing employment (Erin & Wolffe, 1999; Wolffe, 2004; Wolffe & Kelly, 2011; Wolffe, 2019).

Specialists in AT may also be essential members of the educational team. The Academy for Certification of Vision Rehabilitation & Education Professionals (ACVREP) has established a credential in this area, the certified assistive technology specialist for people with visual impairments (CATIS) (ACV REP, 2019). An individual with this credential has knowledge of general AT as well as specialized experience with people who have visual impairments. Although many public schools and agencies do not have an AT professional with this background, consultation can sometimes be arranged by collaborating with special schools and private agencies in visual impairment.

Sometimes students with visual impairments receive services from paraprofessionals (also known as aides or classroom assistants). The role of the paraprofessional varies widely. Some are trained and hired as braille transcribers and spend most of their time developing braille and tactile materials. These individuals usually work with students who are blind. They have been trained in the use of the braille code, often through completion of the transcriber's course through the Library of Congress. These paraprofessionals are highly skilled employees, and in some schools they are paid more than paraprofessionals without specific training in visual impairments (see information about pay scales at www.nrcpara.org/forum/wages).

Other paraprofessionals are employed to support the skills taught by a TVI. They may work with an adolescent on reading activities or on practicing skills such as moving through the cafeteria line, putting on a coat, or improving keyboarding speed. Paraprofessionals may also provide physical assistance to students with multiple disabilities. It is important that their work be guided by a TVI who has assessed the student and can monitor the educational activities (Holbrook & Blankenship, 2017); they should not be the primary skill instructor listed on the student's IEP.

A survey of teachers of students who are blind or have low vision and the paraprofessionals who work with them indicated that the most common activity for paraprofessionals was preparing materials, both in braille and large print (McKenzie & Lewis, 2008). Other common responsibilities reported in this study included supervising meals (more often reported by teachers), behavioral management, feeding, supervising students on buses, and performing assessments and clerical tasks.

It is rarely beneficial to assign a full-time aide to a student with a visual impairment; such an arrangement may encourage overreliance on adults and limit interaction with other students (Topor & Hong, 2017). Students with visual impairments need the opportunity to learn by doing, and both the student and fellow classmates can learn from assisting one another. When an adult is close to a student throughout the classroom day, other students are discouraged from interacting with the student. When a paraprofessional is needed, that aide may need to be assigned to a classroom rather than an individual student (Miller & Levack, 1997; Russotti & Shaw, 2004). The TVI works

closely with the paraprofessional to help the aide understand when the student needs assistance and when the aide should distance herself from the child. This is especially true when a student has reached secondary school and is assuming responsibility for managing his or her own materials; however, this responsibility begins well before the secondary level, when the classroom teacher expects the student to manage personal materials and request assistance from others in the classroom when necessary.

Classroom peers are often willing to provide assistance. Peers can read brief handwritten notes or instructions, serve as human guides, assist with locating materials, and describe pictures. Some students with visual impairments like to speak with classmates as a group about how they can assist; others prefer to manage this informally. Asking for assistance from different classmates can provide an opportunity to get to know others and avoid relying too much on a few familiar people. The student with a visual impairment can also be encouraged to provide assistance to others in the class, according to his or her abilities. The student can identify ways in which she or he can collaborate as a team member.

Educational Support From Families and Service Providers

Although professionals in visual impairment work to ensure that students receive appropriate services related to their blindness or low vision, the transition process will not be successful without a unified team approach. The student as well as family members, general and special educators, related service providers such as occupational and physical therapists, and rehabilitation professionals must collaborate to achieve the goals that have been established for successful transition. Family members should be encouraged to participate actively in the IEP process, and team members should consider and respect their contributions as team members. If a family is new to the planning process, the teacher of students with visual impairments might spend time with them before the meeting reviewing the process and supporting the importance of the parental role (Lewis & Allman, 2017).

Academic and vocational assessments can provide the groundwork for the team to consider postsecondary goals and to identify the necessary actions for a student to move toward those goals. If a student has specific careers objectives, the team must assure that there are realistic experiences related to the student's stated interests and goals. These experiences might include job shadowing or volunteer experiences arranged in collaboration with the vocational counselors in the school setting. For example, a student may have been encouraged toward a stereotypical goal such as becoming a musician because the general public has heard of blind musicians, rather than being encouraged to consider all the ramifications such a choice will entail: the need for extensive practice in addition to talent and interest; self-marketing; planning for where, how, and when to audition; financial investment in musical instruments and lessons; related mobility requirements (moving in and out of clubs or performing on stage, for instance); and independent living requirements since such jobs often require extensive travel or moving to another city or state rather than staying in one's home community. Team members need to provide realistic and specific feedback throughout the school years so students know their strengths and weaknesses compared to the abilities of others with similar goals.

Although the student's educational team will include qualified professionals in visual impairment, the student's main teachers are general educators. Part of the role of the TVI and orientation and mobility specialist is to work with classroom teachers to emphasize the adaptations that will make their lessons accessible to a student with a visual impairment. Simple strategies like reading material from the whiteboard while writing or describing items in a laboratory demonstration can make a lesson understandable for a student with a visual impairment; however, the general education teacher will need to understand that advanced planning is required for the TVI to prepare appropriate materials in braille, large print, electronic file, or tactile graphic. Older students should be encouraged to communicate directly with the classroom teacher about how they learn best. Not only does this

ensure that the student's needs are met when the TVI is not around, but it also provides personal advocacy experience that the student will need in the workplace or college.

Sometimes educators with no experience with students who have visual impairments do not know how much work or academic performance to expect (Spungin, 2002). A person with a visual impairment can perform similarly to sighted peers. Although adaptations may be needed, students should be expected to reach the same standards as their sighted peers unless another disability requires modification of content and curriculum; this requires collaboration between the classroom teacher and the TVI (Holbrook & Rosenblum, 2017). An analysis of data from 41 young people with visual impairments by McDonnall and Crudden (2009) revealed that academic performance was strongly related to later employment. This finding supports the importance of establishing clear academic goals to prepare the student for work, especially in reading and mathematics.

In addition, general educators have a responsibility to involve students in classroom activities and to encourage them to respond actively as members of the class. Students with visual impairments often appear passive or unengaged to their classroom teachers, as indicated in a study by Bardin and Lewis (2008). This lack of involvement sends a message to others, even if unintentionally, that the student is uninterested. A collaborative relationship between the classroom teacher, the teacher of students with visual impairments, and other team members can foster a balanced instructional plan that will facilitate regular communication and problem solving (Topor & Hong, 2017).

Consistent positive expectations among family members and teachers also convey the message to students who are blind or have low vision that they must complete classroom activities and assignments as required even though this sometimes requires more time or alternative approaches (Lewis & Allman, 2014; Mangold, 1982; Wolffe, 1999). Families send a powerful message that they expect their child to work as an adult by requiring the child to perform routine tasks at home and complete homework assignments. Most families are unfamiliar with the abilities of people with visual impairments when their own child is diagnosed (Lewis & Allman, 2017) and may need information about their student's capabilities that can translate into higher expectations for postsecondary experiences. Conversely, others may have heard positive comments and praise from their student's teachers and may not understand how their son's or daughter's abilities compare to the general population. Inviting parents to school to observe instruction or activities can be a useful way of exchanging information about establishing expectations and structuring learning. Even if parents cannot visit, regular phone calls and emails will keep parents informed about their child's learning progress (Lewis & Allman, 2017).

Families can be instrumental in building connections with work environments (Wolffe, 2014). Individuals with visual impairments use formal job-seeking networks less frequently than sighted peers and more often rely on friends and family to assist with work opportunities Moore, Wolffe, & McDonnall, 2010). As members of the educational team, families can convey their own understanding of their student's strengths and weaknesses but should consider the information they receive from the team about the necessary skills that will provide the best chances for future work opportunities.

Service personnel such as occupational and physical therapists can provide information on physical abilities and adaptations that should be considered when the team considers postsecondary opportunities. Rehabilitation counselors work with individuals and families on adjustment related to disabilities, and vocational rehabilitation counselors specialize in employment needs. Rehabilitation therapists work directly with people with visual impairments to teach the skills needed for work and adult independence. These rehabilitation professionals work with educational personnel to plan for transition (Holbrook & Blankenship, 2017).

States vary in the support they offer to students entering college or the workplace. Rehabilitation counselors can respond to specific questions, such as what types of assistive technology will be provided, whether orientation and mobility services will be available for orientation to college campuses, and whether a student is eligible for a postsecondary rehabilitation program. Involving a

rehabilitation professional requires a memorandum of understanding (MOU) between education and rehabilitation entities in a community, spelling out what each agency will provide. In many states, a rehabilitation counselor or transition coordinator will attend students' IEP meetings following their 16th birthday. This collaboration between education and rehabilitation personnel appears to help ensure a smooth transition from secondary school into postsecondary training and work.

Transition-Age Youth Characteristics

Two lifestyles studies, one quantitative and one qualitative, were undertaken by Wolffe and Sacks to analyze similarities and differences among youth (15–21 years old) who were blind, low vision, and sighted. For their quantitative study, the researchers interviewed young adults and their parents three times in 18 months and addressed four domains: academics, activities of daily living, social, and vocational (Wolffe & Sacks, 1997; Sacks, Wolffe, & Tierney, 1998). As a follow-up, the researchers used ethnographic techniques and observed three of the participants during a typical day and validated the findings in an earlier qualitative study (Sacks & Wolffe, 1998).

The results of these studies indicated that students who were blind or sighted received comparable grades (As and Bs) while the low-vision students received Bs and Cs. There were marked differences between the groups in terms of homework, however. The students with visual impairments reported receiving less homework than the sighted students, and the visually impaired students tended to study at school with the help of instructional personnel while the sighted students tended to study out of school and with friends. In terms of activities of daily living, all of the students took care of themselves, their money, and their schedules (time management). The most obvious differences between the groups were in home management responsibilities: performing household chores, grocery shopping, cleaning, cooking, and general housekeeping responsibilities. More vision tended to equate to greater levels of responsibility at home (Wolffe & Sacks, 1997).

In the social skills area, these young adults differed in the intensity level (passive, mid, or high) of their activities. Young people with low vision tended to be involved in the fewest activities and were the least likely to be in social situations with lots of other people (high-level activities). The sighted students were the most active socially. One of the most promising findings in the vocational area was that almost all of the students (88% of the students who were blind and 94% of the students with sight or low vision) had worked for pay. However, while 81% of the sighted students reported finding their own jobs, only 31% of the low-vision students and 19% of the blind students did so (Wolffe & Sacks, 1997).

In a replication of the lifestyles study completed with Canadian youth (Shaw, Gold, & Simson, 2005; Shaw, Gold, & Wolffe, 2007), the researchers noted that although Canadian youth with visual impairments had worked for pay, there were significant differences between partially sighted participants – 78% of whom had worked for pay – and blind participants – 61% of whom had worked for pay. There were also significant differences between blind and partially sighted participants in terms of who was currently working for pay: 35% of partially sighted and 20% of blind participants (29% of the combined groupings) were currently employed. These findings are not unlike what the researchers engaged in the National Longitudinal Transition studies (NLTS, NLTS-2) found in their analyses of follow-up data with U.S. youth (Newman et al., 2009; Wagner et al., 1992; Wagner, 1992; Wagner et al., 2005; Newman et al., 2010).

Findings from NLTS and NLTS-2, which spanned the period from 1981 to 2010, provided the most comprehensive view to date of the characteristics of students with visual impairments in the transition process. However, as noted earlier, students identified as visually impaired in the NLTS and NLTS-2 do not typically have additional disabilities. Young adults with visual impairments who were out of school tended to be living with a parent or guardian in the first and second NLTS cohorts (1987 and 2003); the respective percentages were 76% and 81%. While there was no statistically

significant change over time, the percentages for individuals who were blind or had low vision are slightly higher compared to other young adults with disabilities. In the most recent NLTS-2 report (Newman et al., 2009), there was steady progress with 19% of youth with visual impairments living independently and 18% living semi–independently (with a spouse, a partner, or a roommate). By comparison, 28% of youth in the general population and 25% of youth with other disabilities were living independently. More young adults with visual impairments were living semi–independently, presumably in dormitories, than any of their peers with other disabilities (range was 0.2% for youth with mental retardation to 13% for youth with hearing impairments).

