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Katherine Josephine Inge

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A National survey of Occupational Therapists in the Public Schools: An
Assessment of Current Practice, Attitudes, and Training Needs Regarding the
Transition Process for Students with Severe Disabilities


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A NATIONAL SURVEY OF OCCUPATIONAL THERAPISTS
IN THE PUBLIC SCHOOLS: AN ASSESSMENT OF CURRENT PRACTICE,
ATTITUDES, AND TRAINING NEEDS REGARDING THE TRANSITION
PROCESS FOR STUDENTS WITH
SEVERE DISABILITIES

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at Virginia Commonwealth University

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ABSTRACT

Title of Dissertation: A NATIONAL SURVEY OF OCCUPATIONAL THERAPISTS IN
THE PUBLIC SCHOOLS: AN ASSESSMENT OF CURRENT
PRACTICE, ATTITUDES, AND TRAINING NEEDS
REGARDING THE TRANSITION PROCESS FOR STUDENTS
WITH SEVERE DISABILITIES.

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Because occupational therapy involvement in transition planning is a relatively new area, little was known about the characteristics of school-based therapists who serve students in this age group. The purpose of this study was to determine their current level of participation in the transition process, the roles that therapists identified for themselves in this process, their attitudes towards best practices for serving students ages 14 - 22, and occupational therapists' future training needs if they are to participate fully in the national transition initiative. A survey was mailed to 1,000 therapists on the American Occupational Therapy Associations Direct Mail List for School-Based Practice. A total of 755 surveys were returned representing a 76% return rate.

The results of this dissertation indicate that occupational therapists are minimally involved in the national transition initiative for students ages 14 - 22. Four hundred and sixty-five therapists (61.6 percent) indicated that they did not provide services to transition-age

students during the 1993-94 school year. Of the 290 respondents who reported that they served these students, the majority indicated that their caseloads consisted primarily of students under 13 years of age. In addition, therapists reported minimal involvement in community-based instruction activities (e.g., evaluating students' needs in community sites, analyzing or modifying community jobs for students' paid employment, providing occupational therapy services for daily living tasks in community environments). Finally, occupational therapists reported that they do not fully participate in the transition team process. However, the findings from this dissertation seem to indicate that occupational therapists' inability to attend team meetings, failure to discuss and develop students' goals in collaborative teams, limited time to train other team members, and failure to participate in community-based instruction, in some instances, may be beyond the control of the individual therapists. Specifically, therapists expressed very supportive and positive attitudes toward many best practices for transition.

Statistically significant findings also were found between therapists' attitudes towards best practices for transition and several work-related variables for school-based practice. Occupational therapists who indicated that they spent the majority of their time teaching other team members to integrate occupational therapy techniques into students' daily activities expressed more positive attitudes toward transition best practices. Therapists who spend the majority of their work days in therapy rooms expressed less positive attitudes toward best practices. Therapists who indicated that they had low numbers of transition-age students on their caseloads also expressed less positive attitudes toward transition best practices. Therapists who reported being a member of the Association for Persons with Severe Handicaps or having read journal articles from this association expressed more positive attitudes toward transition best practices. Other variables such as educational background, length of employment in schools,

length of employment in other areas of practice, and employment relationship did not have a significant relationship with therapists' attitudes toward best practices for transition. The results of this dissertation provide important information for university personnel, the American Occupational Therapy Association, and school administrators for facilitating occupational therapists' involvement in the transition process.

CHAPTER I

Introduction

Students with disabilities were afforded access to a "free and appropriate" public education in 1975 with the Education for All Handicapped Children Act (P.L. 94-142). This legislation established that each student with a disability have an individualized educational program (I.E.P.) to meet her or his specific learning needs. The law also provided for "related services" for every student who required such support. P.L. 94-142 defined related services as "transportation and such developmental, corrective, and other supportive services as are required to assist a child to benefit from special education, and includes...occupational therapy" (Reg 300.13, p. 102:53).

The Education for All Handicapped Children Act also established that a student's education must be provided in the least restrictive environment (LRE), specifically, that they be educated to the "maximum extent appropriate" with children who are not handicapped. The law stipulated that separate classes or special schools "or other removal of handicapped children from the regular education environment, occurs only when the nature or severity of the handicap is such that education in regular classes with supplementary aids, and services cannot be achieved satisfactorily" (20 U.S.C. §1413[5], 1975).

The Education for Handicapped Children Amendments of 1983 (P.L. 98-199) included a section on Secondary Education and Transition Services (Wehman, Moon, Everson, Wood, & Barcus, 1988). The amendments authorized funds for research, training, and demonstration projects in the area of transition of learners from school to post-secondary environments. Spearheaded by Assistant Secretary of Education, Madeline Will (1984), the Office of Special

Education and Rehabilitative Services developed a conceptual transition model known as **"Bridges to Employment: The U.S. Department of Education's View of Transition."** P.L. 98-199 has served as a catalyst for recent legislative changes requiring transition services for students with disabilities (Everson, Barcus, Moon, & Morton, 1987). Secondary Education and Transition Services were renewed in the Education of the Handicapped Act Amendments (P.L. 99-457) of 1986.

The most recent reauthorization of The Education for Handicapped Children Act, P.L. 101-476, became law in September of 1990, and is commonly referred to as The Individuals with Disabilities Education Act (IDEA). P.L. 101-476 defined "transition services" as follows:

Transition services means a coordinated set of activities for a student, designed within an outcome oriented process, which promotes movement from school to post school activities, includes postsecondary education, vocational training, integrated employment, (including supported employment), continuing adult education, adult services, independent living, or community participation. The coordinated set of activities shall be based upon the individual student's needs taking into account the student's preferences and interests and shall include instruction, community experiences, development of employment and other postschool adult living objectives, and when appropriate acquisition of daily living skills and functional vocational evaluation (20 U.S.C. §1401 [a][19], 1990).

Prior to this legislation, transition services had never been defined. Although transition had been described within the special education process, it had never been defined in terms of

who should participate, when they should participate, and who would provide the services. P.L. 101-476 mandates transition services for students with severe disabilities to include community experiences, the development of employment, and other post-school adult living objectives. In addition, an individualized transition plan (ITP) must be developed for each student no later than age 16 and, in some cases, at age 14 or younger. Interagency responsibilities and linkages also must be included before the student graduates.

The IDEA resulted from the increased focus on efforts to facilitate the successful movement of youth with disabilities from school to adult settings. The IDEA requires local education agencies to include transition planning and implementation in the IEP process for all students with disabilities. Thus, for the first time, legislation spells out a requirement for providing "transition services" to support youth in their movement into post school settings.

Occupational therapy continues to be a related service under P.L. 101-476 for eligible students. Specifically, related services are defined by the IDEA as follows:

Transportation, and such developmental, corrective, and other supportive services (including speech pathology and audiology, psychological services, physical and occupational therapy, recreation, including therapeutic recreation and social work services, and medical and counseling services, including rehabilitation counseling, except that such medical services shall be for diagnostic and evaluation purposes only) as may be required to assist [a] child with a disability to benefit from special education, and includes the early identification and assessment of disabling conditions in children (20 U.S.C. §1401 [a][17]).

This definition was changed from the one appearing in P.L. 94-142 by substituting "recreation including therapeutic recreation and social work services," for "recreation" and by inserting "including rehabilitation counseling."

Statement of the Problem

The transition process has been legally mandated as "a coordinated set of activities for a student, designed within an outcome oriented process, which promotes movement from school to post school activities" (P.L. 101-476). This coordinated set of activities includes the provision of occupational therapy and other related services within the public school program as deemed necessary for students to benefit from their educational programs. Transition best practices include a) a collaborative team approach in which members function collectively to determine objectives for a student within life domains (e.g. community, leisure, vocational, and domestic); b) a community-referenced, functional, and age-appropriate curriculum; c) integrated related service delivery; and d) community-based instruction within non-school environments. Although occupational therapists have much to offer students of transition age, they have not been consistently involved in this process (Brolhier, Shepherd, & Flick, 1994). The degree to which students with severe disabilities will achieve transition outcomes, in part, is dependent on occupational therapists serving as collaborative team members and assisting in the design and implementation of student transition programs.

Public schools are second only to hospitals as the largest employer of occupational therapists (Royeen, 1986). However, many school-based therapists continue to rely on a medical model orientation to evaluate and provide services to students with severe disabilities. If occupational therapists want to continue to play a role in the public schools, they must delineate

the uniqueness of their services as they relate to the educational program (Royeen, 1988). Unfortunately, the roles and services of occupational therapists in schools are rarely clarified (Bundy, 1993). Therefore, the problem addressed by this study was the identification of occupational therapy roles in the transition process and the degree to which therapists are accepting of transition best practices.

Rationale for Study of the Problem

To date, no known studies have been conducted to determine the roles that occupational therapists play in the transition process or to assess their attitudes regarding integrating therapy services into transition programming for students with severe disabilities. Such information could be very useful. First, determining the roles that occupational therapists identify for themselves and assessing their attitudes toward participation in the transition process and best educational practices for students with severe disabilities could provide an indicator of the degree to which therapists are participating in the national transition initiative. Due to the unique needs of individuals with severe disabilities, it is imperative that therapists participate on collaborative transition teams and provide integrated therapy in order to facilitate successful student outcomes. Second, an assessment of self-reported training needs related to best educational practices and transition can provide useful information to programs that provide initial and continuing training for occupational therapists.

Statement of Purpose

The purpose of this study was to better understand, through a national survey, occupational therapists' roles in school-based practice. Specifically, the study assessed therapists' participation in transition planning, their attitudes toward transition best practices, and

their perceived training needs concerning integrating therapy services into the transition process for students with severe disabilities. The results of the study should prove helpful in the development of preservice and inservice training programs by school administrators, university faculty, and occupational therapy supervisors. In addition, the data generated should provide a foundation on which to build additional research in the area of developing collaborative transition teams for planning and implementing educational programs for students with severe disabilities.

Literature/Research Background

While there have been major strides towards successful transition for students with severe disabilities, the majority continue to be unemployed after they graduate. Wehman (1992) reported that less than 12% of all individuals placed in supported employment nationally are considered to have severe disabilities. In addition, Wehman reports that only 2% of the total placements included individuals with physical disabilities. Many follow-up studies of students with severe disabilities exiting the school system indicate that they leave only to join the ranks of those who are unemployed or underemployed (Brodsky, 1983; Halpern, 1990; Haring & Lovett, 1990; Wagner, 1993; Wehman, 1993; Wehman, Kregel, & Seyfarth, 1985).

Since 1985, SRI International of Menlo Park, California has conducted a National Longitudinal Transition Study of students in special education (Wagner, 1993). This project, conducted for the Office of Special Education Programs of the U.S. Department of Education, is gathering information concerning how well individuals with disabilities are being served under the Individuals with Disabilities Education Act (IDEA). Included in the study are more than 8,000 youth with disabilities. Results to date include the following:

Employment Outcomes

- Youth with disabilities do not achieve competitive employment at comparable levels to their nondisabled peers. ($p < .001$)
- 73% of those youth labeled multiply handicapped in the study were not employed when surveyed in 1987 or 1990. Of those who were employed, 10.2% lost employment during this time period.
- 50.3% of those youth labeled mentally retarded were not employed when surveyed in 1987 or 1990. Of those who were employed, 12.9% lost employment during this time period.
- 73.3% of those youth labeled orthopedically impaired were not employed when surveyed in 1987 or 1990. Of those who were employed, 5.6% lost employment during this time period.

