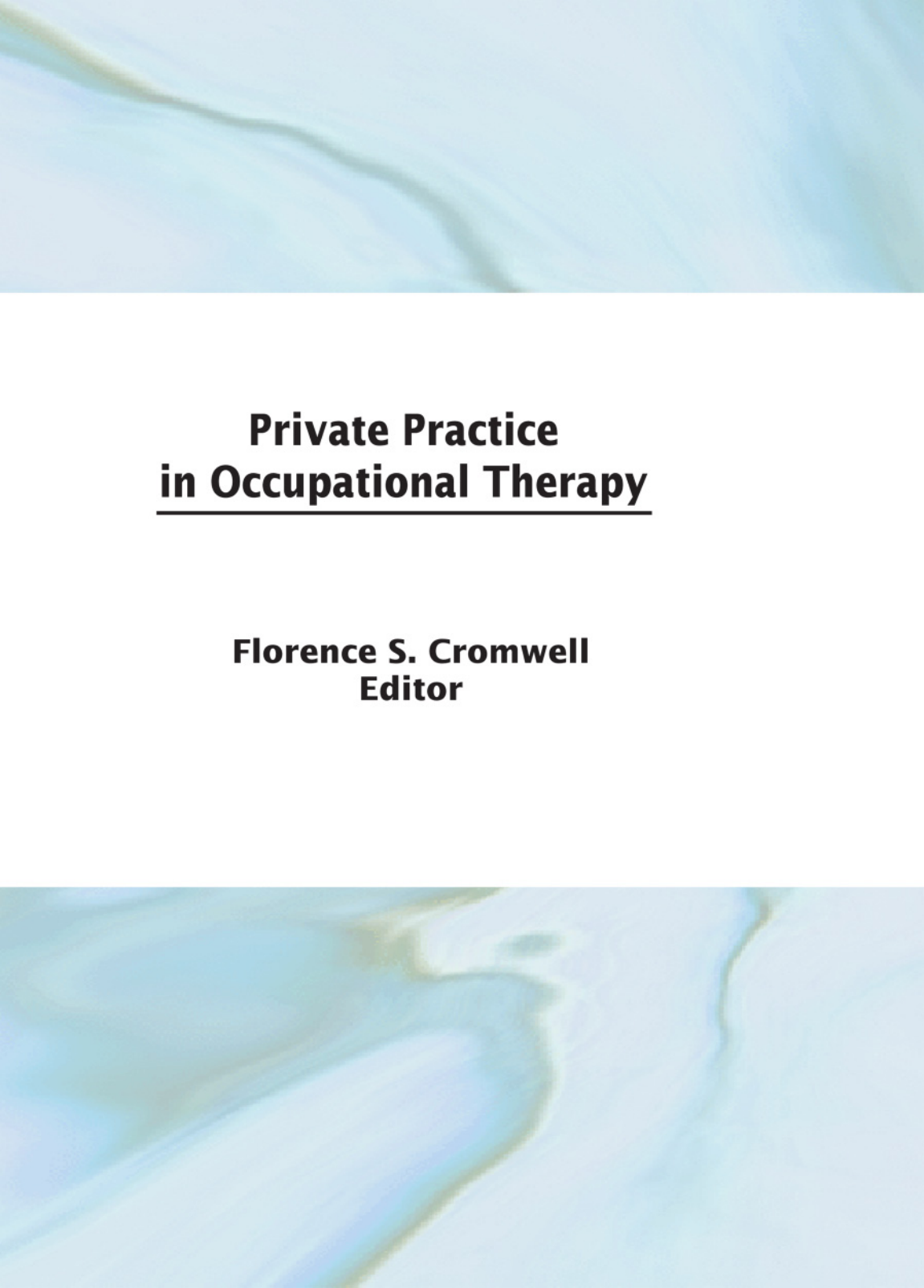




Private Practice in Occupational Therapy

**Florence S. Cromwell
Editor**

Private Practice in Occupational Therapy

The *Occupational Therapy in Health Care* series,
Florence S. Cromwell, Editor

- *The Changing Roles of Occupational Therapists in the 1980s*
- *Occupational Therapy Assessment as the Keystone to Treatment Planning*
- *Occupational Therapy and the Patient With Pain*
- *Occupational Therapy Strategies and Adaptations for Independent Daily Living*
- *The Roles of Occupational Therapists in Continuity of Care*
- *Private Practice in Occupational Therapy*
- *Treatment of the Adolescent With Behavioral Problems*
- *Work-Related Treatment in Occupational Therapy*

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Florence S. Cromwell
Editor

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Private Practice in Occupational Therapy

Occupational Therapy in Health Care
Volume 2, Number 2

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Private Practice in Occupational Therapy

FROM THE EDITOR'S DESK



One of the fastest growing segments of occupational therapy practice is in the private practice arena where therapists, alone or in teams of colleagues, are venturing into the market place to offer a tantalizing assortment of needed health care services. According to some of the writers in this issue, "it is about time!"

In putting together the issue it was difficult to plan and select papers that would provide you, the reader, with both the diversity and the excitement represented in the models of practice now found in our profession. The issue is a large one, and could have been larger. Despite its scope, many of you will wish we had included such things as school system consultation, hand practices, well-child developmental programs, consultation to architects and community planners, and stories of the specialists who are vendors of various assistive equipment. Perhaps another issue later can address those roles and others that are only now emerging in private practice.

Your attention however is drawn to some models of entrepreneurship already reported in previous issues of *OTHC*: Vol. I-2, Tooper as an itinerant educator and purveyor of special strategies for treatment and management uses . . . humor; Vol. I-4, Fink who is an expert designer and engineer of adaptive equipment; Vol. II-1, Grover who developed a "brokerage" for services to/for the aged and their families.