In terms of social involvement, there was an increase noted from 37% of young adults with visual impairments participating in community groups in 1987 to 45% in 2003. However, of even greater positive note was the increase in volunteer work activities or community service for these young adults: only 12% of the 1987 cohort reported this type of activity while in the 2003 cohort, 54% were engaged in volunteer work or community service – a statistically significant increase of 42%. In the most recent NLTS-2 report, 46% were participating in community groups and 67% were engaged in volunteer work or community service. Young adults with visual impairments had a significantly higher rate of participation in volunteer or community service than did youth with learning disabilities, intellectual disability, emotional disturbances, other health impairments, autism, hearing impairment, or orthopedic impairment (Newman et al., 2009).

Concerns evidenced in NLTS and NLTS-2 about the mediocre level of general social involve-ment (less than 50% of young adults with visual impairments were participating in community groups) were mirrored in the lifestyle studies performed in the United States (Wolffe & Sacks, 1997) and Canada (Shaw et al., 2005; Shaw et al., 2007; Gold, Shaw, & Wolffe, 2010). In the U.S. study, students with low vision appeared to be involved in the fewest activities and were the least likely to be in social situations that involved group interactions (high-level activities). Student and parent data indicated the sighted students in this sample were the most active socially. Mean differences between the groups indicated that the groups were relatively equal for mid-level activities; however, students who were blind had the greatest involvement in passive activities. The Canadian lifestyles study showed comparable results: data suggested a pattern of greater engagement in passive and mid-level social activities than in high-level social activities for the participants (all of whom were blind or had low vision) (Shaw et al., 2005).

Also of interest is the finding that 37% of the Canadian participants who were blind and partially sighted ($N = 330$) reported that they were actively looking for work. Although when they were asked how much time they spent on a daily basis looking for work, the respondents stated they spent "one hour or less" per day on their job searches, 26% reported that they had not submitted any applications in the past year, and 41% said that they had not had any interviews in the previous year (Shaw et al., 2005, 2007).

Results reported in the NLTS and NLTS-2 related to employment were discussed earlier in this chapter. While the most recent data (from the 2005 interviews with youth and parents) indicated that 43% of the youth with visual impairments were working at the point when they were interviewed, they were working the fewest number of hours per week (22.8) of any of the working youth. When queried, they were the most likely group (81%) of young workers with disabilities to want to work full-time. They earned an average salary of $7.90 an hour, and 38% of those employed were receiv-ing benefits. Overall, they liked their jobs (42%) or had a fair perception of the work (40%) and almost universally (98%) felt well treated on the job. This group of young adults with disabilities was the most likely to make their employers aware of their disability; however, only 16% received job accommodations.

Transition-age youth with visual impairments are likely to graduate and attend college or uni-versity programs. In the 2005 NLTS-2 interviews, 78% of visually impaired students indicated that they had or were enrolled in postsecondary training (56% in two–year programs, 12% in vocational

training programs, and 44% in four-year programs). Of those who were enrolled at the time of the interviews, the vast majority (97%) stated that they were working toward degrees; however, only 12% had completed their program of study within four years of high school graduation. By comparison, 45% of youth with emotional disturbance, 41% with speech/language impairments, and 30% with other health impairments had completed their studies. While 43% of the youth with visual impairments were working, they were working fewer hours than any other group of young adults with disabilities (Newman et al., 2009). Throughout the published studies, youngsters with visual impairments seem to be experiencing difficulty with social engagement and tend to be living with their families or semi-independently in dormitories rather than independently.

Career and rehabilitation counselors have long understood the importance of social skills and social networks both for finding and maintaining employment. Therefore, it is essential that young adults with visual impairments develop strong social skills and that they participate in social activities in their communities (Bolles & Brown, 2001; Crudden, McBroom, Skinner, & Moore, 1998; Fesko & Temelini, 1997; Roy, Dimigen, & Taylor, 1998; Sacks & Wolffe, 1992; Wolffe, 2012). To improve these outcomes, it is important that transition programs be designed to meet these students' disability-specific needs. Characteristics of programs that have proven successful in effecting change within this population are discussed next.

Transition Program Characteristics

Elements that have been identified as leading to success in transition programs for students with visual impairments include: assessment and programming that are outcome oriented; disability-specific skill development, including reading and writing with braille or optical devices, orientation and mobility skills, use of assistive technology, and the like; structured pre-employment skills training that includes self-initiated job searches, skill building connected to future work (transferable skills), student diversity, goal setting, limited use of supports, and self-advocacy instruction; paid or volunteer work experiences for students; collaboration between education (secondary and postsecondary) and rehabilitation personnel; and program evaluation (McDonnall & Crudden, 2009; Nagle, 2001; Wolffe, 2012). Each of these elements is described in the following.

Outcome-oriented assessment and programming necessitate that students identify what they are interested in doing following high school: where they plan to live, what they plan to do for work, what training they need to accomplish, and what help they anticipate needing from others. They then need to develop plans while still in school to prepare for these eventualities. An informal assessment tool, the Transition Competencies Checklist, is specific to the population of students with visual impairments, including those with additional disabilities, and is available upon request from the first author of this chapter. This tool has students self-evaluate in ten areas: understanding work; leisure and social skills; problem-solving skills; self-advocacy skills; compensatory skills (also known as alternative techniques); knowledge of careers and sources of career information; understanding ability level; mastery of career counseling content areas (self-awareness, career exploration, job-seeking skills, job maintenance, employment skills); evidence of work experience; and understanding employers' concerns (Wolffe, 2001, 2014, 2017).

Alternative skills or disability-specific skills are described in an earlier section of this chapter related to the Expanded Core Curriculum. These are the skills that enable youth with visual impairments to integrate into training or work environments with their nondisabled peers while using techniques that do not rely on vision, such as reading and writing with braille or optical devices, using assistive technology, traveling without sight or with impaired sight using appropriate tools and techniques, living independently, taking care of oneself and one's home, and so forth.

Pre-employment skills training for youth with visual impairments needs to include self-awareness (based on both the young adults' perceptions of their strengths and weaknesses and input from

others), career exploration (which includes gaining information about the diversity of jobs available and what those jobs entail), job-seeking skills (especially how to handle paperwork and interactions, such as interviews without visual cues), and job maintenance skills (work habits and behaviors expected of all workers). Young adults with visual impairments need to be encouraged to self-initiate in their job searches since one of the concerns evidenced in research (Wolffe & Sacks, 1997) has been that others (teachers, counselors, significant adults) in the lives of youth have been more likely to secure jobs for these students than the students themselves.

Another area of importance is skill building that encourages transferable skills. The mainstream career literature reports that young adults without disabilities can anticipate changing careers a minimum of seven times in their lifetimes (Bolles, 2018); therefore, it is imperative that youth with disabilities develop skills that are viable in present and future work. This would include a broad understanding of technology and how it is changing to meet the needs of a diverse workforce as well as developing soft skills: the work habits and behaviors that all employers expect of their workers (attendance, punctuality, trustworthiness, self-initiative, working cooperatively, following directions, and so forth). As the labor market continues to change and adapt to a more digitally connected environment, the notion of long-term employment with one employer has evolved into a workforce that tends to operate remotely or from home offices more frequently and provide services for more than one employer at a time. This change in the structure of jobs from one long-term employer to multiple employers for whom a worker is committed for the duration of a project is often referred to as working in the gig economy. An example that most people can relate to is the rideshare business and companies such as Uber and Lyft, where drivers contract with these companies to take passengers in their own cars and are not employed per se by the companies – they are independent contractors, not employees. More and more companies are following this model and hiring people on a contract-only basis rather than making them full-time employees. For students with visual impairments, this means that they must have strong organizational and communication skills to negotiate and manage independent contracts and good mobility skills to both network with prospective employers and deliver their products.

Students with visual impairments need to be encouraged to set achievable goals and make limited use of supports, which will be expected of them in a work environment. In addition, they need to develop strong networks in their communities and within the vocational sector in which they wish to work so that they can take advantage of changes in hiring practices and labor market demands. Finally, students with visual impairments can benefit from programs where they are encouraged to learn and apply self-advocacy skills, such as practicing disability disclosure and articulating how they can perform competitively with or without accommodations.

Strong programs include *ongoing evaluation of the program components* using both internal and external evaluators to ensure a nonbiased report of the program's strengths and weaknesses. Change in students' perceptions of employment readiness and growth in areas they have identified as important to their career progress need to be documented as well as more discrete outcomes such as employment. Details about employment outcomes such as the number of hours being worked, rate of pay, benefits received, and type of work being performed tell only part of the story. Researchers also need to know how these young adults secured their jobs, what types of accommodations have enabled them to be successful on the job, and what amount of time and effort they had to exert to become and remain employed.

Paid or volunteer work experiences for students are a key element in successful transition programs. It may well be that increases in rates of employment over time are related to corresponding increases in the involvement of students with disabilities in volunteer and community work as well as paid work while still in school. This is an area that requires further research, but the results of projects like the NLTS-2 are promising. What we know from secondary analyses of NLTS-2 and RSA datasets is that working while in high school has a significant impact on the likelihood that, following school

completion, young adults with visual impairments will move into employment (Connors et al., 2014; McDonnall, 2011; McDonnall & Crudden, 2009). Information gleaned from the NLTS–2 datasets shows that having multiple jobs increased the young adults' successes in securing employment. Having had just two jobs in the two years prior to leaving school resulted in individuals having a 1.6–2.1 higher likelihood of being employed than their peers without work experience (McDonnall, 2011).

One of the most critical elements for successful transition programs is *a strong collaboration between education (secondary and postsecondary) and rehabilitation personnel*. With collaboration between service providers, young adults who are blind or have low vision can make seamless transitions from childhood to adult roles and responsibilities. Educators can share with the team their perceptions of how the students learn best, whether they demonstrate strong work habits, and how they apply their knowledge, abilities, and talents in academic settings. Personnel from postsecondary training institutions can help students understand what content, skills, and study habits will be required in their next learning environment, and the students can prepare accordingly. This is particularly important because most students with visual impairments will have received special education services in primary and secondary educational settings and may not be well prepared for postsecondary independent study. Finally, it is important to include rehabilitation personnel in transition planning and when implementing adult activities because they are well versed in labor market considerations. These include what jobs are available in the desired geographic areas, what options and support are available to prepare for the type of careers sought, what employers expect of their employees, what accommodations are reasonable and how to acquire them for work, and so forth.

A Model Transition Program

Researchers have followed a promising approach to providing transition services that was initiated in Florida in 2002 and has been replicated nationally and internationally. The results of that effort provide insight into the effectiveness of the programmatic elements outlined prior (Jorgensen-Smith & Lewis, 2004; Lewis, Bardin, & Jorgensen-Smith, 2009; McMahon, Wolffe, Wolfe, & Brooker, 2013; Wittich, Watanabe, Scully, & Bergevin, 2013). The approach, which is being used by public and private rehabilitation agencies to provide transition services, involves collaboration between community-based rehabilitation service providers and educators working in districts referring students to summer transition projects. In the model, rehabilitation workers were introduced to the principles of the Transition Tote System (Wolffe, 2012) and exposed to the career education needs of children and adolescents with visual impairments including the elements of successful programs. They, in turn, worked with educational providers and established summer transition programs.