Independent Living Outcomes

- Only 13.4% of those youth labeled multiply handicapped in the study were living independently 3-5 years post graduation.
- Only 23.7% of those youth labeled mentally retarded in the study were living independently 3-5 years post graduation.
- Only 38% of those youth labeled orthopedically impaired in the study were living independently 3-5 years post graduation (Wagner, 1993).

These findings reveal relatively poor transition outcomes for individuals with severe disabilities, indicating a need to identify services that facilitate successful post-school outcomes.

Several demonstration projects throughout the United States have demonstrated that individuals with severe disabilities are able to work given the needed supports and adaptations (Moon, Inge, Wehman, Brooke, & Barcus, 1990; Rusch, 1986; Sowers & Powers, 1991; Wehman & Kregel, 1985). From these programs, a description of "best practices" regarding school programs for students with severe disabilities has emerged (Inge & Wehman, 1993; McDonnell, Hardman, & Hightower, 1989; Pumpian, West, & Shepard, 1988a; Pumpian, West, & Shepard, 1988b; Renzaglia & Hutchins, 1988; Wehman, Moon et al., 1988). Some of these

practices include training students in community settings, identifying and training jobs and tasks that are reflective of the local job market, training work related skills, identifying adaptive strategies and instructional procedures to train students, providing training in real job settings, and reconceptualizing staff roles and organizational structures.

Asselin, Hanley-Maxwell, and Szymanski (1992) suggested that professionals in the school system and community must begin to provide services using a transdisciplinary model for successful transition from school to employment outcomes. The transdisciplinary model, commonly credited to Hutchison (1978), consists of a team of individuals from various disciplines including the teacher, related services personnel (occupational therapist, physical therapist, speech therapist, nurse, etc.), and family members. The team works together to design the student's IEP/ITP as he or she nears the time for transition from school to adult services. Implementation of the IEP/ITP requires team members to assume some of the responsibilities of other team members and to deliver services across traditional disciplinary boundaries.

Everson and Moon (1987) also suggested that the use of the transdisciplinary approach is critical during transition planning. They stated that without the appropriate related services, many students with severe disabilities will be unprepared for employment or independent living post graduation. Occupational therapists can play a crucial role as team members in the transition process, since they have a unique focus on purposeful activities (Brollier et al., 1994; Warren, 1986). For instance, occupational therapists have a great deal of knowledge that can facilitate a student's acquisition of functional skills. This may include task and environmental modifications, identification of assistive technology devices, assessment and modification for appropriate positioning, and assistance in teaching daily living skills (Brollier et al., 1994).

Clark (1979) stated that "the core of occupational therapy service delivery is the therapists' use of activity analysis and adaptation processes", and "the outcome of occupational therapy service delivery is determined by the client's mastery of tasks and relationships necessary to actively engage in play, work, and self-maintenance" (p. 580). In addition, the philosophical base of occupational therapy states that occupational therapy is "based on the belief that purposeful activity (occupation), including its interpersonal and environmental components, may be used to prevent and mediate dysfunction..."(American Occupational Therapy Association, 1979 p. 786). If the ultimate goal of occupational therapy is the optimum function of people in their daily living, leisure, and vocational skills (Van Deusen, 1990), then occupational therapists should participate in the transition process to facilitate successful post school outcomes for students with severe disabilities.

Compensatory strategies and assistive technology are other areas in which the occupational therapist has specialized skills (Brolhier et al., 1994; Royeen & Marsh, 1988). The identification of adaptive equipment may be critical for participation in functional daily living activities such as dressing and feeding. In addition, the occupational therapist can fabricate environmental and material modifications that can facilitate a student's adaptive functioning in work, play, and self-care (Inge, 1992; Inge & Shepherd, in press; York & Rainforth, 1991).

The American Occupational Therapy Association (AOTA, 1987) developed standards of practice for occupational therapists in the school system that included guidelines for transition services. These standards include the following:

The occupational therapist shall participate in providing transition services for students with special needs as they make the transition..from school to adult

roles (e.g. independent living, work, community participation)...The occupational therapist shall provide services to help the student effectively meet demands (self-care, physical, social, emotional, academic) within current and anticipated educational environments. The occupational therapist shall participate as a member of the multidisciplinary team in the development of an individualized transition plan to assist students with disabilities who are moving from school to adult roles that include employment, community living, and community recreation (p. 807).

The standards further specify that occupational therapists should complete functional community-referenced assessments and participate in transition planning and implementation of student goals through a cooperative team approach.

The Association for Persons with Severe Handicaps (TASH) also has developed a position statement on related services in the public school setting to include occupational therapy (TASH, 1986). Although the statement does not specifically address the roles of related services personnel in transition, it does recommend that these professionals assist individuals with severe disabilities to function in natural environments to include typical home and community settings. More specifically, the position states that a high degree of collaboration and sharing of information and skills must occur among families, teachers, direct service providers, and related services professionals. TASH believes that the provision of integrated services requires that related services personnel:

1. *Establish priorities with parents/advocates and other team members;*
2. *Observe and assess persons with handicaps in natural settings;*

3. *Collaborate with family and team members to provide intervention strategies and adaptations that optimize participation in natural settings;*
4. *Teach specific and individualized procedures to enhance functional positioning, movement, and communication abilities in natural settings;*
5. *Evaluate the effectiveness of intervention procedures based on performance outcomes in natural settings* (TASH, 1986).

Spencer (1991) compiled a set of educational materials to describe the role of occupational therapists in the transition process. Intended as a training tool for university programs in occupational therapy, the monograph presents a comprehensive functional approach consistent with the "best practices" in the special education literature. In addition, Spencer and Sample (1993) developed a self-study training packet for occupational therapists in transition planning and occupational therapy service delivery. Case study examples are included that demonstrate how the occupational therapist can be involved in vocational activities by adapting curriculum, providing adaptive equipment, consulting with teachers, and consulting with community work sites where students with severe disabilities can gain actual work experience.

Very few articles have been published on the roles of occupational therapists in the transition process (Brollier et al., 1994). In addition, much of the literature that is available does not present a "best practice" approach to transition planning. For instance, Mitchell, Rourke, and Schwarz (1989) described a collaborative "model" program that included occupational therapy for transition-age students with moderate mental retardation. However, occupational therapy services included "pre-vocational", nonfunctional tasks that were trained in a simulated workshop

setting. In addition, students were required to move through a sequence of training levels prior to inclusion in the school's vocational program. This type of service provision is in direct conflict with the functional, community-based vocational programming approach that has proven successful for students with severe disabilities in achieving employment outcomes (Gaylord-Ross, 1989; Inge & Wehman, 1993; Renzaglia & Hutchins, 1988).

Although occupational therapists could play a significant role in transition planning, many occupational therapists continue to focus primarily on children with developmental disabilities (W. Dunn, personal communication, August, 1993; Neistadt, 1987; Warren, 1986). (Developmental disabilities are severe chronic disabilities that occur before the age of 22 years and result in substantial functional limitations in self-care, independent living skills, mobility, communication, cognition, and perception.) While literature in the special education field for students with severe disabilities focuses on functional, age-appropriate programming (Brown, Branston et al., 1979; Brown, Branston-McLean et al., 1979; Brown, Nisbet et al., 1983; Brown et al., 1991), many occupational therapists continue to adhere to a developmental approach emphasizing pre-readiness skills and simulations, while under-emphasizing occupational performance areas and real life activities (Brollier et al., 1994). Part of the problem may lie in the continuing debate among occupational therapists concerning the belief in the profession's philosophical base of occupation and the belief that nontraditional treatment modalities are more effective than purposeful activity (Vogel, 1991).

An even greater problem may be that occupational therapists are not providing services to some students with severe disabilities, because they feel that the student is too severely disabled to benefit from occupational therapy services (Carr, 1989; Nesbit, 1993). Carr (1989)

presented the criteria that occupational therapists are using in Louisiana to determine which students with disabilities should receive services. One of the criteria calls for determining whether a student's cognitive scores on standardized tests fall below his or her motor scores. If this is the case, the student is not referred for occupational therapy, since he or she would be considered too severely disabled to use the skills learned during therapy in daily activities. Clearly, if this criterion is applied to most students with severe disabilities, it would exclude them from vocational training and employment as a post school transition outcome. Other barriers to occupational therapists functioning within collaborative transition teams have been suggested. Some of these include limited staff resources, limited training and experience in school-based practice issues, unrelated work experiences (e.g., medical/hospital settings), therapist attitudes toward serving older students with severe disabilities, and administrator attitudes toward the need for occupational therapy services in the transition process (Rainforth, York, & Macdonald, 1992; T. Brolhier, personal communication, July 16, 1993).

Several authors have indicated a need for occupational therapists to define and delineate their role in the public school setting (Bundy, 1993; Colman, 1988; Royeen, 1986, 1988). In addition, Snell and Browder (1986) indicated that one of the major unresolved research issues for school programs is the determination of the variables influencing the delivery of related services (to include occupational therapy) within the community-based instructional model. They further stated that research is needed on including students with severe disabilities who are also physically challenged within the community domain. The extent to which students receive integrated therapy in a community-based instructional model and ultimately obtain successful transition outcomes may be dependent, in part, upon the acceptance by occupational

therapists of best practices related to educational programming (Everson & Moon, 1987; Spencer, 1991). Effective preservice and continuing education programs must be developed that will enhance occupational therapists' knowledge and attitudes regarding best educational practices and effective transition programming for students with severe disabilities because of the critical roles occupational therapists can perform in the transition process.

Research Questions

This study was designed to address a series of questions regarding occupational therapy school-based practice, and the attitudes occupational therapists have toward best practices for transition. These questions are listed below.

Question #1: What are the demographic characteristics (e.g., educational backgrounds, work experiences, continuing education experiences, age) of occupational therapists who work with transition-age students, and what are the characteristics of their jobs (e.g., What types of students do they serve? Where is therapy provided? Do they participate in transition planning?)

Question #2: What are the attitudes of occupational therapists toward "best practices" for transition planning and do occupational therapists incorporate "best practices" in their service delivery?

Question #3: What is the relationship between occupational therapists' length of employment, educational level, continuing education experiences, work experiences, and their attitudes toward "best practices" for transition programming?

Question #4: What are the attitudes of occupational therapists towards vocational outcomes for students with severe disabilities?

Question #5: What are the self-reported training needs of occupational therapists in the transition process?

