

POLICY ANALYSIS SERIES

ISSUES RELATED TO WELSCH v. LEVINE / NO. 12

ANALYSIS OF NONFORMAL TRAINING FOR PERSONNEL WORKING
IN THE FIELD OF DEVELOPMENTAL DISABILITIES
IN MINNESOTA: 1981-1982

Adult education is needed to help us to change--to acquire knowledge and understandings in order to help us to mature. Careful planning can set the conditions for change. It is difficult to name a more demanding task. Yet much of the planning by adult education agencies is haphazard. Often the planning is the last-minute, stopgap kind of effort summed up in the phrase "Whom can we get to talk to our group at the next meeting?" If we are to take the task of planning our adult education seriously, we will need a systematic approach. (Bergevin, Morris, & Smith, 1963, p. 8)

I. INTRODUCTION

This paper is the first of a three-part series to address the overall requirement set forth in the Developmental Disabilities Assistance and Bill of Rights Act (P.L. 95-602) 1978, which states:

The (State) plan (for developmental disabilities) must provide for . . . an assessment of the adequacy of the skill level of professionals and paraprofessionals serving persons with developmental disabilities in the State and the adequacy of the State programs and plans supporting training of such professionals and paraprofessionals in maintaining the quality of services provided to persons with developmental disabilities in the State . . . (42 USC 6009)

The focus of this study is on nonformal training activities taking place in Minnesota for personnel working with people with developmental disabilities. Nonformal training refers to those educational experiences such as conferences, workshops, seminars, in-service training, or courses that take place outside of the traditional (formal) postsecondary institutions (e.g., colleges, universities, vocational schools) and are sponsored by professional organizations, governmental agencies, service agencies, or continuing education programs. Nonformal training events are usually designed to meet the individual and collective needs and interests of people who share similar job responsibilities,

work settings, and/or clientele. Nonformal training may or may not have linkage with the formal educational sector, e.g., arrangements for issuance of credits and/or certification.

II. REVIEW OF LITERATURE

Inevitably, when the quality of human service programs is evaluated, a major factor is the competency of the personnel. A review of the literature indicates that nonformal training efforts have been fragmented, uncoordinated, piecemeal, and reactive to crises and events as opposed to being proactive, thoughtfully planned, organized, and sequenced in scale with current developmental and behavioral technology.

According to a national study conducted by the New Careers Training Laboratory at the City University of New York, "we are confronted with a promise--performance gap Where expectations have been raised and commitments have been made to improve the quality and variety of services available to meet the diverse needs of persons with developmental disabilities, these new and improved services must be provided within budgetary constraints." (1979, p. 8).

In face of the major sociopolitical changes in attitudes and practices during the last two decades, changes that have been brought about by deinstitutionalization, communitization (Jones, 1979), and normalization, several issues have surfaced regarding personnel training and development. These issues are, indeed, complex but must be confronted.

A. Training Issues Relating to Deinstitutionalization

As the population of public residential facilities moves to community settings, so also must resources be reallocated, including personnel. Deinstitutionalization plans must provide for retraining of staff for possible job transfer to community programs with assurance of career mobility and continuity of employment (New Careers Training Laboratory, 1979). Where labor unions have often impeded progress toward these transitions, they must be included in the dialogue during the early planning stages so that deinstitutionalization can occur with minimal resistance to change and so that employees' rights are given due respect (Apolloni, Capuccilli, & Cooke, 1980).

At the same time, there has been increased demand for improving the skills of those who work in state facilities. This need was addressed in the Minnesota *Welsch v. Noot* Consent Decree (September, 1980):

In-service training programs at the state institutions shall include increased emphasis on the proper care of physically handicapped persons (with particular emphasis on their positioning needs), proper implementation of

behavior management programs, effective training for severely and profoundly retarded persons in communication skills, and training with regard to the services provided mentally retarded persons by residential and nonresidential community service providers. (Paragraph #60)

Continued success of deinstitutionalization, however, is directly dependent upon the strength of those services provided in the community. This is particularly substantiated by the figures relating to admissions and readmissions to state hospitals. In Minnesota, as well as nationally, "over half of all admissions to state hospitals are because of behavior problems. Moreover, nearly all people who are returned to state hospitals . . . are readmitted because of behavior problems" (Minnesota Developmental Disabilities Program Office, *Policy Analysis Paper No. 10*, p. 14). Provencal suggested a solution, "Good training of providers virtually eliminates the phenomenon of clients returning to the institution because he or she failed to adjust . . . if there is any failure, we are the ones who have failed" (Provencal, in Apolloni et al., 1980, p. 36).

The most critical time for interaction between state-operated facility staff and community service providers is before community placements occur. In personnel training, there must be instilled not only a commitment toward actively seeking less restrictive placements, but the staff must also be receptive to new knowledge and directions from the placement agency. As they have experienced in the Macomb-Oakland Regional Center in Michigan, "if we carefully select and prepare the people who will be receiving the person leaving the institution, virtually anyone can move to the community at large. This belief has led us to place tremendous efforts in training foster parents and group home personnel" (Provencal, in Apolloni et al., p. 28).

B. Training Issues Relating to Community Services

In 1974-75, when the *CAIR Report* (Community Alternatives and Institutional Reform) was being prepared by task force members in Minnesota, there were at least 75 different services identified that might be required at various times in a lifetime by persons with developmental disabilities living in community settings. The variety of settings and services needed is complicated further by the multiple disciplines, both professional and paraprofessional, involved in delivering these services. Increasingly, the concept of interdisciplinary service and training has become recognized and implemented. Continued success of interagency coordination is dependent upon individuals working together for the benefit of persons with developmental disabilities and their families (Elder & Magrab, 1980, p. 22).

The *CAIR Report* was very specific in recommending that a single, statewide agency be delegated the responsibility and funding:

- to develop an ongoing inventory of instructional programs for the developmentally disabled;
- to train staffs and parents on educational strategies which can be applied to promote the development of developmentally disabled persons in all behavioral areas; and
- to train staff to have demonstrated competence in educational and behavioral programming, data collection and analysis, and design and implementation of individualized program plans. (p. 6)

To date, there has been little progress in Minnesota toward the implementation of the *CAIR* recommendations relating to training. This has been a common experience in many other states as well. The development of task analysis, standard job descriptions, training curriculums, and career ladders have been desired by the many actors in the field of developmental disabilities, but these tasks have not been accomplished because "it wasn't anybody's job" (Provencal, in Apolloni et al., 1980, p. 29).