The program participants in the summer transition programs complete a self-assessment tool for young adults, the Transition Competencies Checklist (Wolffe, 2001, 2014, 2017), and set goals for their training based on the pre-test results. The Transition Competencies Checklist, introduced prior, is a self-report tool that addresses ten transition areas of concern. The students used the checklist to identify their strengths and weaknesses and set goals for their training based on the information they gleaned from the tool. The staff use the Transition Tote System to provide instruction in career education concepts and also provide disability-specific skills training in all of their transition projects to meet the students' reported needs.

In addition to using the Transition Tote materials, the service providers decided to adhere to the guidelines proposed as critical to successful transition programs. Therefore, their transition programs included: collaboration among agencies; employability skills training (including soft skills instruction and modeling, self-initiated job searches, the acquisition of transferable skills, the development of realistic goals, and instruction in self-advocacy); the inclusion of diverse groups of young people; the limited use of supports; paid work; internal and external evaluation; and enthusiastic service providers.

Results of the pilot project in Florida focused on program evaluation. Formative and summative data for each of the pilot sites and feedback from the participants – exit interviews and focus groups – were collected. Once the pilot projects were completed, the data collected were analyzed and the work group considered how to infuse what they had learned into a statewide implementation plan (Jorgensen-Smith & Lewis, 2004). In a one-year post-training follow-up study, Lewis and her colleagues (Lewis et al., 2009) used the Transition Competencies Checklist to measure changes in the students' perceived transition abilities. They reported that the students who participated in the transition program scored higher ratings in the areas where they had participated in structured learning: understanding of work based on real-life experiences, self-advocacy, knowledge of career options, ratings of their future level of dependency, mastery of career counseling areas, and ratings of their overall transition competencies one year after having completed the summer transition program. The students showed evidence of having retained content that was presented to them via the structured learning approach (using the Transition Tote materials) but not in other areas of instruction (alternative skills such as orientation and mobility, social skills, self-advocacy, etc.) a year following training.

When researchers looked at students based on their modes of reading (braille versus print), prior work experience, and gender, they found no differences in the students' overall transition competencies. These results were unexpected since previous studies have found differences between the employment rates of students with low vision and those who are blind (Houtenville, 2003; Shaw et al., 2007). These researchers found that individuals with low vision were more likely to be employed than those who were blind. While unexpected, the finding that students' prior work experience was not significantly correlated to positive outcomes may have been an artifact of the decision by Lewis and her colleagues not to include the two sections of the Transition Competencies Checklist that related to work experience in the overall transition competencies score (Lewis et al., 2009). Another surprising finding was the lack of gender differences found in this sample of students since there is contradictory evidence in the literature (D'Amico, 1991; Newman, 1991; Newman et al., 2009; Wagner, 1992; Wagner, Cadwallader, & Marder, 2003; Newman et al., 2010).

Overall, this model transition project and its evaluation lend credence to several notions related to ongoing service provision for students with visual impairments:

- A structured learning approach may be most productive for retaining content for students with visual impairments.
- Collaborative programming that involves rehabilitation and education personnel may facilitate the transition process for students.
- Instruction in self-advocacy skills is an important component of pre-employability skills training in preparation for the transition from school to work.
- Without structured learning, important skills such as problem-solving skills, social and leisure skills, and compensatory skills may not be adequately reinforced to be applied long-term.

While more research is needed, the preliminary evaluation of Florida's model transition program for students with visual impairments seems to validate much of the work and previous research in the area of transition for students with visual impairments. In the appendix to this chapter, resources to support instruction in these key areas, including specific curricula in career education and transition skill development, are provided.

Summary

Legislative initiatives between 1970 and 2000 have, unfortunately, not led to a notable increase in the incidence of employment of young adults with visual impairments graduating from high school. Although there have been encouraging trends reported in students' participation in their educational

planning, increases in their positive attitudes toward school, and expressions of student and parent expectations of employment, none of these positive trends have translated into independent employment in adulthood. Employment data for this population is also questionable because it often does not include students with other disabling conditions in addition to visual impairments.

Educational intervention for these students must include attention to both the standard core curriculum and the ECC, a selection of instructional areas that addresses skills often needed by students with visual impairments. The ECC includes disability-specific skills to facilitate access to the mainstream curriculum (known as compensatory skills), orientation and mobility, social interaction, independent living, recreation and leisure, sensory efficiency, technology, career education, and self-determination. In considering rehabilitative needs, researchers have identified some characteristics that are common among students with visual impairment in secondary settings. Students with visual impairments received less homework than sighted peers, and they more often completed homework with supervision by an adult. Students with more vision tended to take more responsibility for home management skills. Although most students with visual impairments had worked for pay by the end of high school, they were less likely than sighted students to have found their own jobs. Data from the National Longitudinal Transition Studies (NLTS, NLTS-2) indicated that students with low vision were more likely to be employed than those who were blind, although these data did not include those with multiple disabilities. Although students with visual impairments were more likely to attend college or postsecondary training than most other students with disabilities, completion of their programs took longer, and those who worked often were employed for fewer hours.

Individualized transition programs for these students need to include outcome-oriented goals and programs that involve student participation as well as instruction in disability-specific skills that ensure that the student can adapt implementation of tasks. In addition, pre-employment skills ensure understanding of personal skills and job requirements. Preparation for current and future career needs is vital in supporting expected changes during a career, making ongoing evaluation of programs a necessity. Volunteer and work experiences along with a strong collaboration between education and rehabilitation also contribute to the establishment of a successful career path.

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APPENDIX A: RESOURCES

Resources: Internet Sites

www.aph.org/aph-connectcenter – The American Printing House for the Blind (APH) has assumed stewardship of many of the American Foundation for the Blind's family of websites, including CareerConnect, its fully accessible, online employment resource. CareerConnect offers students with visual impairments and their families as well as those who work with them access to information about more than 1,000 successfully employed blind and visually impaired adults who discuss their jobs, the tools they use to perform on the job, and how they secured and maintain employment and offer suggestions to others. CareerConnect also offers a variety of audio/video media: *On Your Mark, Get Set . . . Go to Work*, a series of videos that explore early work experiences of young adults with visual impairments; *Aaron's Adventures in Employment*, a combination of videos and old-time radio drama chronicling the adventures of a visually impaired teenager going to work for the first time; and content related to finding employment with a visual disability.

www.projectaspiro.com – The World Blind Union's employment resources website offers information to individuals with visual impairments (navigational tab reads, planning a career), service providers, friends and family members, and employers. The content areas include informative overviews, tip sheets, checklists, and resources for these four main audiences. In addition, there are videos and audio interviews with successfully employed individuals who are blind or have low vision from

a variety of countries under Success Stories and an easily navigated resource section with downloadable files for further reference.

www.tsbvi.edu/recc – Texas School for the Blind and Visually Impaired provides an informational website that includes education resources on a wide variety of topics, including careers and transition.

www.ada.gov – The United States Department of Justice site explains in full the Americans with Disabilities Act and offers technical assistance to those implementing the act.

www.disabilitystatistics.org – This is the website maintained by Cornell University where visitors can access U.S. disability statistics collected on the U.S. Census, the American Community Survey, and the Equal Employment Opportunity Commission.

https://ion.workforcegps.org – The Innovation and Opportunity Network's site that provides resources to support successful implement of the Workforce Innovation and Opportunity Act (WIOA).

Resources: Publications

Allman, C. B., & Lewis, S. (Eds.). (2014). *ECC essentials: Teaching the Expanded Core Curriculum to students with visual impairments*. New York: AFB Press.
  This is a practical guide to teaching students with visual impairments in all areas of the Expanded Core Curriculum: compensatory skills, sensory efficiency, assistive technology, orientation and mobility, independent living, social interaction, recreation and leisure, career education, and self-determination. In addition to content, each chapter includes proposed instructional activities and resources.

Holbrook, M. C., Kamei-Hannan, C., & McCarthy, T. (Eds.). (2017). *Foundations of education* (3rd ed.): *Vol. 2. Instructional strategies for teaching children and youths with visual impairments*. New York: AFB Press.
  This volume of *Foundations of Education* includes informative chapters on career education, social skills, and self-determination – three important areas in preparing youth with visual impairments for the transition from school to adult roles and responsibilities. Assessment tools, content, and instructional strategies are included for all areas of the curriculum, including instruction in disability-specific skills.

LeJeune, B. J., & Orr, A. (2011). *Transition activity calendar for students with visual impairments* (2nd ed.). Retrieved from https://blind.msstate.edu/search/search.php?q=transition+activity+calendar&x=0&y=0
  This booklet is written in a checklist format and spells out the activities in which college-bound students with visual impairments need to be engaged, from middle school through high school.

Maffei, P. (2014). *Quick and easy expanded core curriculum: The Hatlen Center guide*. Louisville, KY: American Printing House for the Blind.
  This curriculum includes a series of lessons that can be completed with students in short periods of time in all areas of the Expanded Core Curriculum, including career education and self-determination.

Sacks, S. Z., & Wolffe, K. E. (Eds.). (2006). *Teaching social skills to students with visual impairments: From theory to practice*. New York: AFB Press.
  This edited book describes the development of social skills in children and adolescents with visual impairments and provides activities to teach these skills. Assessment techniques and tools, as well as instructional resources, are also included.

Trief, E., & Feeney, R. (2014). *College bound: A guide for students with visual impairments*. New York: AFB Press.
  This book details the activities that young people need to accomplish in preparation for college.

Wolffe, K. E. (Ed.). (1999). *Skills for success: A career education handbook for children and adolescents with visual impairments*. New York: AFB Press.
  This book guides families and professionals in developing activities that will lead to careers for children with visual impairments, including those with multiple disabilities. The introduction provides an overview of key issues to prepare students for careers, and subsequent chapters present activities that are appropriate for preschoolers, elementary students, secondary students, and middle school students. Each section includes suggestions for students who have multiple disabilities.

Wolffe, K. E. (2012). *The Transition Tote system: Navigating the rapids of life* (2nd ed.). Louisville, KY: American Printing House for the Blind.

This set of materials for youth with visual impairments comprises a pre-employment structure-learning curriculum in the following content areas: self-awareness, career exploration, job seeking, and job maintenance. Materials include *The Student Manual*, which comes in the tote – a backpack that features organizational tools designed to aid students who are blind or have low vision – and *The Facilitator's Guide*, which explains to teachers and other caregivers how to modify the lessons of the curriculum for students with greater challenges.

Wolffe, K. E. (2012). *Career counseling for people with disabilities: A practical guide to finding employment* (2nd ed.). Austin, TX: Pro-Ed.

This book is designed for counselors working with adults who are disabled and interested in employment. Although not specific to people with visual impairments, many of the activities and resources are pertinent.

Note: In addition to the aforementioned booklets and books, many articles related to the transition process for youth with visual impairments are available, the bulk of them in the *Journal of Visual Impairment & Blindness*, published by the American Foundation for the Blind in both print and electronic formats.

Resources: Organizations

American Council of the Blind (www.acb.org) and **National Federation of the Blind** (www.nfb.org/nfb) are national organizations of and for people who are blind and visually impaired. Members advocate for issues related to blindness/visual impairment, publish relevant materials, and hold national and local conferences.

American Foundation for the Blind (www.afb.org) is a nonprofit organization that provides advocacy on behalf of individuals with visual impairments and information for professionals and consumers through its publications, *Journal of Visual Impairment and Blindness* and *AccessWorld*.

American Printing House for the Blind (www.aph.org) is a multiservice nonprofit organization that develops products for students who are blind or have low vision. APH receives federal funds to produce textbooks in print and large type as well as other educational materials. They produce many products that facilitate transition, including assistive technology, braille equipment and materials, and products related to career development and independent living. In addition, APH is now hosting the former AFB websites: CareerConnect, Family Connect, Vision Aware, and Braille Bug, as well as publishing texts and materials for pre-service personnel and continuing education materials for professionals.

Hadley Institute for the Blind (www.hadley.edu) – This distance education option for people with visual impairments and their families provides adult continuing education courses and materials for professionals. Although Hadley no longer offers high school credit courses, they do have supportive instructional materials such as videos on assistive technology and podcasts to support career development for secondary and postsecondary students.