Method

A national survey of occupational therapists who provided services to students, ages 14 - 22, in public school settings was conducted. A written questionnaire consisting of closed form items that included multiple choice, Likert rating scale, and ranked item responses was mailed to therapists identified from the American Occupational Therapy Direct Mailing List of School-Based Practice. The development of this questionnaire involved the following primary activities: 1) 5 semi-structured interviews with national experts on transition programming and occupational therapy; 2) 8 semi-structured interviews with occupational therapy practitioners who were actively involved in transition programming; 3) item generation and selection based on the semi-structured interviews and literature review; 4) expert panel review; and 5) pilot testing and questionnaire revision based on the results of the pilot test.

The questionnaire consisted of items assessing four types of information to include 1) occupational therapy school-based practice characteristics; 2.) attitudes toward school-based practice and transition; 3) perceived training needs in the area of school-based practice and transition; and 4) professional demographics. Specifically, the survey asked occupational therapists to describe the characteristics of their current service delivery practices (e.g., location of therapy, types of students served, model of practice.) Other questions evaluated occupational therapists' attitudes towards such issues as the use of an integrated therapy model, providing services within functional age-appropriate community environments, training other public school personnel to implement therapy objectives, providing occupational therapy services in

community-based vocational training sites, and attitudes toward the employability of students with severe disabilities. Another set of questions asked occupational therapists to identify their perceived training needs related to school-based practice issues and participation on collaborative transition teams. Finally, occupational therapists were asked to provide demographic information about their professional characteristics (e.g., length of employment as an occupational therapist, length of employment within the public school setting, length of employment in other unrelated settings, education level, area of therapy specialization).

Sampling procedures. The sample for this study was identified using the American Occupational Therapy Association's (AOTA) Direct Mailing List. AOTA maintains this list by grouping the names and addresses of the therapists by the specific states or U.S. territories in which they practice as well as by special interest groups. When this study was initiated, there were 3,944 names and addresses of occupational therapists on the list who identified themselves as working in a school-based practice. A computer generated simple random sampling procedure of the population was used to identify a national sample of 1,000 occupational therapists. This procedure was completed by the AOTA Direct Mail Department, and mailing labels were purchased from this organization for distribution of the questionnaires.

Administration procedures. The questionnaire was mailed using first class postage to the identified occupational therapists and was accompanied by a cover letter explaining the purpose of the survey, a statement of endorsement from the American Occupational Therapy Association, and a self-addressed business reply envelope. Each questionnaire was coded to ensure respondent confidentiality; however, the codes enabled an analysis to be made between "respondents" and "non-respondents". One week after the initial questionnaire was mailed, a

follow-up post card was mailed to the entire sample asking if the survey had been completed and thanking those therapists who had responded. Three weeks after the initial questionnaire was mailed, a follow-up letter including an additional copy of the questionnaire and envelope was mailed to "non-respondents" requesting the completion of the survey (Dillman, 1978). Four weeks after the final follow-up letters were mailed, data collection procedures were terminated.

Data management and analysis. All data regarding the occupational therapists' responses to the questionnaire were entered and stored within the Virginia Commonwealth University's mainframe computer system. The data generated from this survey were analyzed with the use of Statistical Analysis Systems software (SAS). Descriptive and inferential statistics were used to analyze the descriptive data generated from the questionnaire to explore the five research questions identified earlier.

Results

A total of 1,000 questionnaires were mailed to the identified occupational therapists. A total of 755 surveys were returned representing a 76% return rate. The size and national scope of this sample is sufficient for the results to be considered externally valid and representative of occupational therapists who work in school-based practices.

There were several important results obtained from the data collected and analyzed for this study. Statistically significant results were obtained for some research questions. These results relate to the research questions posed earlier and are summarized below.

1. Nationally, more occupational therapists do not provide services to transition-age students than occupational therapists who do serve this age group.
2. Students, ages birth to 13, are the primary recipients of the occupational therapy services

that are provided in school-based practice.

3. As students move through the transition process, occupational therapy services decrease. By the time students near graduation, few are receiving occupational therapy services.
4. Occupational therapists' involvement in community-based instruction for students ages 14 -22 is minimal.
5. Occupational therapists' involvement in community job sites for students ages 14 - 22 is minimal.
6. Occupational therapists are not full participants in the ITP/IEP team process.
7. Occupational therapists who work with transition-age youth appear to have rather positive attitudes towards many best practices in transition.
8. Occupational therapists who work with transition-age students appear to have less positive attitudes toward best practices for vocational programming.
9. Occupational therapists who reported that they have been members of the Association for Persons with Severe Handicaps or read articles from this organization, expressed more positive attitudes toward transition best practices than occupational therapists who were not associated with TASH.
10. Occupational therapists who indicated that they spent the majority of their time teaching other team members to integrate OT techniques into students' daily activities expressed more positive attitudes toward transition best practices.
11. Occupational therapists who reported that they spent the majority of their work day delivering services in therapy rooms or therapy areas expressed significantly less positive attitudes toward transition best practices.

12. Occupational therapists who reported serving three or fewer transition-age youth during the 1993-94 school year expressed less positive attitudes toward transition best practices.
13. Occupational therapists who work with transition-age youth have had limited training on transition planning.

Summary

Occupational therapists have expertise in the development and adaptation of environments as well as sensorimotor functioning and its effect on skill acquisition. This knowledge and expertise can directly influence a student's skill acquisition for functional transition outcomes such as work. This study determined occupational therapists' current participation in the national transition initiative, their attitudes toward transition best practices, and their self-reported training needs related to occupational therapy service delivery to transition-age students with severe disabilities. The results of this study provide baseline data that have implications for the future research on occupational therapists involvement in the transition process and the barriers to their participation on collaborative transition teams. In addition, the data collected provide important information for planning preservice and continuing education programs for occupational therapists and other professionals practicing within the public school system.

CHAPTER II

Review of Literature

The purpose of this literature review is to provide a framework and explanation for the identification of the previously stated research questions. The first section presents an historical overview of the litigation and legislation that has led to service delivery in community environments including the public schools and integrated work settings for students with severe disabilities. The second section describes the current "best practices" in education that have emerged, including a discussion of related service provision within the educational program. This discussion focuses on how the best practices of integrated therapy and collaborative teamwork for related services have evolved in contrast to the traditional medical model of service delivery. The final section summarizes the literature on transition programming and discusses the implications for delivery of related services, specifically occupational therapy, to secondary-age students with severe disabilities.

Historical Overview

Individuals with severe disabilities often have been perceived as "unteachable" and "incurable" (Ferguson, Ferguson, & Jones, 1988). During the Middle Ages, they were segregated from communities in asylums and cared for with no intent to provide education. At the beginning of the 19th century, a physician named Itard attempted to educate a wild boy found in France. His work indicated for the first time that education may make a difference for individuals with mental retardation. However, the focus of this education was on institutional care (Heward & Orlansky, 1984).

The first individual in the United States who attempted to educate individuals who were

retarded was Samuel Gridley Howe, who established an institution in Massachusetts. For the majority of the 19th century, large state institutions became the educational setting for this group of individuals. However, as these facilities became overcrowded, this focus shifted to custodial care. Education became a secondary emphasis and often was not provided.

Institutionalization remained the norm until only recently. If educational services were provided at all, they were provided by parents or private organizations developed for this purpose (Brown, Nisbet et al., 1983). During the 1940's and 1950's, parents and other concerned individuals began to establish private day residential schools for individuals with severe disabilities, all of which were segregated programs, located in church basements and other private facilities. Only since 1975 and Public Law 94-142 have students with severe disabilities had access to a "free and appropriate" education. The events and related legislation leading up to the inclusion of individuals with severe disabilities in the public schools are outlined in the following section on litigation and legislation.

Litigation and Legislation Related to Education

World War II facilitated some positive outcomes for individuals with disabilities in the United States. The close of the war brought about a new awareness with the return of many soldiers with disabilities (Westling, 1986). Federal spending was designated to solve the problems of integrating these men back into society. This concern and financial support began to "spill-over" to children with disabilities. Basically, the war prepared society for the provision of public school services to individuals of school age with severe disabilities (Westling, 1986).

Legislation to desegregate black students often has been given credit for facilitating the cause of students with severe disabilities (Heward & Orlansky, 1984). The first case of

historical significance was *Brown v. Board of Education* (1954). The basis for this litigation was that black children in Topeka, Kansas were forced to attend segregated facilities even when they had to pass by local neighborhood schools that white children attended. The lawyers argued that this separation from the white students resulted in a feeling of stigma and a strain on the students' health due to the excessive travel. The court ruled that "separate but equal" did not have a place in the educational system. In fact, the Fourteenth Amendment to the Constitution prohibited the states from placing restrictions on individuals based on race and color (Ravitch, 1980).

The *Brown v. Board of Education* decision raised some important questions for the parents of children with disabilities. Did the idea of equal access for black children apply to their sons and daughters? Shouldn't the Fourteenth Amendment protect them as well?

It is interesting to note that the exclusion of students with severe disabilities from regular schools has been cited as causing the same feelings of stigma and strain on students' health that was presented in the *Brown v. Board of Education* case. Brown, Nisbet et al. (1983) stated that students who have severe disabilities must attend their "home school" or the same school that they would attend if not disabled. These authors argued that any benefit achieved in therapy is neutralized when students travel for extended hours to reach segregated, special schools.

Litigation specific to students with disabilities. Two of the cases cited most often for the rights of people with disabilities are *Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania* (1972) and *Mills v. Board of Education* (1972). In Pennsylvania, the Association for Retarded Citizens (ARC) brought suit against a state law that denied public education to children specified as "unable to profit from public school attendance."

The lawyers and parents claimed that the state could not prove that the children would not benefit from education. The court decided that the state had to provide a free public education. In addition, a ruling was made that the parents had to be notified of any changes in the educational program. This was the first application of due process for individuals with disabilities (Heward & Orlansky, 1984).

Mills v. Board of Education took place in Washington, D.C. where seven children had been denied a free education because of learning and behavior problems. The school system had claimed that it did not have adequate funds to provide an appropriate education. The court decided that lack of funding was an invalid excuse for not providing services to children with disabilities (Heward & Orlansky, 1984).

Legislation. Public Law 94-142 is the legislation that actually mandated a "free and appropriate public education" to all children with disabilities. As previously stated, this legislation established that each student with a disability should have an IEP to meet her or his specific learning needs. In addition, related services are to be provided for each identified student if needed for the educational program. PL 94-142 was re-authorized as PL 98-199 and PL 101-476. The most recent re-authorization mandated transition services for students with severe disabilities in order to facilitate post school outcomes. Since one of IDEA's anticipated transition outcomes is employment, the legislative history for rehabilitation services also becomes important to review. The following section provides this information.

Vocational Rehabilitation Legislation

The first federally sponsored programs through vocational rehabilitation were authorized in 1918 for World War I veterans. Services were extended to non-military personnel

who had physical disabilities in 1920 through the Smith-Fess Act (Braddock, 1987). Individuals with mental retardation were included in 1943 under the Barden-LaFollette Act (LaVor, 1976).