Another barrier to progress has been turf protection. "Governmental agencies, private agencies, unions, and professional organizations all agree with advocacy groups that there is a need for better services . . .; however, there is little agreement as how to bring it about" (New Careers Training Laboratory, 1979, p. 5).

One of the many problems that emerges when existing living arrangements are assessed against the principles and standards of normalization and civil rights guarantees is that "there has not been a commitment to systematic staff development that would assure the availability of sufficient knowledgeable and competent service workers (including caregivers) fully grounded in program philosophy and progressively advancing toward career objectives with state sanctions" (Apolloni et al., 1980, p. 10). Issues such as licensure and certification at the professional level and some type of competency-based credentialing at the direct care level can address in a global fashion the question of staff abilities. The continual updating of skills and knowledge is essential for all staff if new and more advanced teaching and training technologies are to be incorporated into the day-to-day services.

An immediate challenge called for by those in the training field (Jones, 1979; Pickett, 1980; Ramseyer, 1980; Wray, 1980) is the heightening of and the full recognition of the status of the paraprofessional. The traditional perceptions of the roles, functions, and

responsibilities of paraprofessionals as being custodial, housekeeping, and clerical must be enhanced not only by equipping them with the knowledge and skills required to do their jobs better but by providing them with commensurate pay and opportunities for advancement through viable career ladders.

In recent years, a nationwide system for voluntary registration and certification of mental health/human service workers has been promoted and developed by the Paraprofessional Manpower Branch of the National Institute of Mental Health. From this effort, a new organization has been created--the National Commission for Human Service Workers, located in Atlanta, Georgia. Registration as a mental health/human service worker provides a simple and inexpensive procedure for large numbers of workers to achieve basic occupational identity. A person who has had at least 30 hours of training, 3 months of experience, and pays a \$15 fee can be registered as a human service worker. Certification is a voluntary, competency-based system designed to assess and certify generic mental health/human service competence. This national certification process involves three assessments: (1) an objective multiple choice test; (2) a clinical simulation exercise; and (3) the assembly of a portfolio documenting the worker's competence (National Commission of Human Service Workers, 1982). This national system of registration and certification may serve as a base upon which to build other specialization requirements here in Minnesota.

C. Training Issues Relating to Staff Turnover

Recruitment, retention, and training of staff have been cited as pervasive problems plaguing administrators of both public and nongovernmental, community-based residential facilities alike (Bruininks, Kudla, Wieck, & Hauber, 1980). Direct care staff, who make up the largest portion of the budgets in these facilities, earn well over \$1 billion of state and federal monies in wages (Bruininks, Hauber, & Kudla, 1979). Many thousands more are spent in recruiting, training, and placing employees.

Turnover among direct care staff has been documented as alarmingly high, occurring at the rate of over 50% (national mean annual rate) in nonpublic facilities and over 30% in public facilities (Lakin, 1981).

Costs for replacing personnel, providing training alone, have been estimated at \$1,500 per person in public institutions in Tennessee (Zaharia & Baumeister, 1978) to \$3,000 per person in Massachusetts (Massachusetts Manpower Services Council, 1978). Although replacement costs were found to be lower in community-based residential programs, from \$200 to \$500 per person (George, 1980), the cumulative effects in terms of precious dollars, administrative overhead, wasted time and effort, and most importantly, the resulting deterioration of the quality of care provided clients, presents a major challenge and

threat to the ongoing success of these programs. It becomes evident that millions of dollars could be saved/rechanneled by reducing the high turnover among direct care staff alone (Lakin, 1980).

The solutions to staff turnover may not be very complex; Hitzing (Apolloni et al., 1980), from the Eastern Nebraska Community Office of Retardation (ENCOR) suggested one alternative approach. "The biggest reason for staff turnover may be that people don't understand what they're getting into. One important aspect of training for ENCOR's residential staff is an early session where staff members talk about what it is like to be a residential manager. ENCOR has learned to be honest early about what new staff people are getting into and that has helped reduce staff turnover later" (p. 91).

D. Training Issues Relating to Adult Education

Freiberg (1979) probably best described the current state of the art relating to the quality of nonformal training programs being provided in almost every segment of human services:

Many inservice programs lack a conceptual framework. Some are not programs at all but a series of disparate experiences. Local programs are too often based on a cafeteria approach Learning theories and research are ignored in conceptualizing the design, development and implementation of such programs . . . (Thus,) determining the effectiveness of piecemeal programs without the benefit of a systematic design within a rigorous conceptual framework becomes a futile exercise. (p. 8)

There is much to be gained by turning to the growing knowledge base in adult education and asking questions such as "How do adults learn?" Adult learning is premised on at least four crucial assumptions. As individuals mature: (1) their self-concept moves from one of being a dependent personality toward being a self-directed human being; (2) they accumulate a growing reservoir of experience that becomes an increasingly rich resource for learning; (3) their readiness to learning becomes oriented increasingly to the developmental tasks of their social roles; and (4) their time perspective changes from one of postponed applications of knowledge to immediacy of application, and accordingly, their orientation toward learning shifts from one of subject-centeredness to one of performance-centeredness (Kidd, 1973).

Implications from these basic assumptions toward practice in adult education are that:

- There is a need to build into training programs some preparatory experiences that will help adults to get a new way of perceiving their roles as learners and to gain some new skills in self-directed learning. Poor

self-concepts resulting from earlier classroom experiences with failure and disrespect must be replaced with an attitude that learning can be enjoyable as well as successful.

- Learning environments must be conducive to adult learning. "One can sense rather quickly on entering an institution (of higher learning), for example, whether it cares more about people or things, whether it is concerned about the feelings and welfare of individuals or herds them through like cattle, and whether it views adults as dependent personalities or self-directed human beings." (Knowles, 1980, p. 47)
- Adult learners must be intimately involved in diagnosing their own needs for learning and in measuring their own progress toward achieving desired competencies. Creative techniques such as critical incidents, sociodrama, computerized games, laboratory methods, and simulation exercises can be used for self-evaluation. Adult learners must be involved in planning and conducting their learning experiences. People feel committed to a decision if they have participated in making it. Knowles stated that, "Because adults define themselves largely by their experiences, they have a deep investment in its value. And so when they find themselves in situations in which their experience is not being used, or its worth is minimized, it is not just their experience that is being rejected--they feel rejected as persons." (p. 50)
- Evaluation, thus, becomes a process of rediagnosing learning needs by the adult learner and not an act by the teacher grading the student.