Occupational therapists can indeed be innovators and risk takers in addressing needs of patients and their communities . . . which brings us to the message of our PRACTICE WATCH feature in this issue by McFadden and Hanschu. It seemed especially fitted as an accompaniment to this theme, as certainly no one in private practice is a stranger to risk taking.

The writers who follow suggest both general and specific ideas and philosophies to guide anyone considering private practice. Frazian offers an especially colorful picture of the climate in which the profession must examine its options and directions for the decade ahead. She strongly suggests the need for entrepreneurship.

Others offer, some in a very personal way, provocative models for private practice, both of direct and indirect services, and an elaboration of the range of elements one must address in a business venture such as a free-standing "clinic". It is not suggested that the collection of papers provides "all you need to know" if you contemplate a business venture of your own. Yet it is hoped you will come away with clearer ideas of the risks, the potentials, and yes, the excitement of this occupational therapy role of independence.

Looking ahead to themes to come in *OTHC* you can anticipate, still this year, an examination of how occupational therapists approach the problems that *adolescence* brings to young persons already suffering from severely disabling conditions. In one issue we shall look at the dynamics of growing into adulthood with spinal cord injury, head trauma, unplanned motherhood, cerebral palsy, arthritis, various kinds and severity of psychiatric illnesses, anorexia, substance abuse and so on. Occupational therapists have special things to offer persons in this age group.

Our final theme in the volume will address more completely the growing practice demand—*work-related programming* in all kinds of settings with patients with many kinds of problems and needs.

On the other hand, we still seek your interest as writers for themes to come . . . all featuring occupational therapy programming with special populations and settings: the *energy-deficient patient* (SCI, cardiac, COPD, frail aged, etc.); *patients with feeding needs* that occupational therapists address; *computer applications* in the profession . . . education, research and practice; and finally how we address the *cultural implications of treatment planning*.

Finally, we thank you for your continued interest and seek your comments and suggestions.

Florence S. Cromwell, Editor

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Conference, Kansas City, 1984.