The Rehabilitation Act has been amended on numerous occasions, since the Barden-LaFollette Act included individuals with mental retardation. In 1954, the amendments included provisions that authorized the funding and building of rehabilitation facilities such as sheltered workshops and day activity centers for individuals with severe disabilities (Wright, 1980). The next revisions occurred in 1973 with the passage of the Vocational Rehabilitation Act (P.L. 93-112). Several critical components of this legislation have implications for service delivery to persons with severe disabilities. First, this law denied federal funds to agencies that discriminated against individuals who were disabled under Section 504. In addition, programs must be accessible to include modifications in schedules, use of devices, and changes in the requirements such that individuals with disabilities could participate (Kokaska & Brolin, 1985). Section 504 states that *"No otherwise qualified handicapped individual shall by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in any program or activity receiving federal financial assistance."* (29 U.S.C. 794).

Another critical component of P.L. 93-112 was the mandating of the Individualized Written Rehabilitation Program (IWRP). The IWRP was to be designed by the rehabilitation counselor and the client and include long range rehabilitation goals, intermediate objectives to reach the identified goals, a statement of the specific services to be provided, a date for the initiation and duration of services, and specified criteria with evaluation procedures. Clearly,

the passage of P.L. 93-112 indicated a shift in rehabilitation from a medical model to one of including the client as a team member in the process.

The reauthorization of The Rehabilitation Act in 1986 resulted in the inclusion of supported employment as a reasonable rehabilitation outcome for individuals with severe disabilities in Title VI, Part C (Revell, 1991). Supported employment was defined as:

Competitive work in an integrated work setting with extended support services for individuals with severe handicaps for whom competitive employment:

- a. has not traditionally occurred; or*
- b. has been interrupted or intermittent as a result of severe handicaps...*

Federal Register (August 14, 1987; p. 30551, 363.7)

Title VI, Part C is significant for several reasons (Revell, 1991). First, supported employment was differentiated as a "place and train" model rather than the traditional pre-placement training model that excluded individuals with severe disabilities from an integrated workforce. Second, it targeted those individuals who historically had been denied rehabilitation services. Finally, supported employment was defined as a community, integrated model that involved paid work for individuals who typically had been relegated to segregated day programs and sheltered workshops that paid subminimum wages.

The Rehabilitation Act was amended most recently in 1992 as P.L. 102-569. This legislation has significant implications for students with severe disabilities. Specifically, the amendments define transition services for the first time, and, in actuality, the definition duplicates the one found in the IDEA. P.L. 102-569 recognizes that many students with the "most severe disabilities" will exit school systems requiring rehabilitation services.

Consequently, the new regulations mandated a state plan requiring that the state rehabilitation agency address the development of policies that will assure coordination between the rehabilitation and state education agencies. The anticipated outcome is that students will exit the public schools and receive rehabilitation services, if needed, without a break in service (Button, 1992; Inge & Brooke, 1993; Inge, Dymond et al., 1993). In addition, the new Amendments are guided by the presumption of ability. A person with a disability, regardless of the severity of the disability, can achieve employment and other rehabilitation goals, if the appropriate services and supports are made available. The transition provisions added to the Act did not shift the burden for transition planning from education to rehabilitation. Instead, they were designed to facilitate coordination and collaboration between the two systems to eliminate gaps in service delivery for eligible students.

Under the new amendments, a two-part process essentially determines an individual's eligibility for rehabilitation services. First, does the person have a disability? Second, does he/she require assistance from the vocational rehabilitation system to achieve an employment outcome? Eligibility determinations must focus first on the use of existing data, particularly on information provided by the individual with a disability, his/her family, or advocates, and information provided by education agencies, social security agencies, the individual's personal physician, previous or current employer(s), community organizations such as UCP affiliates, and any organization or person referring the individual.

Prior to the Rehabilitation Act Amendments of 1992, an individual with a disability had to be evaluated to determine his/her "rehabilitation potential" and the "feasibility" for "employability." These evaluations usually concluded that persons with severe disabilities were

not eligible for services (Moon et al., 1990). The use of existing data for determining eligibility for rehabilitation services, however, has major implications for school programs. If students participate in school programs that provide best educational practices to include community-based vocational training and paid work experiences prior to graduation, data will be available to establish eligibility for rehabilitation services post graduation (Inge, Dymond et al., 1993).

Summary

P.L. 94-142 and its amendments paved the way for student access to a public school education. Concurrently, the Vocational Rehabilitation Act and its amendments have provided access to integrated employment opportunities for adults with severe disabilities. Specifically, the Rehabilitation Act Amendments of 1992 mandated collaboration between state vocational and educational agencies. The combined impact of IDEA and P.L. 102-569 provides legislative support for community-based service delivery to students of secondary age as they prepare to transition from school to work. The following section reviews the evolution of best educational practices for students with severe disabilities.

Educational Best Practices for Students with Severe Disabilities

The initial instructional curriculum in the public schools for students with severe disabilities used a developmental model within self-contained residential facilities, segregated classrooms in specialized schools, private centers such as churches, or at home (Brown, Nietupski, & Hamre-Nietupski, 1976; Brown, Branston et al., 1979; Brown, Branston-McLean et al., 1979; Nietupski, Hamre-Nietupski, Houselog, Donder, & Anderson, 1988; Pumpian et al., 1988a). The developmental model assumes that students with severe disabilities are "not ready" to participate in the mainstream of society (natural environments) and that they need to progress

through normal developmental sequences in order to prepare them to function in daily activities (Brown, Branston-McLean et al., 1979). Teachers and therapists who use a developmental approach typically require students to participate in such nonfunctional tasks as counting wooden blocks, putting pegs in pegboards, stringing beads or performing other tasks based on the student's developmental age. Use of a developmental model results in the training of prerequisite skills that usually exclude students from most age appropriate activities and community environments.

Community-Referenced Curriculum

The foundation for the best educational practice of community-referenced instruction began with Wolfensberger's philosophy of normalization (Snell & Browder, 1986). Normalization embraces the ideal of community living for all people with disabilities. This philosophy, in combination with Skinner's work in the area of applied behavior analysis, was the foundation for the development of systematic training technologies that evolved during the 1970's (Snell & Browder, 1986). For instance, Gold (1972) demonstrated that individuals with severe mental retardation could learn to assemble a bicycle brake. The research during this time period, however, was conducted in segregated settings, typically sheltered workshops and institutional residences (Kregel & Wehman, 1989).

Brown, Branston, et al. (1979) were the first to discuss the use of a community-referenced, chronological, age-appropriate, and functional curriculum for students with severe disabilities. This model focuses on training skills that are most relevant in a student's daily life to allow him or her to function as independently as possible. These skills, referred to as functional skills, are those frequently required in natural domestic, vocational, and community

environments. Nonfunctional skills are those that have a low probability of occurring in daily activities such as placing pegs in pegboards, stringing beads, or sorting nuts and bolts.

A functional curriculum can be organized into four major life domains: domestic, leisure, community, and vocational (Brown, Branston-McLean et al., 1979; Brown et al., 1980; Falvey, 1989). These domains can be further divided into environments and sub-environments in which the student with a severe disability currently functions or might function in the future. Activities and skills can then be delineated for instruction based on these natural environments. This strategy has been referred to as an ecological inventory or top-down curriculum approach (Brown, Branston et al., 1979; Brown, Branston-McLean et al., 1979; Brown et al., 1980).

Brown and associates (1976) provided guidelines for the selection of functional skills for instruction called the "criterion of ultimate functioning". In other words, instruction should focus on those skills that a student must have to function "as productively and independently as possible in socially, vocationally, and domestically integrated adult community environments". The answers to the six questions that make up the criterion of ultimate functioning are used to determine skill selection. Some of the areas include determining if acquiring the skill would allow a student to function within complex heterogeneous community environments, considering if the student could function as an adult without the ability to perform the skill, determining if adaptations or training a different skill would allow the student to function more quickly and efficiently, and considering if the skills and instructional materials are those found in chronological, age-appropriate environments.

Age appropriate skills specific to the student's chronological age are then targeted for instruction within current and future natural environments where the student is expected to

function. The term, "natural environments", means those least restrictive environments in which the individual with a severe disability is being prepared to function (Brown, Branston-McLean et al., 1979). This best practice concept is critical for students with severe disabilities, since these students typically do not transfer (use) skills taught in one environment (e.g. simulated settings in school) to those settings where they must actually perform a daily activity (Falvey, 1989; Gaylord-Ross, 1989; McCarthy, Everson, Barcus, & Moon, 1985; Wehman, Moon et al., 1988). Performance of a skill in an environment that is different than the one in which the skill was taught and acquired is referred to as generalization (Stokes & Baer, 1977).

Inherent to the concept of training in the natural environment is the best practice of using age-appropriate, instructional materials that the student will encounter in real life settings. Simulated activities that use such things as grocery flashcards, nuts and bolts, fake money, "paper-plate" clocks, and pre-packaged activity cards characterize inappropriate instructional materials. Instead, instructional materials should match the student's chronological rather than developmental age and should be those items specific to real environments (Brown et al., 1976; Brown, Branston-McLean et al., 1979). A picture grocery list for shopping at the neighborhood store, cleaning supplies, real money, a quartz wristwatch with an alarm would be examples of age-appropriate, functional materials.

Using a community-referenced curriculum may result in the identification of a variety of activities in which the student with a severe disability can not participate in the same way as a typical peer (Brown et al., 1980). However, adaptations and modifications can be made to allow participation in chronological-age appropriate activities (York & Rainforth, 1991). This best practice has been referred to as the principle of "partial participation" (Baumgart et al.,

1982). Partial participation has been conceptualized by Baumgart et al. to include 1) providing personal assistance, 2) modifying skills or activities, 3) using an adaptive device, and 4) modifying the physical and social environments. Use of this best practice in combination with the other approaches outlined above allows for curriculum development within chronologically age-appropriate environments.

Educating Students with Severe Disabilities in Their "Home Schools"

As stated previously, students with severe disabilities were initially served in segregated schools such as special centers for students with disabilities. In fact, once students gained access to a "free and appropriate education", the question became whether they should be included in regular or segregated schools (Sontag, Burke, & York, 1973). The literature suggests that segregated schools result in denied opportunities for students with disabilities (Brown, Long, Udvari-Solner, Schwarz et al., 1989). They do not have opportunities to interact with their peers, demonstrate that they can function in integrated environments, or ultimately function in society.

Increasingly, school systems are integrating students with disabilities into regular schools. The literature describes several considerations and strategies that school districts should use to disperse students with severe disabilities in regular schools (Brown, Long, Udvari-Solner, Davis et al., 1989; Brown et al., 1991; Sailor, 1989; Taylor, 1982). First, students should attend age-appropriate schools; those they would attend if they did not have disabilities. (If this is not possible, students should attend in the nearest school to their local school.) The proportion of students with disabilities approximate the proportion of students with disabilities to students without disabilities in the neighborhood school. Transportation should be accomplished in a

reasonable time period and should be integrated with peers as much as possible. Classes for students with disabilities should be dispersed in proximity of classes for students without disabilities of the same age and not congregated in isolated sections of the school. The school program should promote the inclusion of students with disabilities in all school activities such as recreational, administrative, and social activities that are attended by their same age peers, and, whenever possible, students should be included in the regular education classroom. This concept of full inclusion refers to the education of all students in their neighborhood classrooms and schools (Stainback, Stainback, & Jackson, 1992).