Fraiberg (1979) also astutely noted that, "No educational program can be better than those who design and deliver it, yet little attention is paid to training the trainers" (p. 7). Knowles (1980) maintained that in recent years adult educators are referred to increasingly in the literature as "change agents," as performing "helping roles" (p. 37). Their function has moved away from being remedial toward developmental--toward helping adult learners to achieve their full potential.

These terms and phrases are all too familiar to those of us who practice in the field of developmental disabilities, for they have been a part of our vocabulary for years. However, they are healthy reminders that we should be practicing what we preach--to apply the same principles of learning to ourselves and our own development. In this sense, states Knowles, "It is no longer functional to define education as a process of transmitting what is known; it must be defined

as a life-long process of continuing inquiry. And so the most important learning of all--for both children and adults--is learning how to learn, the skills of self-directed inquiry . . . to create an educative society" (p. 38).

Resources for learning are everywhere in our environment and people can get help in their learning from many other persons. "The modern task of education, therefore," says Knowles, "becomes one of finding new ways to link learners with learning resources" (p. 20).

E. Training and Staff Development in Other States

Several states in the U.S. and provinces in Canada have taken aggressive action to address their personnel training needs (New Careers Training Laboratory, 1979). States in this country include: Arkansas, Indiana, Michigan, New York, Oregon, Pennsylvania, South Dakota, Nebraska, and Utah. Details about Michigan and Nebraska are described below.

Michigan: Training has been made mandatory at the entry level and for ongoing in-service training (Provencal, in Apolloni et al., 1980, p. 32; Leismer, 1981, p. 2).

Staff in group homes were required to have 120 hours of preservice and 80 hours of in-service annually. Staff in state residential facilities were required to have 240 hours of preservice and 140 hours of in-service training annually. The Michigan State Department of Mental Health developed a training model to (re)train direct care workers in state facilities. Training was linked to promotion. Employees enter as a trainee or as a direct care staff or supervisor. Curriculum included:

Phase I: 120 hours core curriculum.

Phase II: 290 hours OJT to develop competencies for service delivery.

Phase III: 80 hours orientation to specific facility.

Phase IV: academic credit.

The Macomb-Oakland Regional Center (MORC) was successful in recruiting and training foster parents with 35 new homes for 1 to 3 residents at the cost of \$34 per diem in 1981 (Leismer, 1981).

Of particular note, MORC had adopted the philosophy that the agency should not have to recruit personnel. "If the experience is esteemed as being attractive, they come to us" (Provencal, in Apolloni et al., p. 25). "We select foster parents and group home personnel who are not only well-qualified and interested in working with people who

have special needs, but who are also committed to learning themselves. In this regard, we have found that the desire to increase knowledge of theories, trends, and techniques is a far better indicator of foster parent effectiveness than years as a parent, educational degree, or years of being in the field" (Provencal, op. cit., pp. 27 and 28).

Nebraska: To comply with the Consent Agreement in *Horacek v. Exon*, the Nebraska Retardation Panel appointed a Task Force on Manpower Development in September, 1978. A statewide humanpower training model was developed for persons working in community residential facilities (Nebraska Mental Retardation Panel, 1979). Uniform standards were applied throughout the state with the community college serving as the principal means of humanpower development. Five levels of training provided the framework for a career ladder: support staff, aides, technicians, professionals, managers, or teachers. One year of college was required for direct care staff, with salaries upgraded. Statewide credentialing was initiated.

Reflecting upon the training program at the Eastern Nebraska Community Office of Retardation (ENCOR), Hitzing (Apolloni et al., p. 89) spoke openly, "One important thing to understand is that although ENCOR has been viewed as providing exemplary residential service, it has never had an outstanding (staff) training program. In fact, I don't know of any community-based program in the United States that does. If there is one aspect of community service development of which we should be ashamed, it is training."

III. METHODOLOGY

In the fall of 1981, structured interviews were conducted with key informants representing 19 different agencies or organizations in Minnesota. The main criteria used for selecting an agency or organization was that they were providing nonformal training on a regular basis for personnel working in the field of developmental disabilities. The respondents were those who had the authority to speak on behalf of their respective agencies or organizations, such as the director, executive secretary, training unit supervisor, or staff trainer/coordinator.

The 19 agencies or organizations that comprised the selected sample for this study fall into four major classifications of training providers: (1) state agencies (N = 4); (2) professional organizations (N = 8); (3) community residential service providers (N = 3); and (4) continuing education (N = 4). The agencies/organizations included in this survey are:

State Agencies (N = 4):

- Special Education, Minnesota Department of Education;
- Technical Consultation and Training Section, Division of Health Systems, Minnesota Department of Health;

- Staff Development Office (St. Paul), Minnesota Department of Public Welfare; and
- Staff Development, Faribault State Hospital, Minnesota Department of Public Welfare.

Professional Organizations (N = 8):

- AAMD, American Association on Mental Deficiency (Minnesota Chapter);
- ARRM, Association of Residences for the Retarded in Minnesota;
- MDACC, Metropolitan Developmental Achievement Center Council;¹
- MARF, Minnesota Association of Rehabilitation Facilities;
- MNABA, Minnesota Association of Behavior Analysis;
- MAP, Minnesota Association of Private Residential Facilities for the Mentally Retarded;²
- MCEC, Minnesota Council for Exceptional Children; and
- MNDACA, Minnesota Developmental Achievement Center Association.

Community Residential Service Providers (N = 3):

- Olmsted Association for Retarded Citizens (ARC) Homes, Inc.;
- Portland Residence, Inc.; and
- REM, Inc., Robert E. Miller, Inc.

Continuing Education (N = 4):

- CCE, Center for Continuing Education, Rehabilitation Services Administration, Region V, c/o Multi Resource Centers, Inc.;
- Chronic Disease in Childhood Curriculum Development Project, Program in Maternal and Child Health, University of Minnesota;
- Continuing Education in Social Work, University of Minnesota; and
- Sister Kenny Institute, Research and Education Department, Abbott-Northwestern Hospital.

The findings in this study are based on a selected sample and do not attempt to identify or describe the universe of nonformal training activities. For example, this report includes only three community residential programs that provide on-site preservice and in-service training and does not include samples of other types of services, e.g., developmental

¹MDACC was dissolved July, 1982.

²MAP has now been merged with ARRM.

achievement centers, special education programs, or sheltered workshops. A separate survey of community residential services and developmental achievement centers regarding in-service training will be published in *Policy Analysis Paper No. 14*.