11. Commission on Standards and Ethics: Principles of Occupational Therapy

Ethics. Rockville, MD: American Occupational Therapy Association, 1980. Computers and the Private Practitioner in Occupational Therapy Estelle Breines, MA, OTR, FAOTA ABSTRACT. Computer application to the area of

occupational therapy practice is a relatively recent undertaking. Because of the absence of pertinent literature, suggestions given for potential uses are derived from imagination and from recent experience. As a therapist in private practice, concerned with cost and efficiency as well as quality treatment, the computer is examined as an administrative and research tool. Therapists are given guidelines so as to choose whether and where to initiate computer use. Next, computers and tasks are subjected to activity analysis, suggesting adaptations for use and proposing some treatment applications. Potential hazards and future needs are discussed, including computer literacy in education of therapists, compatibility of hardware/software, and communication between therapists.

If one had been born at home; walked great distances to school; travelled by horse drawn vehicles; learned a trade from one's parents; lived through several wars to end all wars, with ever increasing technology for both health and destruction; saw the birth of cars, planes, rockets and satellites; experienced stereopticons, silent films, talkies, and video cassettes; saw the communications media develop from news papers to television, one supposes then, that the magic of computers would not be any more difficult to conceive than

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New York University.

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were all those happenings. Computers are one more new experience.

Today computers impact upon us all. They are used in business, in supermarkets, in design and engineering. One cannot envision the scope of computer use in the future, in general, or as applied to health care. Computer application is

bounded only by imagination and creativity.

Since creativity is the stock in trade of occupational therapy, it is only appropriate that occupational therapists should

begin to address the application of computers to the settings

in which they operate and to the care of the populations they

serve. One such setting is a private practice business, Geri

Rehab, Inc. In this paper, the writer will describe the experience

of her company in using a Radio Shack TRS-80 Model II

Micro Computer (Model II) for both administrative and treatment

purposes. By so doing, it is hoped other therapists with

relatively small-scale operations will see potentials in

the use

of computers for their setting or population.

ADMINISTRATIVE TOOL

In order to meet the needs of cost effectiveness, to heighten efficiency, maximize time utilization and aid in research, Geri-Rehab, Inc. investigated the computer market and selected Model II. This selection was based upon several concerns. This equipment enabled the use of a variety of readily available software. Service and supplies are also readily available, since Radio Shack stores are located within

close proximity to our rurally situated office, and many others

are not. This choice has never been regretted.

Using a Model II with one expansion disk drive, a Daisy Wheel Printer II and SCRIPSIT(Tandy, 1981), the Radio Shack version of word processing, Geri-Rehab, Inc. has been able to correspond, bill patients, retain and retrieve consulta

tion reports, develop grant proposals, maintain and update procedures manuals, keep contracts current, and typeset publications and promotional material. Word processing software allows keyed instructions to be sent to the computer to tell the printer to provide "hard" or paper copies of selected information. Printing output can be varied in infinite ways by

altering the parameters of instructions and by the many print

ing options available. For example, reports, labels, lists, type

setting and other applications are possible with appropriate

formatting. PAYROLL (Tandy, 1982) permits checks to be drawn with

automatic computations for withholding, and prepares weekly,

monthly and year end statements and W2 forms. VISICALC,

(Radio Shack, 1980) an accounting spread sheet, is used to

prepare facilities' bills, itemizing and computing individual

patient treatment charges for each facility with which Geri

Rehab, Inc. contracts. Lists have been prepared with the use of

PROFILE II (Tandy, 1981), which permits sorting by zip code,

alphabet, and special categories, enabling the production of

mailing labels and reports. This has been a considerable assist

in the distribution of our publications.

Using the DATASTAR (MicroPro, 1983) and REPORT

STAR (Micropro, 1983) data base management system pro

grams together with the PICKLES and TROUT (1983) version

of the CP/M operating system, software has been developed to

collect data about patient performance generated by the Func

tional Assessment Scale (Breines, 1983). When complete, this

package will permit sorting by any number of categories. It has

been programmed for use with the Functional Assessment

Scale

to sort by diagnosis, facility, therapist, and guarantor, enabling

the results to be further analyzed by statistical software. Pre

liminary statistical analysis indicated that age of elderly sub

jects studied was not a factor in performance competency, so

age was not chosen as a sorting criteria, thus providing more

disk space and efficiency for data storage of significant items.