There are several reasons that students with disabilities should go to home schools rather than segregated or clustered schools. Brown, Long, Udvari-Solner, Davis, et al. (1989) suggest that the future leaders of tomorrow are the nondisabled students who are enrolled in schools today. The best way to prepare these students to be responsive adults towards individuals with disabilities is to provide opportunities for all students, regardless of their ability to interact in their schools and neighborhoods.

Another critical consideration is that students with disabilities require instruction in the actual environments that they will use during nonschool hours (Brown, Long, Udvari-Solner, Davis et al., 1989; Brown, Ford et al., 1983). Instruction in the actual environments increases the chance that the student will use the skills he/she has learned in daily living activities. In addition, if nondisabled students and adults observe students with disabilities learning to function in natural environments, it is more likely that they will be perceived as having competencies. The community will get to know, communicate with, and assist a person with a disability if he or she becomes a part of the home school and community.

Finally, individuals with severe disabilities often spend a large portion of their time in solitary activities, with family members, or with paid caregivers (Brown, Long, Udvari-Solner, Davis et al., 1989). Including students in home schools allows for the natural development of social interactions with nondisabled peers. It has been suggested that the natural supportive relationships that develop for students within regular classrooms are as important as "professional support from experts" (Stainback et al., 1992). Stainback and her colleagues state that inclusive classrooms foster natural support networks when there is an emphasis on peer tutoring, buddy systems, circles of friends, cooperative learning, and other types of supportive relationships. Supportive relationships in the classroom connects students and staff in ongoing relationships that lead to the development of supportive communities (Strully & Strully, 1990).

Summary

In summary, Brown and his associates pioneered the development of best educational practices for students with severe disabilities that have facilitated the movement of students from segregated school programs to their home schools. This includes the use of a community-referenced, chronological, age-appropriate, and functional curriculum based on individual student needs. Instruction optimally occurs within those natural environments (community, home, school, work) where the student currently functions as well as those that are targeted for future participation. The following section further expands these identified best practices to include the integration of related services within the educational program.

Integrating Related Services Within the Educational Program

Students with severe disabilities have a variety of needs that can not be met by any one professional (Orelove & Sobsey, 1991). Consequently, a great deal of the literature on

designing and implementing programs for students with severe disabilities focuses on the provision of related services within the educational program (Campbell, 1989a, 1989b; Dunn, 1991a; Orelove & Sobsey, 1991; Rainforth & York, 1987, 1991; Rainforth, York, & Macdonald, 1992; York, Rainforth, & Dunn, 1990; York, Rainforth, & Giangreco, 1990). The strategies for incorporating related services personnel into the educational program have been referred to as the transdisciplinary model, integrated therapy, and collaborative teamwork.

One of the first articles to discuss integrated therapy services (Stemat, Messina, Nietupski, Lyon, & Brown, 1977) based an argument for integrated therapy model on four assumptions: 1) assessment of motor abilities can be best completed in natural environments; 2) clusters of developmental motor skills should be taught through functional activities, 3) therapy must be longitudinal and contextual to be successful; and 4) skills are useful only if they are taught and verified in the environments in which they naturally occur. These assumptions are consistent with the best practices already discussed for educational programming (Brown et al., 1976; Brown, Branston-McLean et al., 1979).

Medical model/isolated service delivery practices. The integrated therapy model represents a major shift in practice for some therapists, since therapy services originated in medical models and isolated settings (York, Rainforth, & Dunn, 1990). Therapeutic techniques including sensory integration therapy, neurodevelopmental treatment, and various sensory stimulation and facilitation procedures, are theoretically grounded in the medical model. Identification of the underlying etiology is considered the basis of therapy with intervention programs designed to remediate the cause of the disorder rather than the symptoms (Ottenbacher, 1982). A medical model orientation advocates for therapeutic assessment and

interventions to be conducted within isolated therapy environments. Assumptions of the isolated therapy model include: 1) motor skills displayed in therapy rooms also are exhibited in other settings, 2) normal developmental sequences can be used as therapeutic intervention for individuals with disabilities, 3) therapy once or twice a week is sufficient to affect motor skill development, 4) motor skills learned/ developed in the therapy room generalize to other environments (Sternat et al., 1977).

A medical orientation usually results in multiple disciplines providing services in isolation to students with severe disabilities as each professional focuses on fragmented components of performance (Rainforth et al., 1992). This has been referred to as a multidisciplinary approach to service delivery (Orelove & Sobsey, 1991). Some of the problems associated with this service delivery model include inaccurate or fragmented evaluations, conflicting recommendations between disciplines, absence of collaboration among service providers, and numerous unrelated program objectives. Campbell (1987b) stated that isolated assessment yields discipline-specific therapy recommendations that have little relationship to program suggestions made by other team members. The result can be seen in IEP goals and objectives that are written separately by each related service provider (e.g., an occupational therapy IEP objective, an educational IEP objective).

The interdisciplinary model is similar to the multidisciplinary approach in that each discipline continues to perform evaluations and treatment individually with the student. However, the interdisciplinary approach advocates for team sharing of information, discussion, and decision making, while implementation continues to be specific to each discipline (Orelove & Sobsey, 1991). Both models rely on the delivery of related services using the isolated

services model with therapeutic intervention provided directly and only by a therapist (direct/isolated). This isolation of services may be physical and/or programmatic (Giangreco, 1986a).

Physical isolation refers to the removal of a student from the natural environment for programming such as delivering services in a therapy room. Programmatic isolation occurs when therapy services are delivered that are not referenced to the educational program. Providing therapy services in a student's classroom, such as passive range of motion or facilitation techniques that are not referenced to the educational program, would be an example of programmatic isolation. In fact, this type of service delivery is incongruent with the intent of P.L. 94-142 and may not qualify as a related service under the law (Giangreco, 1986a; Giangreco, York, & Rainforth, 1989).

Rainforth et al. (1992) stated that one problem with using an isolated therapy model for serving students with severe disabilities is that services are frequently discontinued based on an inability to demonstrate achievements in therapy. This inability to benefit, however, is related to the "episodic and isolated" nature of the intervention which does not assist students in developing needed skills within natural environments (Dunn, 1991a). Giangreco (1986a) stated that the isolated services model also forces teachers and therapists to rely on their own professional resources to develop and alter student programs. The result is programs that do not address the total needs of students with severe disabilities.

Transdisciplinary programming. The transdisciplinary teamwork approach emerged, based on the understanding that the multiple needs of students with severe disabilities are interrelated. "To function in any daily environment, activity, or routine requires efficient

sensorimotor and cognitive and communication performance" (Rainforth et al., 1992). In order to understand the varied influences on function, team members which include the teacher, occupational therapist, physical therapist, speech therapist, nurse, and family members must share information and skills. In addition, each member must assume some of the responsibilities of other team members in order to deliver services across traditional disciplinary boundaries.

Lyon and Lyon (1980) called this sharing by team members role release. Role release is characterized by three levels to include sharing general information, sharing informational skills, and sharing performance competencies. Sharing general information requires team members to communicate knowledge about basic procedures or practices. Sharing informational skills involves teaching others to make judgments or decisions such as determining whether a student is correctly positioned in a wheelchair. Sharing performance competencies refers to actually teaching another team member to perform a skill such as training a teacher to implement oral motor procedures for a student during mealtime.

The sharing of performance competencies is often cited as a criticism of the transdisciplinary model by therapists (Orellove & Sobsey, 1991; Rainforth et al., 1992). Some would state that only therapists are qualified to provide related service intervention (direct therapy) due to their highly specialized skills and training. They may agree that it makes sense to deliver intervention during functional activities, yet still contend that therapy should only be delivered by a certified therapist (Rainforth et al., 1992).

Rainforth and associates (1992) identified two major problems that occur when therapy is delivered only by therapists. First, the therapist assumes that he or she will always be available to teach skills within functional contexts, although this would be impossible throughout

a student's day. Second, the therapist assumes that a student's programming needs can be addressed in isolation (e.g., sensorimotor skills taught in isolation from communication). This is simply not true for students with severe disabilities.

Service delivery models for related services. Application of the transdisciplinary model, therefore, advocates the provision of therapy through an indirect approach (Giangreco, 1986a, 1986b; Orelove & Sobsey, 1991). Therapists release parts of their roles to other team members to allow students to receive frequent and ongoing intervention within educational contexts in absence of the therapist (Rainforth et al., 1992). This concept of indirect service delivery has been further clarified by the use of the term integrated therapy or integrated programming (Campbell, 1987a; Giangreco et al., 1989; Rainforth et al., 1992). Campbell (1987a) defines integrated programming in the following way:

All [motor] skills must be incorporated into functional curricular domains, rather than trained in isolation...from the environmental context in which those skills will be used. Incorporation of essential skills into functional content areas, embedded in activities that are carried out in a variety of environments, provides the context for teaching functional movement skills. (p. 185)

Therapeutic intervention is delivered indirectly when the therapist trains other team members to integrate therapy objectives into functional activities during naturally occurring times of the day. This is the role release concept central to the transdisciplinary model.

The American Occupational Therapy Association (AOTA, 1987, 1989) has defined two service delivery models of indirect service provision as monitoring and consultation. Monitoring occurs when the occupational therapist completes the evaluation, develops the intervention plan

to enhance IEP goals, and instructs others to carry out the identified procedures. It also includes:

- a) Contact shall be at least two times a month.*
- b) The occupational therapy assistant participates in the monitoring process as directed by the occupational therapist.*
- c) The selection of monitoring intervention shall be based on consideration of both the health and safety of the student and the appropriate procedural precautions. (AOTA, 1987, p. 807).*

The therapist remains responsible for the outcomes of the intervention strategies and must ensure that the individual implementing the procedures can demonstrate them correctly and without cues (Dunn, 1991; Dunn & Campbell, 1991).

Consultation as defined by AOTA (1987) "is a service in which the occupational therapists' expertise is used to help the educational system achieve its goals and objectives" (p. 807). Consultation can be provided to the school system, professionals, or student. In this model, the occupational therapist is using her/his knowledge to enable another person to develop programs or solve issues. The responsibility for the outcomes rests with the person who sought the consultation and not the therapist (Dunn, 1991; Dunn & Campbell, 1991).

Direct therapy may still be included within an integrated service model if the goals and objectives are jointly developed and agreed upon by a student's educational team. In addition, these objectives must be a part of the educational plan. Direct therapy is chosen when the student's needs can be met only through specialized therapeutic interventions that can not be safely provided by others (Dunn, 1991). Examples of this might be sensory integration techniques or neurodevelopmental treatment procedures that elicit autonomic nervous system

responses. If therapists choose to deliver direct/isolated services, they must provide justification for these segregated, isolated practices (Dunn, 1991; Dunn & Campbell, 1991). Dunn and Campbell further stated that direct therapy must take place within natural environments and be incorporated into students' routines as the usual practice rather than the exception.