IV. RESULTS

The results section will be presented in the following order: (a) analysis of statements of purpose, (b) training needs assessments, (c) selection of training topics, (d) evaluation methods, (e) finances, (f) number of people trained, (g) number and locations of training events, (h) training content and trends, (i) coordination needs and barriers, and (j) suggestions for future training efforts.

A. Analysis of Statements of Purpose

The respondents were asked to provide written or verbal statements of purpose for their agency, organization, or particular training unit. All had the following common elements within their statements of purpose: (a) to work continuously toward the improvement of the quality of services offered to people with developmental disabilities, (b) to achieve such program enhancement by increasing the competency levels of personnel. The professional organizations included an additional dimension to the statement of purpose that pertained to morale building and the improvement of professional status or image.

B. Training Needs Assessments

Table 1 displays the methods used by the respondents in assessing the training needs of their audiences. As indicated, most of the methods used were informal (e.g., receiving verbal input from the participants or training committees) as opposed to conducting surveys, compiling data from program or personnel performance reviews, or using an external consultant/evaluator. Another common method for assessing training needs was the tabulation of suggestions received from evaluations of past training activities. Only one organization received input from the ASSET Project (Adjusting Service Systems to Evolving Therapies) (see p. 26), where members of the organization were formally tested according to competencies in a highly specialized area--aversive treatment.

Table 1
Methods of Assessing Training Needs
by Category of Agency/Organization
(Fall, 1981)

METHODS OF ASSESSING TRAINING NEEDS	T R A I N I N G P R O V I D E R S									
	State Agencies (N = 4)		Profes- sional Organi- zations (N = 8)		Community Residen- tial Service Providers (N = 3)		Contin- uing Educa- tion (N = 4)		Total (N = 19)	
	N %		N %		N %		N %		N %	
	<u>Informal Methods:</u>									
Input from staff, committees, or membership	4	100	8	100	3	100	4	100	19	100
From evaluations of past training activities	4	100	8	100	1	33	4	100	17	100
<u>Formal Methods:</u>										
Formal surveys	0	0	1	13	1	33	1	25	3	16
Licensing compli- ance reviews or monitoring reports	2	50	0	0	2	66	0	0	4	21
External evalua- tions/consultants	2	50	0	0	0	0	0	0	2	11

C. Selection of Training Topics

The respondents were asked, "Who selects the training topics?" Implied in this question is whether decisions are made by management and/or central staff or by means of a wider participation from those receiving the training (e.g., through board/committee participation). The responses are displayed in Table 2.

State agencies employ several methods for making their decisions. While management and staff make the final decisions, they depend upon input from advisory/planning committees. Professional organizations, on the other hand, usually do not have central staff and depend solely upon committee/board decision making.

Table 2
Authority for Selection of Training Content
and Methods by Category of Agency/Organization
(Fall, 1981)

CATEGORY OF AGENCY/ ORGANIZATION	DECISION MAKERS					
	Management and/or Staff		Board and/or Plan- ning Commit- tee		Train- ees	
	N	%	N	%	N	%
State Agencies (N = 4)	4	100	3	75	1	25
Professional Organiza- tions (N = 8)	0	0	7	86	1	13
Community Residential Service Providers (N = 3)	3	100	0	0	0	0
Continuing Education (N = 4)	3	75	0	0	2	50

Where the decisions are left to the choice of the trainees, it is usual for a group of trainees to request a particular topic, e.g., through continuing education or a state agency. Or, again, the trainees make the decisions when they are part of an organization that practices participatory management.

D. Evaluation Method

This question assessed how nonformal training activities were being evaluated. The respondents were presented with three levels by which training might be evaluated:

Level 1: feedback evaluation, usually provided in the form of a feedback sheet which elicits positive or negative reactions from the trainee about the training experience.

Level 2: learning evaluation, paper and pencil tests, work samples, or demonstrations that illustrate what principles, facts, or techniques have been learned.

Level 3: behavior change or transfer evaluation, which measures changes in work performance, learning retention, and learning transfer to the job situation once training has been completed. Measurement of behavior change is usually accomplished by self-ratings, follow-up surveys, or videotape recordings.

While all of the respondents used feedback evaluation (see Table 3), only a few (5 of 19, or 26%) measured what learning took place, or if learning was transferred to the job (1 of 19, or 5%).

Table 3
Methods Used to Evaluate Nonformal Training Activities
by the Selected Sample Agencies/Organizations^a
(Fall, 1981)

TRAINING PROVIDERS	METHODS OF EVALUATION				BEHAVIOR CHANGE OR LEARNING TRANSFER	
	Feedback		Learn- ing		N	%
	N	%	N	%		
State Agencies (N = 4)	4	100	2	50	0	0
Professional Organizations (N = 8)	8	100	0	0	0	0
Community Residential Service Providers (N = 3)	3	100	2	66	1	33
Continuing Education (N = 4)	4	100	1	24	0	0

^aMore than one response was permitted.

E. Expenditures on Nonformal Training

Respondents were asked to provide an estimate of the dollars expended for provision of nonformal training for 1981. Not all the agencies or organizations could provide these figures (see Table 4). In some cases, estimates were made since records were not kept separately for the developmental disability category. The total amount of money spent on nonformal training activities by these agencies was over \$4.5 million. There are no baseline figures available for comparison. Most respondents anticipated budget cuts due to state and national economic conditions.

Table 4
Expenditures on Nonformal Training by the Selected
Sample of Training Providers
(Fiscal Year 1981)

Training Providers	Expenditures (estimated)
State Agencies (N = 3 of 4)	\$ 430,330
Professional Organizations (N = 8)	79,300
Community Residential Service Providers (N = 3)	77,370
Continuing Education (N = 4)	3,923,000 ^a
TOTAL (N = 18 of 19)	\$4,510,000 ^b

^aThis figure is the total budget not
the amount allocated for developmen-
dal disabilities.

^bThis figure overestimates the total
amount spent on developmental disa-
bilities training (see footnote a).

F. Number of People Trained

Although requested, very few respondents were able to document the number of people who attended their training sessions, conferences, or seminars. Those individuals who did provide this information had kept excellent records, but these instances were relatively infrequent so that it became impractical to report the results of this question.

G. Number and Location of Training Events

A frequent complaint heard from personnel living outside of the Twin Cities has been that training events are never (or almost never) scheduled in their particular geographic location. The results of this question documents that such complaints are usually valid.