Specialized Schools for the Blind – Many states have specialized schools that provide resources for students who are blind or have low vision. Many schools maintain websites that are available to families and professionals and provide short-term services or summer programs that can assist students with transition to adulthood. Many of these specialized schools also work with local public schools to meet the needs of students educated in their districts. Member schools in the Council of Schools for the Blind can be found at https://cosbvi.org. Texas School for the Blind and Visually Impaired maintains a public information website that includes information on career education and transition at www.tsbvi.edu/recc/ce.htm. Perkins School for the Blind in Boston offers a career education website that describes their pre-employment program and provides additional information at www.perkins.org/resources/scout/transition/career-exploration.html.

Transition Planning and Services for Youth With Emotional and Behavioral Disorders

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Planning for life after high school can be both exciting and overwhelming for adolescents. And for educators who are supporting youth to transition to adulthood, this process can incite similar emotions. Yet decades of research affirm that the planning and preparation that take place during secondary school have a powerful impact on the postschool outcomes of young people. The experiences youth have while in school (e.g., classes, community involvement, service, employment, relationships with peers and adults) can shape their aspirations and achievements during school and postschool. Naturally, the pathways to adulthood will look different for each individual, as some youths will go to college, others will begin working, and all will broaden their community participation.

Achieving one's desired postschool aspirations can be more difficult for some students. Youth who receive services under the special education category of emotional disturbance (ED), although we will use the broader terminology of emotional and behavioral disorders (EBD) throughout this chapter, hold the same aspirations but experience a significant in-school and postschool achievement gap compared to other youth with and without disabilities. Longitudinal studies such as the National Longitudinal Transition Study-2 (NLTS-2) and National Longitudinal Transition Study 2012 (NLTS 2012) have suggested dismal employment, postsecondary education, and community participation outcomes for youth with EBD compared to their peers with other disabilities or without disabilities (Karpur, Clark, Caproni, & Sterner, 2005; Lipscomb et al., 2017b; Osgood, Foster, Flanagan, & Ruth, 2007; Newman, Wagner, Cameto, & Knokey, 2009; Zigmond, 2006). Among youth with disabilities who receive special education services and supports under the Individuals with Disabilities Education Act (IDEA), 5% have been identified with EBD (U.S. Department of Education, 2018). Of youth identified with EBD, 75% are male and 25% are Black/African American and 18% are Hispanic.

While research-based practices have been identified targeting youth with EBD, data suggest that schools, families, and communities continue to struggle to support youth with EBD in obtaining their postschool aspirations. For example, findings from NLTS 2012 confirm that improvements in transition programming for youth with EBD are still needed. NLTS 2012 findings report that among youth with EBD, 62% come from socioeconomically disadvantaged backgrounds and 33% attend lower-performing schools (Lipscomb et al., 2017b). Relatedly, parents of youth with EBD were most likely, compared to parents across all other disability categories, to identify the need for their child to work immediately after high school. Yet over one-third of parents (36%) reported school staff did not provide enough information about job opportunities and career planning despite this being a

primary postschool goal for parents. Moreover, 30% of youth with EBD reported that school staff did not help enough with learning about different careers (Lipscomb et al., 2017b).

The NLTS 2012 provides further insights into the postsecondary education aspirations of youth with EBD (Lipscomb et al., 2017b). Most (52%) youth with EBD expected to graduate from high school, yet only 30% of their parents had the same expectation. In addition, 75% of youth with EBD expected to obtain some postsecondary education compared to 58% of their parents. Such findings highlight a discrepancy in expectations between children and their families. Barriers identified by parents to achieving postsecondary education for youth with EBD included social readiness (50%), uncertainty about educational opportunities (36%), and uncertainty on how to obtain financial aid or pay for school (42%).

Youth with EBD also have significant support needs related to school engagement. Strikingly, youth with EBD experience suspensions (65%), expulsions (19%), arrests (17%), and drop out (40%) at substantially higher rates than students in any other disability category (Duchnowski & Kutash, 2011; Wilkins & Bost, 2014). These negative in-school outcomes likely shape graduation and post-school trajectories and reiterate the need to identify, implement, and sustain the delivery of high-quality transition services and supports in school.

Throughout this chapter we will focus on transition services to improve the negative current outcomes for youth with EBD. As noted previously, we adopt the terminology of EBD to describe students whose behavioral and/or emotional needs necessitate specialized services and supports to achieve in-school and postschool work and/or other community participation outcomes. This defi-nition recognizes that a broad range of youth may have needs for specialized services (e.g., youth who experience a mental health condition). This definition is broader than the IDEA definition of emotional disturbance. Although IDEA does acknowledge the significant impact internalizing disor-ders (e.g., depression and/or anxiety) can have on students' access to their education, Mitchell, Kern, and Conroy (2019) advocate for a revised definition and eligibility criteria under IDEA to ensure more youth who experience mental health challenges receive needed services within special educa-tion. This broadened concept of EBD may address the high magnitude of under-identified and/or underserved youth (Walker, Nishioka, Zeller, Severson, & Feil, 2000).

To address the needs of youth with EBD in secondary school, a well-designed and well-implemented approach should consist of evidence-based instructional practices, when available, and the integration of efficient and effective transition services to support a youth's movement from in-school to postschool activities. Evidence-based practices and student-focused supports such as explicit instruction should be applied to support academic skills (e.g., reading, writing, and mathematics) as well as non-academic skills (e.g., self-determination, social, employability, community living). The combination of instruction in academic and non-academic skills can help bolster students' success in employment, education, and community participation. In addition, the coordination of multi-system (i.e., school, agency, community) transition services must also be considered to achieve optimal post-school outcomes (Morningstar & Clavenna-Deane, 2018). A singular focus on either academic or non-academic skills is likely insufficient to meet the multifaceted transition needs for youth with EBD to successfully pursue their aspirations after they leave high school; hence there is a need for a comprehensive approach that accounts for the myriad of issues youth with EBD experience.

Recent Legislation Changes

In recent years, a number of policy shifts have occurred, changing the landscape of supports and ser-vices for youth with disabilities, including those with EBD. The passage of the Workforce Innovation and Opportunity Act (WIOA, 2014), an amendment to the Rehabilitation Act of 1973, has sup-ported collaboration between schools and vocational rehabilitation to help provide pre-employment transition services prior to school completion. Additionally, the Strengthening Career and Technical

Education for the 21st Century Act (2018), also known as Perkins V, requires states to ensure that students with disabilities participate in career and technical education (CTE) coursework while in high school and postschool. This may be due to the promising outcomes youth with disabilities experience when participating in CTE coursework. For example, students who take a concentration of CTE courses have a higher likelihood of obtaining full-time employment after high school, a primary postschool goal of more than half (57.8%) of students with EBD (Cameto, Levine, & Wagner, 2004; Wagner, Newman, & Javitz, 2017).

Enhancing Relevant Skills

High school represents an opportune time for youth with EBD to develop critical skills and attitudes that will prepare them to successfully assume future adult roles. The barriers that youth with EBD experience in accessing knowledge and services for successful transition must be addressed (Clark & Hart, 2009; Wagner & Davis, 2006). The considerable differences found among youth labeled with the EBD highlights the importance of individualized, developmentally appropriate, and culturally responsive transition services and supports.

Individualized, student-focused planning has long been advocated as an essential starting point for designing instruction that is relevant to the needs, interests, and long-term goals of youth with disabilities, including those with EBD. Transition assessments are critical elements of transition planning and can provided insight into the strengths and needs of students across academic and non-academic domains (Morningstar & Clavenna-Deane, 2018; Rowe, Mazzotti, Hirano, & Alverson, 2015). Once appropriate assessment has occurred, decisions can be made regarding how best to assist students address their support needs and achieve their short- and long-term goals. This may result in team decisions that consider the multiple educational and community contexts that are available to each student. The heterogeneity of student strengths and needs, along with the diverse educational contexts within which they are served, necessitates careful consideration of which supports will be most essential for each student with EBD. In the next section we discuss four skill domains that may be important for transition planning teams to specifically consider for students with EBD: (1) social and interpersonal skill development, (2) self-determination, (3) employment-related skills, and (4) academic competence.

Social and Interpersonal Skills

Social and interpersonal skill development can be an important area of support for youth with EBD. Teachers should assess students to ensure those in need of additional instruction and supports receive them. Gresham and Elliott (2014) remark that social skills are conceptualized as a specific class of behaviors that an individual will exhibit to complete a social task. Social tasks may include introducing yourself to someone new or being able to track and participate in conversations. Social competence is conceptualized as to whether or not an individual performs a social task adequately. Therefore, practitioners or researchers should consider whether students need knowledge acquisition or performance-based intervention (Gresham & Elliott, 2014).

Social and interpersonal skills have been identified as key elements to success in employment, education, and community participation (Benz, Yovanoff, & Doren, 1997; Mazzotti et al., 2016; Test, Mazzotti et al., 2009). More specifically, demonstration of higher social and interpersonal competence has been associated with greater overall well-being, including academic success and enhanced relationships with peers and adults, and social capital (DiPerna & Elliott, 2002; Malecki & Elliot, 2002; Wentzel, 2009). In addition, social skills and competence are critical characteristics identified by employers related to hiring, promotion, and retention (Carter & Wehby, 2003; Ju, Zhang, & Pacha, 2012). Recognizing that social skills can impact both education and employment, consideration should be given to how students obtain proficiency in this area.

Social skill interventions have been deemed a promising practice for youth with disabilities (Mazzotti et al., 2016), yet there continues to be little high-quality research that meets criteria to specify it as an evidence-based practice. For youth who exhibit behavioral problems, providing additional explicit instruction of social skills as well as frequent positive reinforcement of performed social skills within the schoolwide positive behavioral intervention and support (PBIS) framework can be beneficial (Simonsen & Sugai, 2013). Youth with EBD are more likely than peers with other disabilities to report being teased or called names during the school year, being made the subject of rumors, being physically attacked or in fights, and having items stolen from them (Lipscomb et al., 2017b). Reducing bullying and victimization while encouraging proactive social behavioral skills may provide the positive interactions students need for further social skill fluency. In addition, behavior-specific feedback, positive reinforcement of prosocial skills, and opportunities to practice prosocial skills are all ways to support students with EBD (Buchanan, Nese, & Clark, 2016).

Many social skills curricula available today have been designed and implemented at the elementary level. Yet, as Buchanan and colleagues (2016) noted, students need continued practice and reinforcement of prosocial behaviors throughout secondary school. Therefore, the following issues should be considered when designing social skills instruction for transition-age youth with EBD. First, social skills instruction should start early, particularly for students evidencing an early trajectory of behavioral support needs. But even for "late starters" – those whose behavioral needs do not emerge until adolescence – social skills training should be offered throughout middle and high school. Second, chosen interventions should be based on sound assessment data to ensure they are addressing the specific nature of social skills or performance deficits (e.g., acquisition, fluency, maintenance). Third, appropriate social skills are contextually determined. The array of contexts within which youth must demonstrate these skills extends beyond the classroom and into an array of employment and community-based settings.

Self-Determination Skills

Self-determination continues to be a prominent focus of intervention and research in the field of secondary special education and transition. Researchers have begun to investigate not only how self-determination develops in youth with disabilities but how self-determined behaviors are expressed and impact outcomes. Causal Agency Theory explains how individuals become self-determined and defines self-determination as a person becoming the causal agent over their lives – that is, the development of skills or abilities that enable them to cause an effect or create change to achieve goals (Shogren et al., 2015). Causal Agency Theory also incorporates other theories that emphasize the role of motivation, persistence, and self-directed change (Deci & Ryan, 2002). Self-determined actions have three essential characteristics: (1) volitional action (e.g., making a conscious choice based on preferences), (2) agentic action (e.g., acting to achieve a goal), and (3) action–control beliefs (e.g., self-empowerment and belief to achieve self-directed goals). Each is an important ability for youth with EBD. Self-determination skill development is widely considered an essential component of comprehensive transition education. As youth approach adulthood, they are expected to assume greater responsibility for managing their own lives and have a more prominent voice in their own transition planning and adult roles and responsibilities.