Collaborative teamwork. Using a transdisciplinary model, related service personnel and educators function in teams and share responsibilities for assessment, development of group instructional goals, and implementation of instruction and therapy through an integrated model of service delivery (Orelove & Sobsey, 1991). Several authors have combined the concepts of transdisciplinary programming and the integrated therapy approach and used the terms collaborative teamwork (Rainforth et al., 1992) or integrated team programming (Campbell, 1987a; 1987b) to define how teams should function when providing services to students with severe disabilities. Rainforth et al. (1992) view transdisciplinary services and integrated therapy as complementary components of the educational program. In other words, transdisciplinary denotes the role release of information and skills among team members which enables them to implement an integrated approach to service provision.

York, Rainforth, and Giangreco (1990) refer to the role release component of the integrated therapy model as "role expansion". Effective collaborative teamwork requires members to expand their roles rather than relinquish them as is implied with the word release. In this process, team members become both teachers and learners by exchanging information and skills in order to develop team intervention programs that can be implemented throughout a student's school day.

If team members agree that the overall goal of instruction is to improve a student's

performance in specific natural environments, then they can function collaboratively to develop one set of instructional objectives (Rainforth & York, 1987). In essence, team members function as equals using a consensus decision making process to plan and implement an integrated educational program for students with severe disabilities (Dunn & Campbell, 1991; Rainforth et al., 1992). Team assessment of students results in the identification of targeted areas for programming, and integrated methodologies are designed that assist a student to acquire agreed upon functional skills (Campbell, 1987b).

Using this approach, therapy objectives become embedded within functional activities rather than listed as separate skills on a student's I.E.P. (Campbell, 1987a; 1987b; Giangreco, 1987a). The collaborative team "owns" the problems as well as the solutions, and all members take "credit" for a student's skill acquisition (Dunn, 1991). The outcomes of collaborative teamwork are that the students have increased opportunities to develop essential skills, and that professional decisions are more likely to be based on functional analyses of behaviors (Dunn, 1991; Idol, Paolucci-Whitcomb, & Nevin, 1986).

Dunn and Campbell (1991) described how occupational therapists can participate in the development of a student's educational program. They outlined five steps based on how the student's sensorimotor challenges interfere with functional activities. These include 1) the team identifies general educational priorities (e.g., daily living, work, leisure), 2) therapists assess students within natural environments to determine student's sensorimotor functioning, 3) therapists assess the influence of student's current sensorimotor limitations on educational performance, 4) therapists suggest interventions (e.g., adapt materials, adapt posture/movement, modify task), and 5) the team jointly decides how to integrate therapy interventions.

Scheduling related services using the integrated therapy model. The use of block scheduling and the primary therapist model have been suggested as strategies for providing related services to students with severe disabilities (Campbell, 1987a, 1987b; Rainforth & York, 1987; Rainforth et al., 1992). Block scheduling refers to the therapist assigning blocks of time to a group of students at a particular location rather than the traditional approach of scheduling individual students. Rainforth and York (1987) suggest that the therapist and teacher meet briefly prior to seeing students to review program data and to determine with whom the therapist will work during the scheduled block. Team members keep track of which students are seen in order to ensure that students receive an appropriate proportion of related services. In addition, blocks should be scheduled to allow therapists to work with students in natural environments as well as the classroom. Finally, block scheduling should allow time for team members to meet to discuss details of instructional programs. This could occur before or after school weekly/bi-weekly with longer meetings scheduled at least once each month for all team members (Rainforth & York, 1987).

The primary therapist model refers to assigning either the physical or occupational therapist as the primary "motor" therapist for specific students (York, Rainforth, & Giangreco, 1990). This model recognizes that many occupational and physical therapists have similar or overlapping areas of expertise. The therapists consult together to assess and design the integrated therapy, but only one assumes primary responsibility for the program. Consultation between the occupational and physical therapist, however, needs to continue on a regular basis such as scheduling a block of time together once a week (York et al., 1990).

Research on Integrating Related Services Within the Educational Program

Most of the literature that focuses on increasing gross and fine motor skills within the public school setting is based on an isolated therapy model rather than an integrated model of services. The relatively few published studies have not been replicated (Dunn, 1991); however, they do provide support for integrating therapy objectives into functional daily activities. This section reviews several of these studies.

Giangreco (1986a) conducted a study to compare direct/isolated and indirect/integrated therapeutic input to a student with multiple disabilities. During baseline procedures, physical and occupational therapists delivered direct therapy services in the corner of the student's classroom to include passive range of motion, tone reduction, and movement facilitation techniques. The teacher provided instruction on using a microswitch separate from these procedures. The indirect/integrated phase incorporated therapeutic intervention procedures to enhance upper extremity functioning within the switch activation program. The therapists served in training, consulting, and monitoring roles to the teacher, assisting her to implement the therapeutic strategies.

The results of the study revealed that the student was able to perform significantly better during the collaboration phase in comparison to the isolated direct phase. Giangreco concluded that "more is not necessarily better." In other words, the author felt that providing direct therapy services in an isolated/direct delivery model would be of less benefit than fewer sessions using an indirect/integrated model in the context of functional activities.

A study conducted by Noonan (1984) reinforces Giangreco's conclusion that services provided directly and solely by the therapist do not result in student gains. Seven students with multiple disabilities, specifically cerebral palsy and mental retardation, participated in the study.

Each received neuromotor intervention within their classrooms except for one student who received treatment in the therapy room. Although therapy was delivered in the classroom, the therapist used an isolated treatment model, since no attempt was made to incorporate the motor responses within functional activities. In all cases, the intervention occurred for 30 minutes a day during 130 school days. A multiple baseline design across two students with severe disabilities was replicated three times. Postural reaction improvements were clearly noted for two students with slight gains for a third student; however, five of the students showed little improvement. Noonan indicated that the three students who showed improvement were the highest functioning intellectually and socially of the group. Although there are no data to demonstrate motor skill acquisition for these students during functional skill training, it seems apparent that isolated/direct therapy was not sufficiently better than incorporating therapeutic objectives in daily activities.

Campbell, McInerney, and Cooper (1984) demonstrated the relationship between acquisition of motor skills and the context of functional activities. In the first case example, the authors demonstrated the effects of student motivation on movement. Programming within a daily activity of activating a switch was analyzed and designed to facilitate a specific movement pattern for a 14-year-old student with cerebral palsy and severe cognitive disability. During the first programming condition, the student received 2 seconds of various electronically produced reinforcement (e.g., music, fan, vibrator) contingent upon touching the switch. Reinforcement remained the same for the second set of trials, but the student received 8 seconds of access to the randomly mixed reinforcer. The third condition consisted of 8 seconds of rock music contingent on switch activation. The mean rate of movement per minute for condition one was

9, for condition two was 3.0, and for condition three was 5.6. The authors concluded that therapists must attend to motivational factors within functional activities (e.g., leisure-recreation) that facilitate movement rather than neuromotor facilitation alone.

Campbell et al. (1984) also presented data in this study on a 14-year-old girl with severe disabilities. A reach and open movement sequence was targeted for programming as the motor response within functional activities (e.g., locker door, microwave oven door, cake mix box, and food containers) that occurred across the student's day. All individuals who interacted with the student were taught to implement the procedures, and data were collected during a baseline and training phase. Average performance during the last five training sessions showed a 36% success rate over the baseline rate of 21%. While the authors concluded that this was not statistically significant, they noted that progress was achieved. In summary, Campbell and associates recommended increasing the number of opportunities for students to perform desired motor skills by integrating therapy goals during functional and motivational daily activities.

Finally, Dunn (1990) compared the use of direct intervention and consultation in a preschool program for children with developmental disabilities. In this study, teachers reported that occupational therapists contributed to a greater extent (24% more) to student goal attainment when using a consultation model than when they used a direct service model. Equally important is the fact that both service provision models resulted in the same percentage of student goal attainment (approximately 70%).

Although this study did not specifically address transition-age students, it does have implications for using a consultation approach within the integrated therapy model. The author demonstrated that the consultation model is no less effective in student goal attainment,

indicating that the therapist does not have to be the sole deliverer of intervention strategies. Considering the number of environments within which transition age students need to receive programming within, this study supports the use of consultation by the therapist to achieve identified community goals.

Summary

The previous sections have provided an overview of the development of best educational practices related to educational programming for students with severe disabilities. These practices include 1) placement of students within their local public schools; 2) development of an age-appropriate, community-referenced, and functional curriculum; 3) community-based training; 4) systematic instruction; 5) integrated delivery of related service; and 6) collaborative teamwork. In addition, preliminary research indicates that applying a combination of systematic instruction with therapeutic interventions results in skill acquisition for students with severe disabilities (Campbell et al., 1984; Giangreco, 1986b). All of these best practices continue to be critical components of the educational program as students with severe disabilities reach transition age. The following section will review the literature on transition and discuss the implications for involving related services, specifically, occupational therapists in the transition process.

Best Practices Related to Transition

The term transition refers to preparing a student to function within subsequent, future environments (Falvey, 1989). Transitions can occur at any age as a student moves from one setting to another, such as moving from pre-school to elementary school. Will (1984) defined transition as "an outcome-oriented process encompassing a broad array of services and

experiences that lead to employment." Wehman and associates (1988) stated that transition is "an interagency planning and implementation process that takes place at the local level and that makes available new residential and employment opportunities for youth with disabilities" (p. 50).

Typically, transition is defined by the outcomes students achieve post school to include community participation, independent living, and employment. Employment is an important school outcome for several reasons. First, students earn monetary rewards that result in the ability to purchase desired goods and services. Second, employment provides access to opportunities to interact with others, the development of self-worth, and the opportunity to be a contributing member of society (McNair & Ashcroft, 1993).

Clearly, best practices related to transition build on those principles outlined in the previous sections. For a student aged 16 or older (and, in some cases, beginning at age 14 based on the provisions of IDEA), transition planning includes 1) functional, age-appropriate, and community-referenced curriculum, 2) community-based service delivery in natural environments, 3) individualized transition planning using a team approach that is future oriented, 4) collaborative interagency planning and service delivery, and 5) student and parental involvement (Everson, 1993; Wehman, 1993; Wehman, Moon et al., 1988).

Advocates for instructing students with severe disabilities of secondary age in real vocational settings, point to the lack of skill generalization as a reason for community-based vocational training (R. Gaylord-Ross, Forte, Storey, C. Gaylord-Ross, & Jameson, 1987; Moon & Inge, 1993; Renzaglia & Hutchins, 1988; Wehman, Moon et al., 1988). This means that a variety of nonschool and post school environments need to be targeted for instruction in order

for successful transition outcomes to occur. In fact, it has been stated that the time spent in school should decrease as students with severe disabilities become adolescents and young adults, until the majority of instruction occurs in nonschool settings including community and vocational environments (Brown, Branston-McLean et al., 1979; Brown, Ford et al., 1983; Brown et al., 1991; Everson, 1993; Inge & Wehman, 1993; Moon et al., 1990; Wehman, Moon et al., 1988).