Among the 19 training providers surveyed, there were 15 agencies or organizations that served the entire state. Table 5 reflects that out of 263 training events sponsored by these 15 trainers, 57% were located in Region Eleven, the metropolitan, seven-county area of the state.

Table 5
Number and Location by Region of Nonformal Training Events
Sponsored by Training Providers Who Serve
Statewide Constituents
(Fiscal Year 1981)

Region	State Agencies (N = 3)		Profes- sional Organi- zations (N = 8)		Continuing Education (N = 4)		Total (N = 15)	
	N	%	N	%	N	%	N	%
One	4	4.0	0	0.0	0	0.0	4	2.0
Two	2	2.0	0	0.0	0	0.0	2	0.8
Three	4	4.0	3	4.0	0	0.0	7	3.0
Four	2	2.0	0	0.0	0	0.0	2	0.8
Five	9	8.0	4	5.0	0	0.0	13	5.0
Six E and W	12	11.0	0	0.0	0	0.0	12	5.0
Seven E and W	10	9.0	6	7.0	0	0.0	16	6.0
Eight	1	1.0	0	0.0	0	0.0	1	0.4
Nine	6	5.0	8	9.0	0	0.0	14	5.0
Ten	9	8.0	3	4.0	0	0.0	12	5.0
Eleven	20	19.0	62	71.0	69	100.0	151	57.0
LOCATION NOT REPORTED	29	27.0	0	0.0	0	0.0	29	10.0
TOTAL	108	100.0	86	100.0	69	100.0	263	100.0

When comparing the results among the different types of trainers, however, there are some major differences. State agencies scheduled the highest percentage of training events around the state, with only 19% of their events held in Region Eleven in fiscal year 1981. In the same year, eight professional organizations held 71% of their events in Region Eleven, and the four continuing education programs held all of their 69 events in Region Eleven.

It should be noted that the following agencies were excluded from this analysis, for they provide localized training by nature of their

geographic focus: Faribault State Hospital; REM, Inc.; Portland Residence; Metro DAC Council; and Olmsted ARC Group Homes.

H. Training Content and Trends

The key informants provided lists of topics and schedules of their nonformal training activities. A complete list was compiled for fiscal year 1981 and only a partial list for fiscal year 1982. The quantity of this information is surpassed only by the diversity of topics covered. Because of the volume of information collected about topics, only a sample of one organization's annual conference is displayed in Table 6 to illustrate the diversity.

One way of measuring and analyzing the content of nonformal training that took place in fiscal year 1981 is to examine the number of hours spent in actual training. Another approach is to note the frequency of topics that occurred among the various nonformal training programs in order to observe certain patterns or trends.

During fiscal year 1981, a total of 3,779 hours of training was provided by the 19 selected agencies/organizations (see Table 7).

The topics were categorized into four general content areas: (1) administration/management; (2) information exchange/issues; (3) human growth and development; and (4) treatment/training techniques. When comparing the number of hours spent in each of these general content areas, it appears that there is a fairly even distribution or coverage of all four content areas (see Table 7). There was a range from 646 hours in information exchange/issues to a high of 967 hours addressing treatment/training techniques. This even distribution is also noticeable among the four types of training providers.

Tables 8 and 9 display the topics that occurred most frequently among the training topics provided in fiscal year 1981 and fiscal year 1982, respectively. The greatest number of hours, collective among the training providers, was in the area of behavior management and behavior problems which also included the management of aggressive behavior and self-protection for staff. A total of 264 hours was provided on behavior management in fiscal year 1981 and 63 hours in fiscal year 1982. (NOTE: the data collected for fiscal year 1982 was not complete.) Table 10 compares the number of hours on behavior management by category of training providers in relation to the total number of hours of training provided. Professional organizations devoted 24% of their total training hours to behavior management.

Repetition of topics suggests certain trends. Some were indicative of the times we live in, such as the topic of "cut-back management" in Table 9 (fiscal year 1982). Other topics, e.g., abuse and neglect of the vulnerable adult, were in response to newly enacted legislation. Other topics with highest frequencies may reflect the nature of the needs of the clientele, such as human sexuality, the

Table 6
 Sample of One Professional Organization's Annual Conference Topics
 Minnesota Developmental Achievement Center Association
 (Fiscal Year 1981)

General Content Areas	Conference Topics
Administration/Management	Program Promotion Interagency Planning for Infants and Toddlers Program Evaluation Personnel Policy and Performance Appraisal Fringe Benefits Survey Report Board and Staff Insurance Function of Board under Community Social Services Act Board/Staff Relations
Information Exchange/Issues	New Staff Orientation Mentally Retarded Offender/Victim Camping Programs Model Infant Stimulation Program P.L. 94-142, Educational Rights Advocacy, Legal Rights
Human Growth and Development	Genetic Counseling Sensory Stimulation Assessment Spiritual Needs Seizures and Medication
Treatment/Training Techniques	Music Methods Recreational Activities Practical Work Activities Management of Diabetic, Mentally Retarded Person Counseling Mentally Retarded Person Swimming and Skating Improving Speech Student Confrontation Avoidance Technique Relaxation Therapy Techniques Puppetry
Other Topics	Role of a Secretary Proofreading Skills

Table 7
Minimum Hours of Nonformal Training in General Content Areas
as Provided by the Selected Sample Training Providers
(Fiscal Year 1981)

TRAINING PROVIDERS	MINIMUM HOURS OF TRAINING PROVIDED IN GENERAL CONTENT AREAS					Total
	Administration/ Management	Information Exchange/ Issues	Human Growth and Development	Treatment/ Training Techniques	Other	
State Agencies (N = 4)	296	330	368	404	393	1,791
Professional Organizations (N = 8)	151	117	100	189	26	583
Community Residential Service Providers (N = 3)	42	89	77	83	0	291
Continuing Education (N = 4)	<u>283</u>	<u>160</u>	<u>364</u>	<u>291</u>	<u>16</u>	<u>1,114</u>
TOTAL (N = 19)	772	696	909	967	435	3,779

NOTE: Minimum number of hours represents a base number of hours of training made available, e.g., some courses or workshops may have been presented more than once and in various locations but were not reported in total hours.