Careful analysis of real information needs contributes to eco

nomical utilization of data, equipment and time-all of which

represent cost.

Geri-Rehab, Inc., has recently acquired a modem. This will

enable us to link by telephone with other data banks for both

information and research. Until the equipment is fully on

line, one cannot imagine all the ways it will be of use. Our

most recent acquisition is the TRS-80 Model 100. This port

able computer fits into a handbag the size of a small briefcase.

It has full word processing capability. This computer is de

signed to hook up with the Model II. It has expanded our

capabilities beyond our expectations. Operated by either bat

ttery or house current, it serves as a second keyboard when

the Model II is in use. It is used for note taking at

meetings,

and stores schedules and phone numbers. It contains its own modem, so data can be transmitted to the Model II by phone from any point away from the office. This capability is ideal

for a practice which is largely itinerant. On several occasions

it has been used with patients in their own homes.

COMPUTER, AN ADMINISTRATIVE TOOL FOR YOU?

In determining the value of computer applications versus traditional applications, it is necessary for the potential user to

weigh the investment of money and time. To familiarize one self with a software package for administration takes many hours. If the usefulness of the package is limited, it may be

better to retain traditional methods. If, on the other hand, the

job which will be facilitated is expected to come up repeatedly,

the speed and accuracy which the computer affords will certainly make the start-up costs well worth the time spent. The

uses to which the computer is applied in the Geri-Rehab, Inc.,

office continue to expand daily. Expansion is limited only by

the time available to develop new applications. COMPUTER AS OCCUPATIONAL THERAPY TOOL

The computer is a tool of the present and the future. It has

structured lives today to a greater extent than yet realized.

Still, the computer remains a mystery, requiring imagination

in conceptualizing its use in therapeutic practice. Little documentation on the application of computers to occupational

therapy has as yet reached the professional literature. Because of this dearth of information, it would be interesting

and valuable to reflect on the role the computer will take in

the field. Therefore, much of what is to be addressed must be

gleaned from the therapist's imagination and very current practice experience. The analysis is less than scientific, but

will hopefully seed the creativity of others.

To use any tool for occupational therapy, it is first necessary to subject that tool and its associated activities to analysis.

Restricting the attention of this paper to the personal or

small business computer, the unit to be discussed is one which

is self-contained, runs on ordinary household electrical current, has a viewing screen and a keyboard, and may or may not have peripheral equipment such as expansion disk drives, a printer or a modem. The viewing screen is similar to a television monitor, often referred to by users as a CRT or

cathode ray tube. The CRT permits communications to be monitored visually. Screens on some equipment can be modified so that they print black on white or white on black. Some screens are green or amber, colors which some manufacturers claim is less apt to cause eye strain. Black and white screens can be adapted by placing a colored filter onto the glass of the CRT.

Those who are uninitiated may begin to understand computers by comparing them with other tools with which they are more familiar. Depending upon its application, the computer can be used as a superbly efficient typewriter, a sophisticated calculator, an art medium, a game board, an auxiliary memory, a compact filing cabinet, an educator and perhaps several other things which escape the understanding of this writer. And, remarkably, the same piece of equipment can do all these things with no more adaptation than one ordinarily applies when one changes a record on a record player.

The computer is a communication instrument ordinarily spoken to through a keyboard, but is subject to modification if necessary, such as by the use of puff-and-sip equipment or other such activator devices (Wamboldt, 1984). It is a tool

which can be applied to the frivolous as well as to the complex, just as a typewriter can be used to write a letter to a

friend or a significant document. In order to do either, one is

not required to know much more about the instrument's use than how to start it up, put the paper in, and strike the keys.