Rainforth and York (1987) provided guidelines for related service personnel to integrate their services within community training sites. This includes 1) therapists functioning as collaborative team members, 2) the embedding of therapy objectives within functional activities during naturally occurring times of the day, 3) the use of an indirect/integrated model of service delivery for students with severe disabilities, and 4) therapist participation in training students within non-school community sites. Although these guidelines do not specifically address the therapist's roles related to transition programming, they are applicable for delivering related services to secondary age students as they move into the community for the majority of their school instruction.

Another rationale cited for the importance of a community-based curriculum is the difficulty simulating the characteristics of the workplace in the classroom setting (Brown et al., 1991; Dymond, Inge, & Brooke, 1993; Wehman, Moon et al., 1988). This includes interacting with coworkers and customers, using actual work materials, orienting in the natural environment, and so forth. Exposure to the natural environment forces teachers to focus on relevant functional skills for training (Ford & Mirenda, 1984). It is much more difficult to target nonfunctional vocational tasks, such as stringing beads, when faced with actual job tasks in the

natural environment.

Finally, the technology for training students in actual job sites has greatly advanced during the past decade (Inge & Dymond, 1994; Inge, Johnston, & Sutphin, 1993; Inge, Moon, & Parent, 1993; Moon & Inge, 1993; Moon et al., 1990; Pumpian, Shepherd, & West, 1988b; Renzaglia & Hutchins, 1988; Sowers & Powers, 1991; Test, Grossi, & Keul, 1988; Wehman, Wood, Everson, Goodwyn, & Conley, 1988). Strategies include 1) analysis of the local labor market 2) identification of potential jobs by job type, 3) analysis of actual job sites, 4) selection of job duties/skills for training, 5) development of task analyses, and 6) selection of reinforcement, prompting, and data collection procedures. Work related, community skills also are targeted for instruction such as interacting with coworkers, taking a break, eating in the employee cafeteria, using the bank, and so forth (C. Gaylord-Ross, Forte, & R. Gaylord-Ross, 1987).

Research related to community-based vocational instruction. Several researchers have attempted to demonstrate a connection between a community-referenced vocational curriculum and employment post graduation. Hill et al. (1985) noted that there was a correlation between community-based training and employment after high school. They found that individuals who had received community-based training prior to employment, versus those who had not, had a greater chance of being successful when placed in supported employment options.

Wehman, Kregel, and Barcus (1985) reported that a higher proportion of individuals (50%) failed prior to 6 months in their first job when they had received vocational training only in segregated schools. This is in comparison to a 26% failure rate for students who had come from integrated schools with community-based programs. They suggested that this indicates a

need for integrated community-based training programs to facilitate employment post graduation.

Hasazi et al. (1985) found a marginal association between vocational education and employment. Those students (53%) who had participated in vocational education were more likely to be employed after high school. In addition, those students who had participated in real part-time jobs during high school were far more likely to be employed than those who did not. Finally, part-time work during high school was significantly related to higher wages after high school.

Teaching functional skills in vocational community-settings also can raise the expectations of parents, professionals, and the general population (Inge & Wehman, 1993). Bates, Morrow, Pancsofar, and Sedlak (1984) demonstrated that a student with a severe disability was perceived as having a higher level of competence when depicted as being involved in functional, integrated, and age appropriate activities. Gaylord-Ross and associates (Gaylord-Ross, Forte, Storey et al., 1987) demonstrated improved attitudes pre- and post-training towards workers with disabilities during an on-site training program. Observers viewed a single videotape with randomly mixed vignettes that showed students pre- and post-training. The students were perceived as more vocationally competent in the post-training vignettes.

Roles and Functions of Occupational Therapists in Transition

Relatively few references are available on integrating occupational therapy services into the transition process. Typically, these studies approach the topic in a general way by recommending that related services personnel serve on transition teams and provide training and therapy in community-sites rather than the school building as students reach transition age (Brown, Nisbet et al., 1983; Everson, 1993; Falvey, 1989; Moon et al., 1990; Wehman, Moon

et al., 1988). Lack of detail in these studies may be partly related to the fact that most of the literature for preparing students with severe disabilities vocationally has focused on those with severe cognitive deficits rather than those students with physical disabilities as well (Renzaglia, Hutchins, & Koterba-Buss, 1992; Sowers & Powers, 1991).

However, several authors specifically have addressed occupational therapy involvement in transition. Spencer (1991) contrasted the traditional concept of occupational therapy and transition planning. The important differences that she outlined include three major issues. First, occupational therapists traditionally have emphasized the identification of problems and "ways to fix the problem" through short and long term goals. The desired outcome is discharge from therapy. This approach is typical of a medical model orientation, where the therapist attempts to identify the cause of problems in order to develop therapeutic interventions. In contrast, transition planning is concerned with student outcomes following school. The planning process spans many years, goals may change, ongoing assessment is required, and "problems" are identified as areas that need support rather than student deficits. Support is provided through hands-on assistance, linkages with community resources, adaptations and modifications, and so forth.

Second, in a traditional direct service model, the occupational therapist plans, coordinates, and delivers therapy. Others such as the client, family, and other professionals may provide input, but ultimately decisions regarding therapy are determined by the occupational therapist. This continues to be a topic of debate among many occupational therapists, who feel that they make the final decisions regarding therapy (Carr, 1989; Nesbit, 1993). However, transition planning must involve the entire team in setting goals (Spencer, 1991). The student

and his/her family are the central members of the team, and professionals are to advise, contribute, and support the overall **team** effort. This team effort is the core of the collaborative teaming approach that uses an integrated model of service delivery.

Finally, occupational therapists traditionally provided services in one setting, i.e., the clinic, school, home. "Visits" may be made to other settings during therapy but are not of primary focus. Therapy services related to transition take place in all relevant environments as indicated by the transition team and individualized transition plan (ITP). This concept of community-based instruction already has been discussed as a best educational practice for students of all ages with severe disabilities. However, it may become a more obvious issue as students reach adolescence, since the majority of their instruction should occur in community settings.

Spencer and Sample (1993) stated that the mandated transition content of P.L. 101-476 reflects the major performance areas central to the profession of occupational therapy. These include work, education, and independent living (i.e., activities of daily living, community participation, mobility, recreation/leisure). In addition, occupational therapists often are the team members with knowledge and expertise related to assistive technology. Many students with severe and multiple disabilities will need assistive technology assessment and training, as well as assistance with acquiring devices to function within future adult roles such as work, home, leisure, and community.

DuBois (1993) noted that the concepts central to transition programming may seem foreign to occupational therapists who practice in the school setting, since many have been primarily concerned with preschool or elementary age students. However, "the heavy emphasis

on function may serve to bring many occupational therapists back to their philosophical roots" (p. 53). DuBois suggested the following points for occupational therapists to consider when defining their roles in the transition process:

1. Coordinate and conduct highly functional assessments in a variety of environments.
2. Plan and deliver services to promote productive and meaningful adult functioning.
3. Adapt the school or nonschool environment to maximize student performance (DuBois, 1993, pg. 53).

More specifically, DuBois stated that occupational therapists who serve adolescents with severe disabilities must: 1) emphasize collaboration, 2) share responsibility for students' goal attainment, 3) use respectful language, eliminating therapy jargon, and 4) emphasize team-generated goals and not individual occupational therapy goals. Although these points were identified specific to the transition process, they also are generic to the best educational practices discussed earlier in this literature review.

Community-based vocational roles for occupational therapists. Wehman and associates (1988b) suggested that occupational therapists can play an important role in the transition process by providing valuable input for analyzing what a student can do physically and then modifying functional daily activities by designing, fabricating, or prescribing simple adaptive equipment for community-based vocational training. Sowers and Powers (1991) stated that occupational therapists should 1) assist the teacher and vocational staff in conducting job site and task analyses; 2) identify and implement job design strategies at the job site; 3) identify and implement strategies to assist in work related skills such as eating, drinking, and using the

bathroom; 4) provide monthly job site visits to determine additional design and adaptation strategies; and 5) attend regularly scheduled meetings to review student progress.

Renzaglia, Hutchins, Koterba-Buss, and Strauss (1992b) have developed a strategy for assessing the potential physical abilities of a student for 1) defining the relationship between the individual's physical abilities and the demands of a job for the job matching process, 2) providing information to personnel who create job adaptations, and 3) giving the team who serves the student a common reference for discussing appropriate vocational goals. These authors stated that one of the primary reasons for the limited number of successful employment outcomes for persons with multiple disabilities is the lack of design and fabrication of necessary job and/or equipment modifications for students to participate in integrated community employment opportunities. Occupational therapists can play a critical role in this design and fabrication process (M. Hutchins, personal communication, March 4, 1994).

Sowers, Jenkins, and Powers (1988) suggested another reason that students with cognitive and physical disabilities have been excluded from vocational training. They stated that some therapists feel that older students with physical disabilities cannot learn new motor responses through direct intervention. Therefore, therapy focuses on maintenance of movement once these students reach adolescence, since it is assumed that the central nervous system can no longer be modified. However, a combined approach of instruction on the job site using systematic instruction, detailed task analyses including specific motor steps, and environment/equipment adaptations have been successful in teaching students with severe and multiple disabilities functional vocational tasks (Renzaglia, Hutchins, Koterba-Buss, 1992; Renzaglia, Hutchins, Koterba-Buss et al., 1992; Sowers et al., 1988, Sowers & Powers, 1991;

Wehman, Wood et al., 1988).

Lin and Browder (1990) demonstrated that adults with disabilities can improve motor functioning within the context of a vocational task. Three adults with profound mental retardation increased their production rates on mail service tasks when instructed using a task analysis based on the technique of motion study (Niebel, 1982). An industrial engineer and the first author of this study observed the three workers and developed a task analysis that incorporated efficient motor movements which eliminated unnecessary motions by the consumers for completing the tasks (Barnes, 1980). A multiple baseline across the three workers demonstrated a functional relationship between increased production and the technique of motion study. Although an occupational therapist was not involved in this particular study, implications for using a motion study approach for training students with severe disabilities is apparent.

Everson and Goodwyn (1987) compared the effectiveness of four types of microswitches during a vocational training program for three adolescents with severe physical disabilities. The program was designed jointly by an occupational therapist and a special education teacher using characteristics of potential jobs available to students with severe disabilities in their home community. Using a multi-element design, the authors identified 1) the most effective movement pattern, 2) switch, and 3) placement of equipment for each student to participate in a functional vocational training activity. Everson and Goodwyn reported that all students seemed to have increased control over extraneous athetoid movements during the training. Although no formal data for motor skill development were collected, this study provides support for integrating therapy objectives into functional vocational programming.

Challenges for integrating occupational therapy in the transition process. The philosophical construct of occupational therapy lends support for the inclusion of occupational therapists on transition teams for students with severe disabilities. This construct is based on the concept of "purposeful activity" or those tasks such as work that have meaning for the individual. The underlying assumption is that this participation in meaningful activity provides intrinsic motivation for the individual to persist in reaching goals (Clark, 1979; Fidler & Fidler, 1978; Vogel, 1991; West, 1984). This intrinsic motivation seems to have resulted in enhanced physical control when students participated in a vocational training activity as noted in the Everson and Goodwyn study (1987). However, many therapists within the public school system have not embraced the integrated service delivery model (Dunn, 1991; Giangreco, 1986a).