Table 8
Frequency of Training Topics by Training Providers
(Fiscal Year 1981)

GENERAL CONTENT AREA	HOURS OF TRAINING PROVIDED BY TRAINING PROVIDERS				
	State Agencies (N = 4)	Professional Organizations (N = 8)	Community Residential Service Providers (N = 3)	Continuing Education (N = 4)	Total (N = 19)
<u>Administration/Management:</u>					
• Computer Technology	46	8	0	0	54
• Time Management	10	23	4	8	45
• Staff Burnout/Job Stress	0	16	4	16	36
<u>Information Exchange/Issues:</u>					
• Assertiveness Training (staff)	12	9	2	24	47
• Abuse/Neglect (child and vulnerable adult)	20	18	0	0	38
• Legal Rights/Advocacy	0	10	3	16	19
• Aversive Treatment (DPW Rule 39)	0	3	0	16	19
<u>Human Growth and Development:</u>					
• Communication Disorders	46	23	0	24	93
• Human Sexuality	38	10	0	32	80
• Early Childhood Devel- opment	52	26	0	0	78
• MR/MI and Mental Health	8	2	2	8	20
<u>Treatment Techniques:</u>					
• Behavior Management and Behavior Problems	32	140	29	64	265
• Least Restrictive Pro- gramming	0	21	4	0	25
• Relaxation Therapy	1	4	0	0	5

Table 9
Frequency of Training Topics by Training Providers
(Fiscal Year 1982)^a

GENERAL CONTENT AREA	HOURS OF TRAINING PROVIDED BY TRAINING PROVIDERS				
	State Agencies (N = 4)	Professional Organizations (N = 8)	Community Residential Service Providers (N = 3)	Continuing Education (N = 4)	Total (N = 19)
<u>Administration/Management:</u>					
• Cut Back Management	0	22	0	16	38
• Person/Professional Growth	8	15	0	8	31
• Assertiveness Training	8	0	8	0	16
• Computer Technology	8	5	0	0	13
• Staff Burnout/Job Stress	8	0	0	0	8
• Leadership Management	0	7	0	0	7
<u>Information Exchange/Issues:</u>					
• MR/MI and Mental Health	12	5	0	16	33
• Laws and Regulations	9	4	0	0	13
• Aversive Treatment (DPW Rule 39)	0	12	0	0	12
• Abuse/Neglect (child and vulnerable adult)	0	0	0	8	8
• Legal Rights, Advocacy and Ethical Issues	0	0	2	4	6
<u>Human Growth and Development:</u>					
• Communication Disorders	0	13	0	0	13
• Human Relations/Communi- cation	0	12	0	0	12
• Early Childhood	0	9	0	0	9
• Human Sexuality	0	7	0	0	7
• Self-Concept	0	4	0	2	6
<u>Treatment Techniques:</u>					
• Behavior Management and Behavior Problems	6	57	0	0	63

^a Based on partial data available.

Table 10
Comparison between Number of Hours of Nonformal Training
Relating to Behavior Management and/or Behavior
Problems and Total Training Hours Provided
by the Selected Agencies/Organizations
(Fiscal Year 1981)

Training Providers	Total Training Hours Provided	Number of Hours/ Behavior Management	Percent
State Agencies (N = 4)	1,791	32	2
Professional Organiza- tions (N = 8)	583	140	24
Community Residential Service Providers (N = 3)	291	29	9
Continuing Education (N = 4)	1,114	64	6

dual diagnosis of mental retardation with mental illness, communica-
tion disorders, and relaxation therapy.

I. Coordination Needs and Barriers

In response to the question of what barriers exist that prevent bet-
ter coordination of training efforts between agencies and organiza-
tions, the respondents indicated that such barriers were either
financial or organizational (bureaucratic):¹

Financial Barriers:

- "competition for funds among the various agencies
or organizations."
- "money and resources." (2 responses)
- "money flows from diverse channels."
- "geographic distances, especially in Northern Min-
nesota. It's too expensive to transport and house
staff into the Metro Area, where many of the train-
ing opportunities occur."
- "many administrators don't see training as a good
investment."

¹Each of the responses occurred once except where noted in parentheses.

Organizational/Bureaucratic Barriers:

- "different philosophies among the various organizations."
- "there is a natural tendency to 'do our own thing.'"
- "turf/territorial protection." (5 responses)
- "specialized interests, every organization has own needs."
- "fear of losing agency/organization identity."
- "lack of communication, poor dissemination of information." (4 responses)
- "awareness and time."
- "heterogeneity of audiences and their specialized needs (e.g., the recent legislative changes regarding certification requirements for school nurses and for early childhood educators by 1982 and 1985, respectively.)"
- "narrow eligibility criteria in federal programs, e.g., Title XX."

J. Suggestions for Future Training Efforts

The key informants were asked to list what topics or concerns they had regarding future training needs. Their comments, as arranged after classification, were as follows:¹

Administration/Management:

- "cost effectiveness, cost containment, cutback management." (4 responses)
- "addressing the needs of the local community--a process of discovering and utilizing/modifying local resources."
- "funding--who's going to pay for services?"
- "licensing."
- "management techniques/skills." (2 responses)
- "how to relate to the business community."
- "work activity programs."

Emerging Issues and/or Need for More Information Dissemination:

- "handicapped awareness, human rights, and advocacy." (5 responses)
- "status of services to physically handicapped (e.g., Minnesota is serving only 20%, educationally)."
- "status of state and federal law (and regulations), especially in the area of special education."
- "legal issues." (2 responses)
- "Vulnerable Adult Protection Act and the protection of staff."

¹Each of the responses occurred once except where noted in parentheses.

Treatment Techniques:

- "least restrictive programming."
- "behavior management technology." (2 responses)
- "behavior problems."

Methods of Training:

- "there is a great need to teach/refresh presenters in presentation skills."
- "paraprofessional training is not well-developed yet."
- "technical information should be made available on short notice, almost like custom designed programs for small groups."
- "there is a need to develop 'canned orientation presentations' on audio-visual media (e.g., introduction to mental retardation, behavior management techniques), which are inexpensive, easy to use and can be self-taught."

V. DISCUSSION

This study was an attempt to document and describe nonformal training activities for personnel working in the field of developmental disabilities in Minnesota. Nonformal training, in essence, was defined as adult education experiences that take place outside of the formal education sector, e.g., conferences, workshops, seminars, in-service training, or courses.

On a positive scale, this study did document that people, generally, are motivated to continue their education throughout their adult lives. Although this study could not document the exact numbers because accurate counts were not usually collected, it is evident that literally thousands of people regularly participate in hundreds of training events taking place throughout the state each year, just in the specialized area of developmental disabilities alone.