Of course, the more one knows about the tool and the principles of its design, the more flexibility and potential the instrument provides.

Because it lends itself to a variety of adaptations and applications,

the computer makes an ideal tool for the occupational

therapist. As a computer's keyboard is essentially designed like that of a typewriter, it is subject to those adaptations

ordinarily used to adapt typewriters. Among these are headwands, keyboard guards, and the like. Unlike the typewriter, some computer equipment offers the advantage of alternative positioning of the keyboard apart from the main body of the equipment. The light-weight keyboard on much equipment is portable. When attached by a cable to the computer, the keyboard can be removed from a stationary site adjacent to the computer and placed in a position at which it may be more easily reached by individuals restricted in mobility or

access. Mobility of equipment components provides much more flexibility in positioning than is ordinarily available even

with a standard portable typewriter. Portability of the entire

equipment between locations makes other adaptations possible. Communication can also occur between computers by using modems which use telephone hookups. Distance is virtually unlimited.

By making the computer a tool of practice, it can become a vehicle by which the occupational therapist can transit practice from the industrial to the technological/electronic era.

For the therapist in private practice it becomes an essential

tool for running an efficient and profitable business. The com

puter can be used in treatment for a variety of purposes. It is

an excellent communication tool for the non-verbal patient who has retained other expressive language skills. In addition

to screen displays, some sophisticated computers have vocal simulators which can be used with individuals who are unable to produce meaningful vocalizations.

The computer is ideal for the patient who finds non dominant handwriting a chore or is discouraged by inadequate handwriting. Unlike the typewriter, errors are easily corrected. This feature of easy correction permits the

patient

to produce a clean and attractively printed product despite severe dysfunction.

Customarily, speed and accuracy increase rapidly once

anxiety is eliminated. It is fun to see mistakes disappear with

the strike of a key. This error elimination feature is valuable

for patients with cognitive and perceptual disorders. Because

of the ease with which errors can be corrected, the computer,

configured for word processing, can be used effectively as a

tool for teaching finger gnosis and fine motor skills. Word

processing permits patients to send letters to families, enables

copy to be retained by patients, and permits material to be

read and corrected by therapists or by patients themselves at

a later date. Patients can be provided with their own discs and

can be encouraged to independently use the equipment for

practice during periods when patients and equipment are free.

Because the computer is an exciting instrument which pro

vides no limit to the mind expansion and skill building it

permits, it is ideal for the cardiac or respiratory patient who is

restricte~ in energy expenditure. It is a craft in every sense of

the word. It delivers a creative product for which satisfaction

is engendered, while creating an energy demand which is modest.

Coordination, speed, and accuracy are skills individuals develop through the use of computer games in the arcades with which we are all familiar. These goals are appropriate for many patients as well, and can be achieved through the use of game software.

Some game playing requires the use of a joystick. Our staff has successfully adapted an Atari joystick with K Splint in a

modified C bar design to sustain the thumb in opposition for a

hemiplegic patient. This permitted the patient to play computer games while reinforcing opposition. Use of the splint during play resulted in the gradual elimination of the adapta

tion and ultimate acquisition of competent three jaw chuck grasp and a fully functional hand.

These are only a few ideas of many that will assuredly be generated in time, as our experience with computers grows.

Undoubtedly, in time, many other adaptations will derive from the problems which will present themselves to patients and therapists. Geri-Rehab, Inc., can only expect that as computer use increases, its use will reflect favorably upon our

patients. RESTRICTIONS ON USE

Some concerns about computer use generate from the fact that the computer is a very compelling instrument. Once engaged in the problem solving it permits, time eludes one. Meals go uneaten, sleep is irregular, family is unheeded. While mind expanding, it is, however, a static, immobile activity and therefore potentially incapacitating for the elderly

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or others with limited endurance. Like the mother who dictates, "Enough TV. Go out and play", the same dictum holds here.