However, research indicates that many youths with EBD evidence limited self-determination skills. Relative to their peers with other high-incidence disabilities, youths with EBD have less knowledge about self-determined behaviors, diminished ability to engage in self-determined behavior, and limited confidence regarding the efficacy of their efforts to be self-determined (Cameto et al., 2004; Carter, Lane, Pierson, & Glaeser, 2006; Carter, Trainor, Sun, & Owens, 2009). In addition, Seo, Wehmeyer, Palmer, and Little (2015) reported that students with EBD reported lower levels of autonomy compared to their peers with learning disabilities. Berry, Ward, and Caplan (2012)

analyzed NLTS-2 data to see how self-determination impacted the likelihood of participating in postsecondary education. They found that youth with disabilities from lower socioeconomic backgrounds, which characterizes the conditions of many youth with EBD, were more likely to attend college if they rated themselves higher on self-empowerment and autonomy.

Fostering self-determination begins with good assessment (Carter, 2010). Both the AIR Self-Determination Scale (Wolman, Campeau, DuBois, Mithaug, & Stolarski, 1994) and The Arc's Self-Determination Scale (Wehmeyer & Klechner, 1995) have been used over the past two decades to assess student self-determination. More recently, Shogren and colleagues (2017) developed the Self-Determination Inventory, which goes beyond the functional model of self-determination and expands the assessment of self-determination aligned with Causal Agency Theory. Each may be useful for assessing student self-determination over time. Once a self-determination measure has been administered, assessment results can help direct instruction on specific self-determination skills (e.g., goal setting, problem solving, or decision making) that need additional practice, or teachers can target self-determination through the academic curricula (e.g., Rowe, Mazzotti, & Sinclair, 2015).

Recent instructional practices have emerged from the research that have shown positive outcomes for students with EBD and other disabilities. The Self-Determined Learning Model of Instruction (SDLMI) has been shown to increase goal-directed, self-regulatory behaviors, which is often a deficit skill for youth with EBD. Because the SDLMI is a self-regulatory and problem-solving intervention, it can be used within any context or classroom to help students self-monitor and achieve individually set goals. For example, Kelly and Shogren (2014) demonstrated that teaching the SDLMI strategy to adolescents with EBD led to decreased off-task behaviors and increased on-task behaviors. Similar findings were reported when teaching students with EBD to use an adaptation of the SLDMI in work settings (Benitez, Lattimore, & Wehmeyer, 2005). Other programs have targeted the development of self-determined behaviors through student participation within educational and transition planning meetings. For example, implementation of the Self-Directed IEP via the ChoiceMaker curriculum (Martin, Marshall, Maxson, & Jerman, 1997) showed strong effects on increasing student participation (i.e., starting the individualized education program [IEP] meeting, talking throughout the IEP meeting, leading the IEP meeting) among youth with disabilities including those with EBD.

Providing opportunities for students to practice self-determination skills through community-based instruction or within the youth's workplace is also critical. Continued practice of self-determined abilities will rely on partnerships with the youth's family and community. Collaborating with families to identify where and how a youth can practice self-determined behaviors at home and in the community is an important aspect of culturally responsive transition instruction.

Employment-Related Skills

Early work and career development experiences – whether school sponsored or occurring beyond the school day – can provide youth with an engaging and effective context for acquiring and refining an array of important social, self-determination, functional, and occupation-specific skills. At the same time, career preparatory experiences offer youth with EBD opportunities to explore and discover their career interests, learn essential work and collaborative values, establish relationships in their community, strengthen their resumes, and heighten future expectations related to college and careers. In terms of experiences while youth with EBD are still in school, researchers have found that youth with EBD had similar rates of paid employment in the past year as their peers with other disabilities (42% compared to 40% respectively; Lipscomb et al., 2017b). Further, youth with EBD were also comparable to youth with other disabilities in regard to participating in paid or unpaid school-sponsored work activity (10% vs. 12% respectively; Lipscomb et al., 2017b). And, compared

specifically to students with learning disabilities, state data revealed youth with EBD were actually more likely to have some level of employment experience (Prince, Hodge, Bridges, & Katsiyannis, 2018). However, compared to youth without an IEP, youth with EBD and other disabilities fall behind on paid work experiences (50% compared to 40% respectively; Lipscomb et al., 2017a). And, data from NLTS-2 and NLTS 2012 suggest that postschool employment for youth with EBD decreased significantly between the 1990s and 2005.

Quality transition planning for employment can help support a student's sustained employment. Yet youth with EBD have limited involvement in vocational coursework, school-based enterprises, job shadowing, internships, work-study programs, and out-of-school jobs (Carter, Trainor, Ditchman, Swedeen, & Owens, 2011). Moreover, students with EBD may experience difficulties in social interpersonal skills, which are critical components of soft skills typically determined to be important for employment (Nochajski & Schweitzer, 2014). Providing opportunities for youth with EBD to develop employment skills or participate in paid work experiences can be beneficial and can lead to better postschool employment outcomes (Test, Mazzotti et al., 2009).

In addition, the alignment between students' assessed strengths, preferences, and goals and their actual work experiences is a continued concern. As a general rule, assessment of preferences and interests should start early, and age-appropriate assessments should be used. Thorough assessments of different careers, different learning preferences, and personal qualities can help reveal different employment opportunities that may have been overlooked. The stronger the connection to a youth's strengths, preferences, and postschool goals, the more meaning and relevance specific career goals have for the student (Cheney, 2012; Kortering, Braziel, & Sitlington, 2010). Career development typically has four main phases: (1) career awareness, (2) career exploration, (3) career preparation, and (4) career assimilation. Starting in the elementary years, youth with EBD can be introduced to what work is and how it can bring self-fulfillment. As students age, the emphasis on building awareness should shift into a focus on exploring careers more deeply. Students may begin to incorporate more hands-on learning through class reports, building connections with mentors, volunteering, or instruction on different job roles. As students begin to start looking for jobs, they enter the career preparation phase. Students may begin to participate in job-related activities such as building a resume, finding jobs to apply for, learning to fill out applications, or learning skills for interviewing. Opportunities for real-world work experience through internships, apprenticeships, or service learning should be explored within this phase as well (Cease-Cook, Fowler, & Test, 2015).

Involvement with CTE programs may also be beneficial for students with EBD. Dougherty, Grindal, and Hehir (2018) found that students with disabilities who participated in CTE also had higher student achievement, increased graduation rates, and a higher likelihood of earning industry-recognized certificates. Furthermore, connections with vocational rehabilitation can be explored to help additional work-based learning opportunities and experiences through the implementation of pre-employment transition services (Pre-ETS), as now required by the WIOA. These Pre-ETS include job exploration counseling, structured work opportunities, postsecondary education counseling, training in workplace readiness skills, and self-advocacy.

Community-based instruction or other community-based work experiences offer prime environments to learn soft skills (e.g., interpersonal/social skills, time management) and career competencies that can be generalized across employment settings. Instructional efforts should target those work-related skills that are especially critical to long-term success and satisfaction on the job. As youth with EBD solidify their employment path and begin to work in a desired field, they enter the last phase of career development, career assimilation. The career development process for students with EBD should be individualized and should reflect their interest, enhance their motivation, and align with their postschool goals.

Academic Skills

Youth with EBD experience a variety of threats to sustained academic skill development and engagement. Almost half (48%) of students with EBD reported that classwork was hard to learn, 48% had trouble keeping up with homework, and 47% reported they needed more help from their teacher. Youth with EBD were also most likely to be late for class (25%), late for school (15%), or cut class (9%) when compared to students with other disabilities (Lipscomb et al., 2017b). All of this contributes to decreased academic engaged time.

One way to help youth stay engaged is through behavioral supports that increase prosocial skills and classroom engagement. Although social skills have been discussed previously, we want to highlight the association of social skills with academic success. Gresham (2015) suggests social skills function as an academic enabler, which contributes to higher academic engagement and achievement. This has been demonstrated by positive associations between social behaviors and academic short-term and long-term outcomes (Algozzine, Wang, & Violett, 2011). Yet social skill development is only one small piece of the puzzle. Another way to keep youth with EBD engaged in academics is through relevant and individualized course pathways that align with postschool goals. An individualized course of study can help support students' transition goals by exposing students to coursework that excites their intrinsic motivation by linking academic topics to a job or college major they aspire to participate. Accessing and persisting through higher education directly relates to earning opportunities later on in life, as individuals who have graduated from high school, college, or attained a professional degree are more likely to have higher earnings and less likely to experience unemployment (Torpey, 2018). High-quality transition planning that takes into account a rigorous course of study, and the type of diploma a youth graduates with has been identified as a predictor of postschool success (Test, Mazzotti et al., 2009).

Unfortunately, many youth with EBD leave high school without the necessary coursework and adequate instruction to meet the demands associated with acceptance or success in college (Wagner & Davis, 2006). In addition, descriptive research indicated that adolescents with EBD showed pronounced academic deficits relative to their same-age peers without disabilities, often performing far below grade level in core content areas such as reading, math, writing, and science (Benner, Nelson, Ralston, & Mooney, 2010; Gage, Wilson, & MacSuga-Gage, 2014; Lane, Carter, Pierson, & Glaeser, 2006; Templeton, Neel, & Blood, 2008).

Although there are many interventions focused on social/behavioral skills (Garwood, Brunsting, & Fox, 2014), there is a need for secondary interventions in academic content areas of reading, writing, math, and science (Burke, Boon, Hatton, & Bowman-Perrott, 2015; Kostewicz & Kubina, 2008). Educators must also find ways to support early learning of academic skills specific for youth with EBD, as learning and achievement trajectories often begin at the elementary level. To support youth with EBD to experience success in their academic coursework, implementation of evidence-based instructional practices must occur. For example, Biancarosa and Snow (2006) suggest (a) providing direct and explicit comprehensive instruction, (b) embedding effective instructional principles in content, (c) building motivation for reading and learning, (d) implementing formative progress monitoring, and (e) using summative evaluation systems to support middle and high school students improve their reading. Further, educators can support youth with EBD through the use of educational supports, modifications, and accommodations. If students are not responsive to those interventions, further individualization of the intervention or curriculum may be necessary for a more intensive learning opportunity (Maggin, Wehby, Farmer, & Brooks, 2016). Finally, because many youths with EBD have difficulty seeing the relevance of high school, designing authentic learning opportunities that integrate academic content with real-life application may be particularly important to establishing an intrinsically motivating learning context.

Establishing Meaningful Supports

Working toward meaningful postschool outcomes for youth with EBD is not a one-person task, nor it is simply a matter of skill development. An entire system of supports must be built to enable youth to succeed in their preparation for and participation in adult life. Coordination of transition services is not only mandated by IDEA (2004), but it can also help youth with EBD enhance their opportunities for a high quality of life postschool. In the following section, we highlight some of those supports that may be particularly beneficial to consider for youth with EBD, including (a) establishing a coordinated service system, (b) enhancing family involvement, and (c) providing behavioral and other mental health services.

Coordinated Service System

Fostering collaboration among various service providers and community support agencies may be one of the most beneficial undertakings to support students with EBD. Youth with EBD many experience multiple vulnerabilities during their transition to adulthood, which may include mental health needs, lack of familial supports, poverty, or involvement with drugs, alcohol, or the juvenile justice system (Osgood, Foster, Flanagan, & Ruth, 2005). To support youth with EBD, IDEA (2004) mandates that schools provide preventative supports and individualized transition services through the coordinated effort of providers. Cameto and colleagues (2004) reported the most common service needs for youth with EBD were postsecondary education accommodations, vocational training or placement, behavioral intervention, mental health services, and social work services. Wagner, Wei, Thornton, and Valdes (2016) found youth with EBD received services at a reduced rate after leaving high school, with a total of 40% of young adults reporting unmet service needs and a third reporting receiving no services after exiting school. Wagner and colleagues (2016) found a lack of information on how to obtain services for their child was a primary barrier to successful outcomes reported by parents.