Yet, while millions of dollars are invested in nonformal training activities, there are few tangible results: (a) most nonformal training events are not designed to meet individual needs and competencies desired; (b) methods of evaluating training do not measure what learning has occurred, or whether or not new knowledge brought about change in work performance; (c) most nonformal training activities do not offer continuing education credits, and where credits are given, they cannot be applied toward career advancement because there are few career ladders provided.

Among the 19 agencies and organizations contacted in the survey, all agreed that there was a need for coordination/collaboration in the area of training. Their responses to the last question in the survey, "How

might training efforts be better coordinated in Minnesota?" serve not only as summary of stated needs but also provide some concrete ideas for immediate steps that could be taken. Comments by the respondents as to how training efforts might be better coordinated in Minnesota reflected three general areas for improvement: (1) communications/sharing of information, (2) training methods, and (3) interagency coordination. Their suggestions are listed below:¹

Communication/Information Sharing:

- "hold interagency/organizational meetings for leaders to share information." (3 responses)
- "provide a clearinghouse for dates of events, topics, and for the dissemination of information." (3 responses)
- "in an information clearinghouse, have information regarding higher education/continuing education opportunities by location."
- "distribute detailed outlines of subjects in seminars, workshops, and conferences in advance." (2 responses)
- "catalogue/list available speakers, educational and training resources."
- "compile evaluations of past training events and audience focus."
- "make better use of computer and word processing technology."
- "there is a need for a central, current mailing list--who to send information to." (2 responses)

Coordination of Training Methods:

- "more use of video taped lectures."
- "match specific needs with variety of facility types and level of staff."
- "coordinate higher education around development incentives."
- "on-the-job observation, evaluation, and training is needed."
- "encourage multi-disciplinary interaction and learning opportunities."
- "provide central office that would conduct training needs assessments, staff evaluation, and provide technical assistance."

Other Training Resources in Minnesota Worth Noting

It was a common experience by the investigators in this study to frequently discover training resources that were already in place or were

¹Each of the responses occurred once except where noted in parentheses.

in early stages of development. Such resources may be helpful in future efforts to coordinate and develop comprehensive training programs in Minnesota. Such resources would include:

ASSET Training Project. The acronym "ASSET" refers to Adjusting Service Systems to Evolving Therapies. This cooperative program between the Minnesota Learning Center (Brainerd), the St. Cloud State University, and Mankato State University is a computer-assisted format for testing and training of people in the use of aversive treatment techniques.

Center for Early Education and Development (CEED), University of Minnesota. This center has been highly successful in sponsoring an annual Minnesota Round Table in Early Education, with emphasis on interdisciplinary discussions about applying research knowledge to practice.

Central Conference of University Training Programs in Developmental Disabilities. This has been primarily a media exchange effort using videotape and telephone conference call discussions among 14 University Affiliated Facilities in the Upper Midwest. The Central Conference Agency in Minnesota has been the Child Development Section, St. Paul-Ramsey Medical Center/University of Minnesota.

Government Training Service. Established under the joint powers authority, this is a public organization representing the cooperative efforts of seven governmental units and instrumentalities. Management, training, and consultation are offered to public employees, officials, and employers in the state of Minnesota. This agency is currently under contract with the Department of Energy, Planning and Development to conduct the Developmental Disabilities Training Project, under a grant from the McKnight Foundation.

Internal Task Force on Inservice and Preservice Training. The Minnesota Department of Education provides this guidance.

Joint Liaison Committee. Operating out of the Division of Vocational Rehabilitation, Department of Economic Security, this committee has served as the communication link between several state agencies and professional trainers in the field of rehabilitation since 1969.

Minnesota Association for Severely Handicapped (MNASH). This group was formed in October, 1981, and has been in the process of affiliating with the national organization, The Association for Severely Handicapped (TASH).

Minnesota Training Consortium. From an office in the Range Center in Chisholm, this newly formed group will be attempting

to coordinate training efforts and resources for personnel working in the field of developmental disabilities.

Southern Minnesota Chapter of American Society for Training and Development (ASTD). This is a national professional society of more than 15,000 persons responsible for the training and development of today's work force. These individuals design and administer training and management programs in business, industry, education, government, and service organizations.

The above listing is not exhaustive and apologies are offered to others who may have been unintentionally omitted.

V. REFERENCES

- Apolloni, T., Cappuccilli, J., & Cooke, T. P. (Eds.). Achievements in residential services for persons with disabilities; toward excellence. Baltimore: University Park Press, 1980.
- Benson, F. A. M., Hitzing, W., & Kozlowski, R. (Eds.). Linking service and training systems in the 1980's; report on a conference on service systems and manpower issues. Columbus, Ohio: The Ohio State University, December 9-10, 1980.
- Bergevin, P., Morris, D., & Smith, R. Adult education procedures; a handbook of tested patterns for effective participation. New York: Seabury Press, 1963.
- Bilovsky, D. & Matson, J. Community colleges and the developmentally disabled; training models for direct care personnel. Washington, DC: American Association of Community and Junior Colleges, 1977.
- Bruininks, R. H., Hauber, F. A., & Kudla, M. J. National survey of community residential facilities: A profile of facilities and residents in 1977. Minneapolis: Department of Psychoeducational Studies, University of Minnesota, 1979.
- Bruininks, R. H., Kudla, M., Wieck, C., & Hauber, F. Management problems in community residential facilities. Mental Retardation, 1980, 18(3), 125-130.
- Elder, J. O. & Magrab, P. R. (Eds.). Coordinating services to handicapped children; a handbook for interagency collaboration. Baltimore: Paul H. Brooks, 1980.
- Elder, J. O. & Magrab, P. R. (Eds.). Planning for services to handicapped persons; community, education, health. Baltimore: Paul H. Brooks, 1979.
- Faison, K. Working plan for coordinated training services for direct-service

staff in community based programs for developmentally disabled persons in Nebraska. Omaha, Nebraska: The University of Nebraska, 1979.

Fiorelli, J. S. (Ed.). A curricular model for preservice training of alternative living arrangement direct service personnel. Philadelphia, Pennsylvania: Temple University, October, 1979.

Fiorelli, J. S., Heverly, M. A., & Conroy, J. W. Manpower issues in community-based alternative living arrangements: Reflections on a statewide inventory in Pennsylvania. Philadelphia, Pennsylvania: Temple University, 1979.

Fiorelli, J. S., Margolis, H., Heverly, M. A., Keating, D. J., & Green, D. Developing a comprehensive training program for direct service personnel providing community based residential services to developmentally disabled persons. Philadelphia, Pennsylvania: Temple University, 1979.