Following this line of thinking, it may be a risk to emphasize the use of computers in the resolution of perceptual and

cognitive disorders. The computer screen is two-dimensional.

Two-dimensional arrays are abstractions of three-dimensional experience and may be dependent upon depth for meaningful perception to be created. Bear in mind as well that sedentary

tasks offer no stimulation to the periphery of the visual field.

Only the foveal fields of vision are stimulated. Therefore, opportunities for the resolution of perception of spatial dimensions are restricted. Such perceptual resolutions are dependent upon the synthesis of stimulus data from peripheral and foveal visual fields in the dimensional world

(Trevvarthen,
1968; Breines, 1981). While computers are being used by cognitive training programs, because of the concerns cited above,
the premises upon which these programs are provided warrant further theoretical analysis and demonstrated worth. The
use of a two-dimensional tool for the resolution of a problem
which derives from a three-dimensional dysfunction requiring
peripheral input, may heighten rather than resolve perceptual
disorders, or may resolve problems in a splinter skill fashion,
rather than address underlying causes of the problem.
Both lack of mobility and resultant sensory deprivation
have been shown to result in disorientation even in normal
young adults (Zuckerman, 1969). One might conclude that if
normal, well, young people are potentially at risk,
individuals
with sensitive and fragile nervous systems may be subject to
similar dysfunctions without caution exercised. That the elderly are subject to nervous system disorders is well documented. Therefore, they as well as younger disabled persons
may be populations at risk of disorientation or other cognitive
disorders through immobility associated with computer use.
These issues will need to be monitored and assessed to deter

mine their relevance, as our experience with computers grows. The need to assess this matter is suggested as a research topic.

Another concern may be the constant visual stimulation associated with computer use. Working people have been known to report that continual use of the computer as a job related 111

tool causes eyestrain and headaches. One cannot anticipate the

responses of a cataract prone or neurologically impaired popu

lation to computer use without further investigation.

Personal experience alerted the author to a potential problem for individuals who wear bifocal corrective lenses. In bifocals, the near vision corrective field is in the lower frame

of the eyeglasses. The upper frame is corrected for distance

vision. The individual wearing bifocals is subject to experienc

ing neck discomfort when he attempts to see more clearly by extending the neck to read the screen through the lower frame, or taking the other option, experiencing eyestrain by

keeping the head neutrally positioned while viewing the screen through the improperly focused upper frame. Neither solution is comfortable or recommended. To remediate this problem, reading or near vision glasses were purchased for explicit use with the computer. The eyeglasses are stored in

the drawer of the computer desk so they are always available.

Since use of bifocals is common for the elderly, this is a concern to which the therapist must be alert when instructing

the older patient in computer use. EFFICACY EFFECTS

While isolation, lack of sensory stimulation and eye strain associated with computer use are potential hazards of which one must be aware, many potential benefits can also be engendered. One is the sense of accomplishment which derives from the acquisition of skills held in high repute. The value of

the computer as a creative tool is inordinate. The feedback obtained from others, for accomplishments exhibited in computer use, results in improved self-image.

Another positive benefit is the sense of camaraderie of belonging to the computer-wise "in" folk, or even more directly, being able to converse through modems with other operators with similar interests, thus potentially expanding the vistas of a population which is often limited in its ability to

get around in the community. Special interest computer clubs

abound. These clubs can provide social opportunities where other social experiences are ordinarily infeasible.

PROGRAM WRITING

Nowhere in this paper has program writing been previously addressed. One is able to successfully own and use a com

puter without even being familiar with computer languages or

how to write programs, although capabilities in this area would assuredly expand the usefulness of the equipment for individuals and for the profession as a whole. As yet, few occupational therapists have addressed themselves to software

or program design, undoubtedly because few have the necessary programming skills to meet these needs. While programming is perhaps not a skill demanded of everyone, there is a

real need for some occupational therapists to acquire competency in programming and computer languages, so that specialized requirements can be met by individuals who are computer experts and occupational therapists as well.