Youth with EBD and their families may also face additional changes as they transition from school to adult service providers. For example, some child services end with no adult services to transition to (e.g., special education, child welfare). Other services (e.g., child mental health, juvenile justice system) have counterparts in the adult system, but adult services often have quite different eligibility criteria and service models than their child-serving counterparts. For students with higher support needs, collaboration across agencies and service providers becomes even more important. Collaboration across agencies and service providers is not just a best practice, it is considered a critical treatment component for wraparound service models (Kernan & Morilus–Black, 2010; Lee et al., 2013). Wraparound programming is implemented as a process by which a group of individuals collaborate to develop, monitor, and update individualized support plans for youth until the ultimate outcome goals are achieved (Shepherd & Linn, 2015).

For support providers working with youth with EBD and their families, a thorough understanding of available services within the community is necessary. In addition, school personnel can form strong relationships with representatives at community agencies (e.g., mental health, vocational rehabilitation, juvenile services) to help reduce the number of barriers that youth and families may encounter. It will also be important for systems to create procedures for information sharing (e.g., eligibility requirements, services) across agencies for efficient and effective collaboration.

Family Involvement

Involving families as equitable participants in the transition planning process can ensure that educational and transition programming is culturally responsive. Culturally responsive transition planning

can be done by working with the youth to identify expectations across school and home environments, integrating family culture and goals in the forefront of discussion and goal setting, and supporting educational decision making through a shared process (Haines, Francis, Shepherd, Ziegler, & Mabika, 2018; Turnbull, Turnbull, Erwin, Soodak, & Shogren, 2015). Family involvement should be encouraged and actively supported to enhance the transition planning process (Clark & Hart, 2009; Lane & Carter, 2006; Unruh, Povenmire-Kirk, & Yamamoto, 2009). The lack of strong relationship is exacerbated for culturally diverse families (Hirano, Rowe, Lindstrom, & Chan, 2018). And involvement prior to the transition planning process has tended to encourage passive (e.g., completing assessments on their child), instead of active, involvement (Landmark, Roberts, & Zhang, 2012).

Due to the important role families play for transition-age youth, developing a trusting and collaborative relationship between school and adult service providers and families is essential (Osher & Osher, 2002). Building opportunities for family involvement has been shown to be associated with improved postschool outcomes for students with disabilities (Mazzotti et al., 2016; Papay & Bambara, 2014). Interventions that have targeted family involvement have focused primarily on increasing knowledge of the transition planning process (Hirano et al., 2018). This is an important step toward addressing a major barrier to an optimal transition, but families continue to report that school personnel do not provide enough information about adult services (Cameto et al., 2004; Wagner et al., 2016). Although knowledge gain is beneficial, there has been little research that has found knowledge gain alone leads to behavioral change without effective support for such change. Because research on culturally responsive family involvement and the transition planning process is still in its infancy, resources for educators and researchers alike are limited. However, the Motivators of Parent Involvement (Hirano et al., 2018) is an assessment tool that school professionals and researchers can use to shed light on the factors that motivate parent involvement in the transition process. Because of the heterogeneity of families, school personnel can use this information to individualize supports based on a family's culture and background. For example, youth with EBD, as all youth, have varying home and community experiences that may influence what they want to do when they grow up, where they want to live, and what family expectations are for the youth.

Parents of youth with EBD report greater economic hardship, are less likely to have an employed parent in the household, are more likely to have children who attend lower-performing schools and report their child's primary postschool goal will be competitive employment (Lipscomb et al., 2017b). School personnel should take into consideration the financial hardships that some families experience. Resources such as housing and access to food banks may be required to support some families' stability. In addition, based on the unique needs of the family, referrals to community agencies (e.g., mental health, substance abuse treatment) for family members may support a youth's maintained stability in the community by adding to the strength of the overall family.

Behavioral Health Services

Behavioral and mental health status has received significant attention in recent years. Researchers and practitioners have struggled to determine how best to implement mental health services in schools. One approach has been to focus on integrated mental health services through the prevention-oriented model of multi-tiered systems of support (MTSS), such as the Interconnected Systems Framework (Barrett, Eber, & Weist, 2013). Furthermore, increased attention has also been given to students with EBD who experience internalizing disorders (i.e., depression and anxiety) and how MTSS frameworks may best support youth with internalizing emotional/behavioral needs (Anello et al., 2017; Weist et al., 2018).

Historically, access to and receipt of behavioral health services has been low for students with EBD (Wagner et al., 2006). More recent findings suggest gains to behavioral health services. More than half (54%) of youth with EBD access mental health services, more than students in any other

disability category (Lipscomb et al., 2017b). In addition, families reported that almost half of youth with EBD used some form of prescription medicine to address behavioral needs (Lipscomb et al., 2017b). But while progress has been made, researchers also acknowledge that youth with EBD continue to be underserved (Walker et al., 2000).

Findings from the Center on Adolescent Research in Schools (CARS) provides evidence that educators must begin thinking about mental health services for youth with EBD earlier than high school. Results from the CARS survey indicate that youth with ED are on average starting to receive community-based psychosocial interventions at age 10, school-based psychosocial interventions at age 13, and pharmacological intervention at age 11 (George, Zaheer, Kern, & Evans, 2018). To circumvent non-identification resulting in low service provision for youth with EBD, Mitchell and colleagues (2019) recommend universal and ongoing screening.

Access to services, however, is often hampered by the lack of coordinated services across child and adult mental health services (Davis, Green, & Hoffman, 2009). After synthesizing data from a national survey on 648 school personnel who work with transition-age youth with disabilities, Poppen, Sinclair, Hirano, Lindstrom, and Unruh (2016) found five major barriers to providing effective mental health services. School personnel reported that (1) schools had limited available resources to address the current needs, (2) students' challenging behaviors and lack of active engagement in services inhibited sustained treatment, (3) a lack of familial involvement in the coordination of services and collaboration with service agencies was a barrier, (4) an overall lack of collaboration among stakeholders (e.g., education systems, mental health services, social services) limited effectiveness, and (5) there is a need for additional training and professional development in the area of mental health. Overcoming these barriers requires multiple systems working together.

Perspectives of youth with EBD and their experiences in school should also be considered when identifying service needs. Students with EBD historically have also had poorer feelings about school than their peers with other disabilities and without disabilities. Only 73% of youth with EBD say they feel part of the school or feel close to the people at school, only 74% are happy to be at school, and only 85% feel safe at school (Lipscomb et al., 2017b). LaSalle, George, McCoach, Polk, and Evanovich (2018) also found that students with EBD expressed poorer perceptions of their school climate, higher rates of mental health problems, and greater victimization from peers, compared to students without disabilities.

Universal schoolwide interventions are one approach to addressing some of these systemic issues that have been identified by school personnel and youth with EBD. In an attempt to promote prosocial outcomes and reduce the negative experiences of students, schools have turned to implementing social-emotional learning (SEL) curricula that promote self-awareness, self-management, social awareness, relationships skills, and responsible decision making (Collaborative for Academic, Social, and Emotional Learning, 2015). While the implementation of SEL programming has produced positive academic and behavioral outcomes (see Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011), there is still a dearth of knowledge on how effective SEL programming is for students with EBD.

In a national survey conducted by Poppen and colleagues (2016), 45% of school personnel reported that they were only somewhat knowledgeable to not at all knowledgeable about the behavioral health services available to students in their schools, and 44% of school personnel reported that they were only somewhat knowledgeable to not at all knowledgeable about the services available to students in their community. Having some knowledge of behavioral health services available in schools and within the community can help provide immediate referrals and mental health supports to students in need. Additionally, it is important to understand where services are implemented and for whom. Even if students are receiving services through the education system beyond the age of 18, they may no longer qualify for youth services, and a transition to adult mental or behavioral health services must occur. This may be a challenge for families as a child-serving agency may readily

include the family and school in the service coordination process and an adult service agency may not. Supporting families in preparing for transitioning to adult behavioral and mental health services will be beneficial for both the families and the youth receiving the services.

Next Steps for Secondary Transition for Youth With EBD

Further efforts are needed to improve the fidelity of services, the identification and implementation of evidence-based practices, and additional practices that can support youth with EBD to reach their aspirations and desires for positive life outcomes. A recent special issue of *Behavioral Disorders* revisited a set of recommendations for students with EBD originally written in 1991 and provided updated recommendations to the field of EBD. The lead authors noted, "Supporting children and youth with EBD is a complex and difficult task that will not only require special educators to focus on viable evidence-based solutions, but also community, state, and federal agencies to adopt policies to guide that work" (Lewis, Wehby, & Scott, 2019, p. 69). With this in mind, we have synthesized the recommendations across the manuscripts in this special issue that are relevant to transition age youth with EBD. We provide a description of the recommendations along with significance to policies and practices for special educators, transition-age focused agency personnel, researchers, and policy makers.

- **Regular universal screening:** Identification of youth who experience mental health challenges during their school-age years is grossly underestimated (Mitchell et al., 2019). These authors report that with earlier identification, a reduction or avoidance of chronic and severe symptoms can occur. Regular screening can identify mental health challenges that begin to manifest during adolescence, and early identification can support (a) connections with appropriate community service agencies, (b) the transition from child to adult serving agencies, and (c) family-school cross-communication before behavioral issues escalate to more severe stages.
- **Revising ED definition and eligibility criteria within IDEA:** Freeman, Yell, Shriner, and Katsiyannis (2019) along with Mitchell et al. (2019) recommend a revision of the ED definition in IDEA to a more multidisciplinary and inclusive definition. The provision of special education services including important transition services for youth with ED is based on the identification and eligibility criteria. The current definition of ED is not inclusive for youth who experience various mental health challenges, many of which may not manifest until adolescence and can impact school completion and postschool outcomes. As with regular screening, a more inclusive definition may allow for preventative services that may circumvent more deleterious adult outcomes if no transition-related services are provided for a student with EBD.
- **Personnel development and capacity building:** Freeman and colleagues (2019) reported one major barrier to serving youth with EBD is the shortage of qualified special education teachers. Many professional development recommendations are mirrored in a 2018 special issue of *Career Development and Transition for Exceptional Individuals* on personnel preparation in secondary transition. Only 35% of sampled universities required a transition course for special education licensure (Williams-Diehm, Rowe, Johnson, & Guilmeus, 2018). In this same issue, Holzberg, Clark, and Morningstar (2018) provide guidance for specific features of professional development that positively support teachers with transition programming including: "(a) coaching and feedback through sustained engagement . . .; (b) collective participation among teachers through collaboration, feedback, modeling, or applied practice; (c) consistent 'manualized' (i.e., written content) training . . .; and (d) active learning embedded in PD through group activities, discussion, and problem-solving" (p. 55).
- **Mechanisms to improve practice:** Lloyd, Bruhn, Sutherland, and Bradshaw (2019) note that the field has failed to implement and scale up effective programs for youth with EBD. Many of

the failures are attributed to the lack of translation of research findings to actionable information for practitioners, both pre-service and in-service personnel, who interact with students with EBD. In secondary transition the field has begun to document evidence-based practices (Test, Fowler, et al., 2009) and predictors of postschool success (Mazzotti et al., 2016; Test, Mazzotti et al., 2009b), yet continuous improvement is still necessary. First, we must understand how evidence-based practices work for youth with EBD and design interventions for youth with EBD that address their specific secondary transition needs. Second, we need to ensure current and future research evidence is translated for consumer use and incorporated into practice with sound scaling-up procedures. Last, we must be diligent in our design of scaling-up practices to account for the potential confounds of working within multiple contexts (e.g., school, community, work-based learning sites) across various agencies (e.g., special education, general education, vocational rehabilitation, mental and behavioral health). Understanding how to implement practices with fidelity at scale can be an area for future research to support positive outcomes for youth with EBD during the transition process.