Freiberg, H. J. & Houston, W. R. Perpetual motion, blindman's bluff, and in-service education. Journal of Teacher Education, 1979, XXX(1), 7-9.

George, M. J. A statewide study of employee turnover in community residential facilities for developmentally disabled persons (unpublished doctoral dissertation, George Peabody College for Teachers), 1980.

Handley, E. E. & Murphy, C. Funding for training: A survey of resources to financially support staff development programs for developmental disabilities personnel. Ann Arbor, Michigan: Michigan University, 1978.

Jones, W. E. Communitization: An alternative approach to social and service reform. New York: National Education Center for Paraprofessionals in Mental Health, April, 1979.

Kelly, P. & Harliceck, L. A statewide network for training special education paraprofessionals. Exceptional Children, April, 1982, 48(6), 535-536.

Kidd, J. R. How adults learn. New York: Association Press, 1973.

Knowles, M. S. The modern practice of adult education; from pedagogy to andragogy. Chicago: Association Press, 1980.

Koplik, K. A survey of cooperative education programs between institutions of higher education and residential facilities for the mentally retarded. Education on Training of the Mentally Retarded, December, 1976, 11(4), 347-351.

Lakin, K. C. & Bruininks, R. H. Occupational stability of direct-care staff of residential facilities for mentally retarded people. Minneapolis: Department of Psychoeducational Studies, University of Minnesota, 1981.

Leismer, J. Experiences of Macomb-Oakland Regional Center, Michigan. Presentation at symposium of Minnesota Developmental Disabilities Program. St. Paul, July 30-31, 1981.

- Leismer, J. Prevention of institutional admissions and returns: Especially those due to client behavioral difficulties (unpublished paper), July 29, 1981.
- Linton, T. E. Towards a national mental retardation manpower model for Canada. Chicago: Illinois University, 1971.
- Massachusetts State Manpower Services Council. Department of mental health on-the-job training project. Boston: Department of Manpower Development, 1978.
- Minnesota Developmental Disabilities Program Office. CAIR: Community alternatives and institutional reform, planning alternatives for the developmentally disabled individuals. St. Paul: Minnesota State Planning Agency, 1975.
- Minnesota Developmental Disabilities Program Office. Policy analysis paper no. 10: Admissions/readmissions to state hospitals--the behavior problem issue. St. Paul: Department of Energy, Planning and Development, April, 1982.
- Moore, E. The education of the paraprofessional. Education and Training of the Mentally Retarded, October, 1977, 296-303.
- National Commission for Human Service Workers. Registration and certification of human service workers. Atlanta, Georgia: Author, 1982.
- National Institute on Mental Retardation. National mental retardation training model. Ontario, Canada: Author, 1972.
- Nebraska Mental Retardation Panel. A statewide manpower model; report of the task force on manpower development. Omaha, Nebraska: Office of Mental Retardation, 1979.
- New Careers Training Laboratory. Career ladders and a training model for the (re)training of direct service workers in community based programs for the developmentally disabled. New York: City University of New York, 1979.
- New Careers Training Laboratory. The utilization and training of paraprofessionals in special education: Present status and future prospect. New York: City University of New York, 1974.
- New Mexico University. A consumer's guide to personnel preparation programs: The training of paraprofessionals in special education and related fields. Albuquerque: Author, 1977.
- Nisonger Center. Linking service and training systems in the 1980s. Columbus: Ohio State University, 1981.
-

- Pfriem, D. C. A survey of inservice training needs. Minneapolis: REM, Inc., September, 1978.
- Pfriem, D. C. Description of duties: Local coordinator for inservice activities. Minneapolis: REM, Inc., 1979.
- Pfriem, D. C. Inservice training: A followup survey. Minneapolis: REM, Inc., August, 1979.
- Pfriem, D. C. Tinker-to-evers but no chance; staff training as a cooperative effort. Minneapolis: REM, Inc., May, 1980.
- Pfriem, D. C. Tinkering with evers' chances; the effects of facility-sponsored career development intervention. Paper presented at the annual meeting of the American Association on Mental Deficiency. Detroit, May, 1981.
- Pickett, A. L. Roles of paraprofessionals in schools. Education Unlimited, February, 1980, 6-7.
- Pickett, A. L. The training of paraprofessionals in special education: Results of a survey of institutions of higher education and descriptions of training programs. New York: City University of New York, 1977.
- Pickett, A. L. The utilization and training of paraprofessionals in special education: Results of a survey of state directors of special education and descriptions of training programs. New York: City University of New York, 1977.
- Ramseyer, G. I. Perceived roles of paraprofessionals in special education settings (unpublished doctoral dissertation), University of Michigan, 1980.
- Task Force on Manpower Development of the Nebraska Mental Retardation Panel. A statewide manpower model; report of the task force on manpower development of the Nebraska Mental Retardation Panel. Lincoln, Nebraska: Nebraska Mental Retardation Panel, January 16, 1979.
- Texas Department of Mental Health and Mental Retardation. Task inventory for direct care paraprofessionals in Texas Department of Mental Health and Mental Retardation, state hospitals, state schools and community centers. Austin, Texas: Author (Circa 1980).
- U.S. Department of Health, Education & Welfare, Region V. Conference proceedings: Skills assessment, training and evaluation of personnel serving developmentally disabled individuals. Ann Arbor: Michigan University, June 23-29, 1979.
- Welsch V. Noot, 4-72 Civil 451 (D. Minn., Sept. 15, 1980).
- White, R. (Ed.). Mental health technician training; staff developers manual. Indianapolis: Indiana University Developmental Training Center (Circa 1980).

- Wray, L. D. Social, political, and cultural challenges to behavioral programs in the community. In G. L. Martin & J. G. Osborne (Eds.), Helping in the Community: Behavioral Applications. New York: Plenum, 1980.
- Zaharia, E. S. & Baumeister, A. A. Estimated position replacement costs for technician personnel in a state's public facilities. Mental Retardation, 1978, 16, 131-134.
- Ziarnik, J. Training staff in community-based facilities; a comprehensive model and its implementation (unpublished manuscript), University of South Dakota (Circa 1980).
- Ziarnik, J., Mauldin, J. E., & Rudrud, E. H. A philosophical foundation for staff training and its implications for service delivery; the proactive/reactive concept (unpublished manuscript), University of South Dakota (Circa 1980).