IMAGINED APPLICATIONS

Imagination enables conjecture about the uses one can conceive for the future. One can envision hooking up a wide television screen such as is available in some nursing homes,

enabling groups to participate in some computer application, perhaps an interfacility computer olympics. Cooperation and competition could be devised in arcade style games, simulated

bowling and football, error finding puzzles, creative writing,

graphics and other such events. Another valuable use for the

computer would be to establish a daily call system to

at-risk

elders in the community.

Due to increased longevity and anticipated long years of good health, the years of employment may be assumed to be

increasing. People often retire to new vocations, rather than

retire from old careers. Because flexible employment hours and computer skills are compatible, those trained in computer

skills may find part-time employment opportunities in their own homes. Such employment may provide work opportuni

ties which are compatible with reduced energy needs some

times required by the disabled. The days of cottage industry

may have returned.

These are only a few ideas of many that will assuredly be

generated in time, as our experience with computers grows.

FUTURE CONSIDERATIONS

Several areas will have to be addressed by the occupational

therapy profession in the near future if computer application

is to continue to expand for practice. These are the develop

ment of more direct practice tools and the strategies for the

accumulation of data from practice.

It remains for the therapists to design specialized programs

to be used for resolving individual patient problems, such as

tracking, word and letter recognition, sequencing,

categoriza

tion, cognitive mapping, utilizing fine motor skills, and
infinite

tum. In addition, the problems of incompatibility of
hardware

and software among users needs resolution. Therapists all
over

the country have computers and software which cannot be
shared. Software programs are designed by their manufactur
ers for use on specific equipment. For example, now* IBM and
APPLE software cannot be interchanged. Therefore, therap

ists tend to function in isolation one from the other, as
incom

patibility of software between users has prevented sharing
things they have developed. Therapists need to know who has
compatible wares and to establish communication with them,
so as to expand their vistas and improve treatment. The
identi

fication of and development of software "translators" will
en

hance communication, and speed the resolution of problems
presently being addressed by individuals in isolation.

In terms of research, occupational therapists who work in
private practice have the ideal tool with which to gather
data

to prove their cost effectiveness. Occupational therapists
live

in a commercial world in which data collection and economics
are inextricably tied to governmental decisions regarding

health care. Occupational therapists must begin to justify their practice, and with the aid of the computer, can do so. If the computer can be used to aid in validating occupational therapy, patients themselves stand to benefit from such research.

- At the time this article was prepared, November 1984.

Finally, in order to prepare future therapists with the skills

they will need, occupational therapy educational programs must obtain and operate computers in their classes to familiarize students and faculty with applications in management, treatment, and research. PROFESSIONAL COMMUNICATION

To their credit, occupational therapists have begun to recognize these problems and needs. Attempts to communicate their interests and capabilities have begun to be demonstrated. The organizational meeting of the Occupational Therapy Computer Club held in Portland, Oregon in May of 1983 indicated a recognition on the part of some therapists that more in the profession must be aware, exchange ideas, and develop applications. The 1984 AOTA Conference in Kansas City demonstrated an active response to the considerable number of computer programs available. Therapists were overheard to speak knowledgeably about bits and bytes and discs and drives, about courses in BASIC, FORTRAN, and COBOL, about computer activated adaptive equipment,

and about research data collection. Therapists are studying and practicing their new craft, developing data collection systems, and sharing solutions. They are breaking new ground by addressing their expertise to the needs of their clients and colleagues. SUMMARY

The use of computers by therapists in private practice can be a most positive and efficient addition to the daily routine and to the successful expansion of both business and treatment aspects of an operation. The profession must continue to expand its expertise so as to advance computer applicability in occupational therapy through the exchange of information, and education of new and experienced therapists.

Occupational therapists are entering a new technological era. As the era unfolds, the computer will be a health care tool, just as it is becoming a tool in other industries. It be115

hooves the occupational therapist to learn to use this tool skillfully in the same way that they have learned to use other

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