- **Tiered system of support:** Mitchell et al. (2019) suggest that MTSS provides a framework to support youth with EBD at the identified levels of service defined by need. A MTSS framework provides general and special educators with tools to provide universal interventions along with prevention strategies coupled with mechanisms for individualized supports for youth with EBD identified as in need of higher levels of supports and services. For example, a youth with EBD may benefit from participation in a CTE course (universal) but may need specific accommodations to support his or her behavioral needs (tiered) to be successful in this coursework.

- **Integrated delivery model:** Mitchell and colleagues (2019) strongly recommend creating an integrated delivery model across the school and community. As described earlier in this chapter, interagency collaboration across general education, special education, families, and community-based agencies (e.g., mental health, juvenile services) is critical for supporting successful outcomes for youth with EBD. Many barriers to an integrated delivery model exist across each community and can be, but not limited to, (a) stigma of individuals with mental health concerns, (b) lack of parental support, (c) lack of qualified personnel and access to community-based agencies, (d) and the perceived high cost of serving youth with EBD, yet a localized community model based on community assets can be built through relationship building among schools, families, and community-based agencies.

Summary

The experiences youth with EBD have, the skills they develop, and the services they interact with during high school and early adulthood can make a substantial difference in the quality of life outcomes they experience into adulthood. Equipping youth with EBD with transition-related skills that increase their competence and confidence, as well as establishing a comprehensive network of individually designed supports and services, represent important elements of effective transition programming. Although the field still has much to learn about how best to support successful transitions for this population of youth, it is clear that quality transition programming is critical to the long-term success and well-being of youth with EBD.

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Improving Transition Outcomes for Youth With Mental Health Conditions

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This chapter focuses on promoting positive postschool outcomes for youth with mental health conditions. The broad population of youth with mental health conditions, including those who do or do not quality for special education, needs specific attention because of their prevalence, unique context, and deplorable outcomes. While it is often thought that the onset of serious mental illness occurs in the early twenties or adulthood, in fact the mean prevalence of psychiatric conditions across all children and adolescents is 13.4%; 50% of all psychiatric conditions have onset before age 14 and 75% before age 25 (Polanczyk, Salum, Sugaya, Caye, & Rohde, 2015; Forness, Freeman, Paparella, Kauffman, & Walker, 2012). Further, about 80% of lifetime mental health diagnoses are made prior to high school graduation. The impact of these conditions looms large. Among U.S. youth, mental health conditions are the cause of 45% of the burden of disability (55.9% of disability burden among 15- to 19-year-old females and 34.8% among 15- to 19-year-old males; Bonnie, Stroud, & Breiner, 2014). The cognitive and functional support needs brought on by psychiatric disabilities can be numerous and similar to other neurologic disabilities such as difficulties with memory, organizing, and planning, as well challenges to maintaining attention and screening out distracting stimuli, although there may be no impact on intelligence per se or ability to learn (Boston University, Center for Psychiatric Rehabilitation, 2019). This population also has specific social and emotional needs related to anxiety, depression, and post-traumatic stress. This range of challenges may precipitate the high rates of utilizing disability benefits. Nearly one-quarter of all youth receiving federal disability benefits are youth with mental health conditions, and sadly for these youth, once they begin to access disability benefits, they rarely stop using benefits, with an average length of disability receipt of 27 years (Rupp & Scott, 1996; Cook, 2006).

There are numerous other contextual barriers that thwart positive transition outcomes of this group. Youth and young adults with mental health conditions often experience higher rates of homelessness, arrests, pregnancy, and substance use compared to other youth (Davis et al., 2007; Sheidow, McCart, Zajac, & Davis, 2012; Stoep, Beresford, Weiss, & McKnight, 2000; Valdés, Williamson, & Wagner, 1990; Davis & Vander Stoep, 1997).

Less is known about the specific school experiences of youth with mental health conditions broadly as this is not a recognized category under the Individuals with Disabilities Education Act (IDEA), although for students served under the label of emotional disturbance, there

is compelling data on the poor in-school outcomes (attendance, grades, and grade retention; Wagner & Newman, 2012). Such youth are also less like than their peers with other disability labels to participate in extracurricular group activities, transition planning, or school-sponsored work experiences (Wagner & Davis, 2006). Further, students with emotional disturbance are much more likely to have ever been suspended/expelled (73% vs. 33%), to have been reassigned from their prior school to their current school (20% vs. 5%), and to have attended five or more schools since starting kindergarten (40% vs. 23%) (Wagner & Cameto, 2004). Given this context, the resultant transition outcomes for this disability group are unsurprisingly poor. While some improvements in dropout rates in special education students with emotional disturbance have been noted (Wagner & Newman, 2012), the most recent available figures (2014–2015 academic year) show a 35% dropout rate (National Center for Education Statistics, 2017) and a higher rate of high school incompletion relative to other disability groups (National Longitudinal Transition Study-2, NLTS-2 data, 2019). Moreover, less than half (45%) of students with emotional disturbance receiving special education services attend any postsecondary education or training, and of those who do, only 41% graduate. Regarding transition to employment, about half (53%) of former students with mental health conditions who received special education services who are out of school for up to six years are competitively employed. This trend continues to become more negative the farther from high school completion, with 50% of students employed at eight years postschool compared to 60% for all young adults with disabilities and 66% for the general population (Wagner & Newman, 2014).

Policy Approaches to Improve Transition Outcomes

There is a clear need for supports for students with mental health conditions as they transition; however, the IDEA special education and transition planning requirements (1990 and 2004 20 U.S.C. § 1400) only benefit a small portion (less than 10%) of the total population of youth with mental health conditions due to false negatives in evaluations for emotional disturbance, misidentification, and the requirement for impact on academic performance (Forness et al., 2012). This necessitates ongoing consideration of how to effectively provide students with mental health conditions with effective supports while they are in school and planning for transition.

The 2014 Workforce Innovation and Opportunity Act (WIOA; P.L. 113–128) is one of the most important recent policy initiatives for youth with disabilities. WIOA mandates that workforce systems (typically the state American Job Centers) spend at least 75% of their youth funding for services for certain groups of out-of-school youth, many of whom are youth with mental health conditions. Further, WIOA mandates that state agencies of vocational rehabilitation (VR) spend at least 15% of their federal funds on students with disabilities. Specifically, VR systems are required to provide five "pre-employment transition services" (Pre-ETS) for students with disabilities, including youth with mental health conditions. These Pre-ETS services are: job exploration counseling (e.g., seminars or workshops on careers and required skills, career ladders, and interest inventory); workplace readiness training (e.g., development of transferable work skills that may include resume writing, interview skills, and professionalism); work-based learning experiences (e.g., opportunities to job shadow, complete informational interviews, volunteer opportunities, and internships); self-advocacy and mentoring (e.g., peer mentoring, development of individual advocacy skills, and rights and responsibilities); and counseling on postsecondary education or training programs (e.g., counseling and guidance about options upon exiting high school that may include academic or vocational programs). Research suggests these to be effective strategies that will boost the postsecondary outcomes of all students with disabilities, including those with mental health conditions (Wissel, Tulikangas, & Guy, 2019).

Of special relevance, the law covers students who are already VR eligible or are *potentially* eligible. The former are typically eligible by virtue of being enrolled in special education or by having a 504 plan. Because the law applies to students who are potentially eligible, it can serve as a channel for providing full VR services to the larger population of students with mental health conditions who are not identified for special education services. As Pre-ETS are designed for students, a close collaboration with VR and with secondary schools to identify and deliver these services becomes necessary. The implementation of Pre-ETS is underway, and there is as yet little evaluative data on the impact or the adaptation of the services to engage and successfully serve students with ED.

Best Practices in Transition for Students With Mental Health Conditions

Much of the research on transition outcomes is cross–disability and does not distinguish findings for students with mental health conditions; further, many students who are not eligible for special education services in school are not included in this body of research. Nonetheless some valuable insights into how to better conduct transition services for this population can be gleaned from this research. A body of evidence has emerged for predictors and best practice for postschool outcomes for youth with disabilities (see Chapter 4). These are also summarized by Anderson and Golden (2019) and are detailed in a U.S. Department of Education guide (2017). Key predictors include paid employment and/or work experiences, parental expectations, inclusion in general education, self-determination skills, social skills, parental involvement, and interagency collaboration.

There has been some research that has focused on transition practices and outcomes for students with ED, which includes some students with mental health conditions. Rojewski, Lee, and Gregg (2015) describe data from the NLTS-2 that show a positive causal relationship between the placement of students with emotional disturbance and learning disabilities in general education classrooms with postsecondary education participation. Wagner and Davis (2006) identified five principles from the literature that represent exemplary practices in promoting positive postsecondary outcomes for students with ED: (1) relationships – helping students form meaningful relationships; (2) rigor – implementing challenging curricula that promote students' academic success; (3) relevance – offering opportunities for professional skill building and career exploration that allow students to prepare for their future jobs; (4) addressing the needs of the whole child – identify the needs, strengths, limitations, and preferences of students so they can become healthy, participating community members; and (5) involving students and families in goal-driven transition planning – gathering input from students and families to plan for the transition to postsecondary life.

More recently, Wagner and Newman (2014) conducted an analysis of NLTS–2 data on in-school or "malleable" factors that predict positive postsecondary outcomes for education or employment for students with emotional disturbance. Three strong predictors emerged. High school students with emotional disturbance who took a leadership role during their individualized education program (IEP) meeting (who had received instruction on the purpose and processes of transition planning and how to actively participate in transition planning) were significantly more likely enroll in college (odds ratio of 3.75). Second, students who had a college representative attend a transition planning meeting were 29 times more likely to be engaged in postsecondary education. Similarly, students who receive transition assistance from between three and six community agencies were more likely to be engaged in postsecondary employment than those who received assistance from two or fewer community agencies. Third, students who had a concentration of general career and technical education (four or more credits) in an occupationally specific subject were 3.31 times more likely to have full-time employment within two years after high school. They were also significantly more likely to have full-time employment at any time since high school.

Models for Transition Services for Students With Mental Health Conditions

The body of transition research specifically for students with mental health needs is limited. A few models for best practice transition planning have emerged, and three are profiled here.

Translating Evidence to Support Transition (TEST)

Following the analysis of in-school factors that predict employment and education outcomes for students with emotional disturbance conducted by Wagner and Newman (2014), three guides were developed and piloted for transition planners and special educators serving students with ED, including those with mental health conditions. The topics of the three guides are student-led IEPs; Biebel, Golden, Huckabee, & Ellison, 2018), taking a concentration of career and technical education (CTE) courses (Ellison, Huckabee, Golden, & Biebel, 2018), and community partnerships in transition planning (Huckabee, Golden, Ellison, & Biebel, 2018). Each guide builds on existing practices from cross-disability materials but adds unique considerations for students with emotional disturbance and mental health conditions. The guides were piloted in two states among ten high schools (Wagner & Newman, 2014).

The purpose of the student-led guide is to increase student engagement; facilitate growing self-advocacy and self-knowledge; and develop a purposeful, coherent vision for what comes next. The guide contains five lesson plans for supporting students to understand the purpose, process, and potential of IEP meetings and ultimately preparing them to lead their own IEP meetings. The student-led guide includes a focus on how to work with students whose anxiety or behaviors are interfering with their ability to lead their IEP. Evaluation of the student-led guide suggested that some students valued learning about IDEA and their rights and wanted to participate more in their IEP now that they understood the process better.

The guide for CTE supports teachers to explore students' interests and aptitudes, to plan for student acquisition of skills and training during high school, to establish students' path to future employment, and to specify a progression of CTE education that leads to career goals. Some of the special consideration for students with mental health conditions described in the guide include: (a) the historic discouragement of individuals with psychiatric disabilities from pursuing work; (b) a tendency to underestimate the potential for a career; (c) family reliance on student's financial assistance (e.g., Social Security); (d) stigma of CTE classes; and (e) the need for creativity in addressing needed accommodations and CTE instructor competence to work with mental health conditions. In the pilot evaluation, there were reports of students turning CTE work experiences into paid internships and postsecondary employment.

The community partners guide (a) helps teachers understand the gap in services that often befalls students with mental health conditions when they turn 18 or 21 and exit high school, (b) trains them to learn about the array of resources that are available, and (c) provides guidance on how to best involve community partners in transition planning. Pilot evaluations suggested the development of successful partnerships with community agencies, increased parental buy-in about the benefit of community partnerships for post-high school success of their students, and creative approaches to involving community partners, such as transition fairs.

Rehabilitation, Empowerment, Natural Supports, Education, and Work (RENEW)

Beginning in 1996, several researchers in New Hampshire developed and began to pilot an intervention for transition-age youth consistent with the children's mental health System of Care framework (Malloy, Cheney, & Cormier, 1998; Cheney, Hagner, Malloy, Cormier, & Bernstein, 1998). The

RENEW (Rehabilitation, Empowerment, Natural supports, Education, and Work) intervention demonstrated promising outcomes for engaging struggling youth in their homes, schools, and communities using a youth-driven planning and team-building process designed to help them articulate and attain specific career and life goals. The initial pilot was well received by the community and has since been manualized (Center for RENEW Implementation, n.d.). RENEW is also consistent with the four-phased family-driven and youth-guided wraparound process (Eber, Malloy, Rose, & Flammini, 2013) and is featured by the National Center for Positive Behavioral Interventions and Supports as a critical element of Tier 3 interventions for youth with significant emotional and behavioral disorders (Algozzine et al., 2014). RENEW includes an engagement phase where facilitators use graphic facilitation to help youth discover their strengths and articulate specific goals and action steps; a planning phase where the youth identifies resources and supporters and invites them to become a team to develop a specific plan; an action and progress monitoring phase where the youth and team members assess accomplishments and make adjustments as needed; and the transition phase when the youth move on to a less intensive set of supports (Berndt, 2008). The RENEW model is implemented by trained facilitators in school and mental health settings.

During the first demonstration project, 94% of all youth participating in RENEW who were eligible to complete high school during the two years of the project did so, and 78% engaged in postsecondary education or training (Cheney et al., 1998). Another study showed an overall improvement in behavioral functioning over 18 months, indicated by a moderate effect size on the Child and Adolescent Needs and Strengths Scale (Malloy, Sundar, Hagner, Pierias, & Viet, 2010). Most recently, a single-school case study of RENEW implementation as part of a larger initiative to implement the evidence-based positive behavioral interventions and supports framework in high schools found significant academic improvement among 25 students who received RENEW (Malloy, Bohanon, & Francoeur, 2018).

Check & Connect

Check & Connect is targeted broadly to youth with learning, social, and behavioral challenges who are at risk of dropping out and is listed in the What Works Clearinghouse (U.S. Department of Education, 2011). Thus, it addresses the large numbers of students with mental health conditions who may not be enrolled in special education. Students so identified are assigned a trained mentor. The mentor systematically monitors students' attendance and performance. This "check" component can signal the need to "connect." For up to two years, mentors will form a trusting relationship with the youth and family (typically in caseloads up to 35) and develop an individualized and flexible plan of supports. Over weekly to monthly meetings, mentors will use a cognitive behavioral approach to build student coping and problem-solving skills and will encourage positive life choices. Student motivation and engagement with school are fostered through encouragement of extracurricular activities (Evidence summary for check and connect, 2017). In two randomized trials, there were significant impacts on high school persistence and completion, attendance, and accrual in credits. Conversely there were decreases in truancy, behavioral referrals, and dropout rates (Sinclair, Christenson, & Thurlow, 2005; Sinclair, Christenson, Evelo, & Hurley, 1998).

Transition to Employment After High School

Given the struggles students with mental health conditions have in completing their secondary education, it is not surprising that their employment and economic futures are bleak (Davis & Vander Stoep, 1997). In contrast to students in other disability groups whose postsecondary employment rates have increased significantly since the early 1990s, employment rates of students with psychiatric conditions have not improved (Wagner, 1995). NLTS-2 findings suggest a post–high school

employment rate of only 50% for students with psychiatric conditions (Newman et al., 2011). Young adults with psychiatric disabilities are employed less often than older adults with these disabilities (Waghorn, Chant, & Harris, 2009), and they have lower employment rates compared to same-age peers in other disability groups (Newman et al., 2011; Stoep et al., 2000). In 2006, about 186,000 young adults with psychiatric conditions received Supplemental Security Income (SSI) benefits because their disability was determined to be severe enough to prevent them from engaging in substantial employment (GAO, 2008). Once on federal benefits, some suggest that there is a disincentive to work, compounding poverty and unemployment among youth with mental health conditions (Wittenberg, Mann, & Thompkins, 2013; McDonald-Wilson, Rogers, Ellison & Lyass, 2003; Mullen, Sullivan-Soydan, Ellison, Stone, & Banko, 2019).

There are few employment innovations that can address this bleak picture. Attempts have been made to adapt existing models of employment supports that were developed for middle-aged adults (Davis, Delman & Duperoy, 2013), such as Individualized Placement and Support (IPS). This model has undergone extensive and rigorous research among adults with mental health conditions and consistently performs better than other vocational models in supporting competitive employment in the community (Drake, Bond, & Becker, 2012). In a recent analysis, the outcomes of IPS were similar for young adults (Bond, Drake, & Campbell, 2016). Adaptations were made to the model for young adults, including adding peer support, adding a focus on completing high school or postsecondary education, and modifying the IPS fidelity scale to include items on education, family involvement, and engagement (Ellison, Klodnick, Bond, et al., 2015; Bond, Becker, Swanson, et al., 2019). However, IPS has been criticized for largely leading to employment that is part-time, entry-level, and short-lived. Thus, the need continues for vocational models that focus on longer-term careers rather than short-term employment for people with mental health conditions.

Supporting College Students With Mental Health Conditions

The poor outcomes of high school students with mental health conditions also persist in postsecondary education. A smaller number of young people with mental health attend postsecondary education (rates ranging from 7%–26% compared to 40% of the general population; Davis & Vander Stoep, 1997; Wagner & Newman, 2012). Young people with mental health conditions also tend to have delays in entering college, higher rates of part-time status, high dropout rates (86%), low graduation rates, and evidence of multiple attempts at college, accruing student debt and sometimes defaulted student loans (Newman et al., 2011; Mullen, Thompson, Murphy et al., 2017; Mowbray, Megivern, & Holter, 2003; Salzer, 2012)

However, there have been increases in recent years in the number of college students with mental health symptoms (Lipson, Lattie, & Eisenberg, 2018), creating an increased need for supports for positive outcomes. Challenges to effectively supporting students with mental health conditions include: (a) college-based counseling services and disability services that are insufficiently staffed and/or lacking the competencies to respond to the more significant mental health challenges becoming prevalent on campuses; (b) disability service staff not feeling adequately trained to provide targeted services, including accommodations and assistive technology; (c) college students who lack adequate knowledge to request and advocate for services; and (d) students who are unwilling to seek help or disclose their conditions due in part to stigma associated with "mental illnesses" (resulting in lower utilization rates of disability services compared to other disability groups on campus; Ellison, Rogers, & Costa, 2013). Students' willingness to disclose their condition on campus is also hampered by punitive or discriminatory college policies and practices toward students who struggle with their mental health on campus (Bazelon Center for Mental Health Law, 2007; Smith, Ackerman, & Costa, 2011).

As evidenced by the high dropout rate, college students with mental health conditions struggle with academic persistence – that is, the ability to maintain consistent attendance and satisfactory academic performance. It is commonly assumed that attrition is due to symptoms and students ultimately leave school because of poor grades; however, there is little empirical evidence to support this position. There is growing literature suggesting that more attention should focus on executive functioning skills, which may be the invisible disability that affects academic persistence of college students with mental health conditions (Mullen et al., 2017; Altshuler et al., 2004; Snyder, Miyake, & Hankin, 2015; Green, 2006; Green, Kern, & Heaton, 2004; McGurk & Mueser, 2004). In a recent study of college students, participants more frequently endorsed executive functioning skills as barriers to their academic performance, such as time management, prioritizing tasks, memory, and reducing distractions, than they did mental health symptoms (Mullen, unpublished data). Postsecondary education provides a host of complex demands for students. For example, managing multiple courses with conflicting assignment deadlines requires a significant amount of cognitive organization and effort to maintain academic persistence. As such, more work is needed to determine needed supports and develop innovative models for providing these supports in postsecondary settings.

Supporting Careers Among Young Adults With Mental Health Conditions

The U.S. Bureau of Labor Statistics tracks unemployment and wage/salary data for those 25 years old and older. These data show that with higher education at or above the associate's degree, individuals' wages not only increase, but they are also insulated from unemployment. Correspondingly, with a bachelor's degree, individuals make more than the median weekly earnings of all workers. Thus, there is a great need at this pivotal life juncture to cultivate career goals and strengthen aspirations and commitment to advance education. Innovations in postsecondary supports for youth with mental health conditions emphasize the intentional development of human capital, which is the unique set of skills and abilities that are only gained through employment and education (Borjas, 2005) – essentially a person's resume. With increased human capital developed through higher education, individuals gain access to primary labor market positions, where pay is higher, tenure is longer, and there are employer benefits, such as vacation and sick time as well as Family Medical Leave Act (FMLA; Baron & Salzer, 2002). Current vocational models for youth with mental health conditions view education as a critical vocational step. Conversely, an employment-only model actively pushes young adults with mental health conditions to pursue jobs that intrinsically have higher rates of unemployment and lower wages.

Helping Youth on the Path to Employment

One comprehensive model that supports young adults in developing and pursuing both school and work goals is currently in testing. Helping Youth on the Path to Employment (HYPE) is a manualized, evidence-informed, and practice-based model that integrates both employment and educational supports into one service. HYPE grew out of a career development service designed for adults (18+) who had longstanding involvement in community mental health services. In order to ensure services were intentionally designed for young adults, development efforts included a systematic review of the existing employment and education services for young adults; a survey of community mental health providers serving young adults; qualitative interviews with young adults; and a development meeting with experts and young adults to discuss the synthesis of the aforementioned activities into the HYPE model (Ellison, Huckabee, Stone, Sabella, & Mullen, 2019).

HYPE focuses specifically on three trajectories: (1) the employment path focuses on supporting the young adult to find a career that is personally meaningful; (2) the education path focuses

on increasing choices, opportunities, and economic stability; and (3) and the personal development path focuses on foundational skills to succeed in school and work. HYPE is an individualized, time-unlimited, community-based service that focuses on skill development, resource development/ identification, and education/advocacy related to accommodations and assistive technology. HYPE connects young adults to existing natural and community/campus/work resources to promote community inclusion and participation. Most unique to HYPE is the integration of a manualized compensatory cognitive remediation intervention, which teaches skills and strategies to counteract specific limitations or underdeveloped skills; for instance, calendaring, to-do lists, and setting reminders become very helpful skills and strategies for those who have difficulty remembering information (Mullen et al., 2017). By developing a young adult–focused model that incorporates cognitive supports, HYPE intends to minimize disruptions young adults have traditionally experienced in school and work in order to prevent poverty and underemployment and reduce the appeal/need for young adults to apply for SSI.

Conclusions

The poor outcomes experienced by those with mental health conditions in young adulthood necessitate specific focus be directed to the needs of this population in secondary school and postschool. Unfortunately, all too often, many youth and youth adults with mental health conditions are not eligible for special education or other disability supports and services. As such, more focus needs to be placed on promising models of career services and establishing their evidence and efficacy with youth with mental health conditions.

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