Limited research has been conducted on identifying roles of the occupational therapy practitioner within the public schools. Giangreco (1990) used a questionnaire to identify the similarities and differences among parents, special education teachers, occupational therapists, physical therapists, and communication specialists regarding 1) roles of related service professionals, 2) criteria used to make related service decisions, and 3) authority for making decisions. All groups strongly rated a) developing adaptations and/or equipment to encourage functional participation, and b) facilitation of functional skills and activities as the two most important roles engaged in by related service personnel. The questionnaire did not address, however, where these activities should occur (e.g., isolated vs. direct service delivery models).

Giangreco (1990) did report that related service professionals felt that it was more important to provide services to students with favorable histories and prognoses for remediation, and those with higher levels of intelligence. He concluded that this may indicate a

disproportionate emphasis on promoting normal developmental sequences and remediating identified deficits that are closely associated with traditional medical models. His hypothesis was supported by the fact that the background data collected from the questionnaire indicated that related services still are primarily provided in direct models and in physically isolated environments.

Another important finding of this study was that related service professionals felt that they should retain the final authority to make decisions regarding service delivery for their discipline. Although they believed that they had responsibility to share their recommendations, they did not feel that final decisions should be made by the team. Giangreco (1990) speculated that professional authority continues to "plague group decision making, and consequently the quality of educational and related services provided to students with handicapping conditions" (p. 29).

The results of this study provide preliminary information regarding occupational therapists' roles in the public school system; however, they are limited by the fact that a voluntary sample included only 46 occupational therapists from two eastern states. A larger random sample of therapists nationally would be needed to validate the results. In addition, the questionnaire does not address specific issues related to the roles of occupational therapists in the transition process to include issues such as therapist knowledge and attitudes towards: 1) service delivery in functional community environments, 2) participation on collaborative transition teams, 3) implementation of an integrated therapy model, and 4) expected transition outcomes for students with severe disabilities.

Summary

There are numerous challenges for integrating occupational therapy into the natural life environments of students with severe disabilities for effecting positive transition outcomes. Occupational therapists have expertise in the development and adaptation of environments and in sensorimotor functioning and its effect on skill acquisition. Their knowledge and expertise can directly influence a student's skill acquisition for functional transition outcomes such as work. This study provides information on occupational therapists' current perceptions of their roles for transition planning, their participation in the transition process, and their attitudes toward transition best practices. This information will assist in the identification of preservice and continuing education needs for therapists in order to further develop and define the roles that facilitate the participation of occupational therapists on collaborative transition teams for students with severe disabilities.

Table 2.1

Definition of Terms

Block Scheduling refers to an occupational therapist scheduling blocks of time for service delivery to a group of students rather than scheduling one-to-one therapy sessions with individual students. For instance, the therapist may identify that a group of students are on his or her occupational therapy case load to receive services and that they are located in a specific classroom. Instead of developing a schedule that indicates specific time periods for each student, the therapist would indicate on his or her schedule that services are being delivered in "classroom A" from 9:00 to 11:00 a.m.. The therapist and teacher review each student's needs at the beginning of this block of time to determine the specific activities and skills to be addressed. This type of block scheduling allows for flexibility of programming as well as time for consultation among the therapist and other IEP/ITP team members.

Community-Based Service Delivery refers to teaching/training students within the actual environments where they need to perform activities rather than teaching all skills in the classroom. For instance, if a student needs to learn to purchase groceries, training would occur in a community supermarket rather than in a simulated store in the special education classroom. The supermarket in this example would be referred to as a functional community environment.

Community-Based Vocational Training has been defined as: the type of training that uses the facilities, materials, persons, and/or tasks within a business to teach and assess students' work

Definition of Terms

and related tasks. In this sense, the actual business environment is considered an extension of the classroom teachers, counselors, and support staff perform their instructional and evaluation roles within the context of the business environments (Pumpian, Shepard, & West, 1988a).

Integrated Therapy Services (also referred to as integrated therapy, integrated therapy model, or integrated programming) is defined by Campbell (1987a) as "all motor skills must be incorporated into functional curricular domains, rather than trained in isolation..from the environmental context in which those skills will be used" (p. 185). In other words, integrated programming requires that therapists incorporate or "embedded" their programming objectives within everyday, functional activities rather than work on such things as motor skills in isolation. For instance, an occupational therapist may work with a student on head control during recreation class rather than in a one-to-one session in the therapy room using a therapy ball. Or, the occupational therapist may assist in analyzing a student's fine motor functioning on a community job-site rather than teaching the student to put pegs in a pegboard. This term is also associated with the term indirect therapy approach.

Indirect Therapy Approach refers to the delivery of therapy by team members other than the occupational therapist. This term is associated with the terms integrated therapy, integrated programming, and transdisciplinary programming. Occupational therapists using this approach would involve themselves to a greater extent as consultants to the teacher or other team

Definition of Terms

members (Orellove & Sobsey, 1991). For instance, the occupational therapist may assess a student during mealtime and develop an oral-motor program to facilitate mealtime skills. He or she would then train the teacher or other team member(s) to perform the "therapy" while providing feedback on their performance. The teacher or other team members can then implement the oral-motor program on a daily basis even when the occupational therapist can not be present. Continued supervision and consulting is provided by the therapist weekly or as needed basis. The student would be receiving indirect therapy services in this example.

Interdisciplinary Model provides a structure for interaction and communication between different disciplines who provide services to students with disabilities (Orellove & Sobsey, 1991). Service delivery, however, continues to be discipline specific. In other words, the occupational therapist may communicate with other team members and discuss program development, but he or she would continue to be responsible for program implementation.

Isolated Therapy Model (also associated with the term physical isolation) refers to the removal of a student from the classroom or other natural environment (e.g., cafeteria, school hallway, physical education class) for the delivery of direct therapy by the occupational therapist. Typically, this involves delivering therapy services that are not referenced to the student's daily activities such as passive range of motion exercises or facilitation techniques in a therapy room away from the student's peers.

Definition of Terms

Medical Model refers to the identification of the underlying etiology of a student's disability or problem and then the therapist designs an intervention program to "remediate" the cause of the disorder (Ottenbacher, 1983). A medical model orientation advocates for therapeutic assessment and interventions that are conducted within isolated therapy environments. The therapist is seen as the "expert" or only qualified individual for delivering the intervention program.

Multidisciplinary Approach refers to a service delivery model in which all disciplines work in isolation or individually with a student. In fact, professionals who use this approach may not associate themselves with belonging to a team (Orelove & Sobsey, 1991), and there is no formal attempt to coordinate or integrate services within a total program for the students served.

Primary Therapist Model is a strategy for maximizing the availability of related service personnel to students with disabilities. This model recognizes that many occupational and physical therapists have similar or overlapping areas of expertise and training. Therefore, the IEP/ITP team identifies either the physical or occupational therapist as the primary "motor" therapist to deliver services. When using the primary therapist model, the occupational and physical therapist jointly assess a student and develop an integrated therapy program which is delivered by the one identified as the primary "motor" therapist. Continued consultation occurs between the two therapists on a regularly scheduled basis for program modification (York, Rainforth, Giangreco, 1990).

Definition of Terms

Role Release refers to a sharing and exchanging of certain roles and responsibilities among team members that are typically associated with one specific discipline (Lyon & Lyon, 1980). The term implies the releasing of a technique from one team member to another team member of a different discipline. For instance, the occupational therapist "releases" or trains the teacher to perform a technique that is seen as within the occupational therapist's area of expertise.

Severe Disabilities generally are characterized in terms of cognitive, behavioral, sensory, or physical deficits that significantly limit an individual's adaptive functioning. The Association for Persons with Severe Handicaps (1985) provides a definition of severe disabilities which focuses on the supports that individuals require to function within integrated natural environments. Specifically, it states:

The Association for Persons with Severe Handicaps addresses the interests of persons with severe handicaps who have traditionally been labelled as severely intellectually disabled. These people include individuals of all ages who require extensive ongoing support in more than one major life activity in order to participate in integrated community settings and to enjoy a quality of life that is available to citizens with fewer or no disabilities. Support may be required for life activities such as mobility, communication, self-care, and learning as necessary for independent living, employment, and self-sufficiency. (TASH, 1985)

Definition of Terms

Transdisciplinary Model (related terms include transdisciplinary teamwork, transdisciplinary programming, collaborative teamwork, indirect therapy model) is characterized by a sharing or transferring of skills among professionals who serve on a collaborative team. Team members collaborate to complete student assessments and to develop a total program that incorporates all the disciplines' input. Service delivery incorporates an indirect therapy model which is characterized by four basic assumptions (Stemat et al., 1977).

1. Assessment of motor abilities can be best completed in natural environments.
2. Students should be taught motor skills during functional daily activities (those needed in everyday living).
3. Therapy should be provided throughout the day and in all settings where the student participates.
4. Skills must be taught in the settings in which they occur naturally.

CHAPTER III

Methodology

Sample Selection

The sample for this study was identified using the American Occupational Therapy Associations's (AOTA) Direct Mailing List. When this study was initiated, the list contained 3,944 names and addresses of registered occupational therapists who identified themselves as working in a school-based practice. At the completion of this study, the list contained the names of 4,478 therapists. Table 3.1 lists the number of therapists currently practicing within each of the fifty states, United States territories, and the District of Columbia for this special interest group.

The AOTA's Direct Mail Department completed the simple random sampling procedure which identified 1,000 occupational therapists for participation in this study. All policies set forth by the Association for use of the mailing list were followed including: 1). the purchase of pressure sensitive labels from AOTA which were used for all mailings and 2). the maintenance of confidential records to ensure the privacy of the respondents. In addition, a sample of the questionnaire was mailed for AOTA approval prior to the purchase of the labels as per AOTA policy. The questionnaire was reviewed by AOTA's research division and practice department, and it was approved for mailing.

Questionnaire Development

The development of the questionnaire for this study consisted of five primary activities: (1) semi-structured telephone interviews with national experts on occupational therapy service delivery and transition planning, (2) semi-structured interviews with occupational therapy

Table 3.1

American Occupational Therapy Direct Mail List for School Systems

Number of Registered Occupational Therapists in School-Based Practice by State, US Territories, and the District of Columbia					
State	Total	State	Total	State	Total
AE	17	LA	48	OR	45
AK	28	MA	245	PA	198
AL	22	MD	106	PR	9
AR	24	ME	54	RI	20
AZ	80	MI	243	SC	27
CA	204	MN	135	SD	20
CO	98	MO	71	TN	45
CT	104	MS	6	TX	159
DC	2	MT	14	UT	20
DE	16	NC	79	VA	148
FL	160	ND	32	VT	18
GA	69	NE	38	WA	152
HI	16	NH	79	WI	140
IA	29	NJ	251	WV	16
ID	11	NM	53	WY	16
IL	169	NV	12	Grand Total:	
IN	83	NY	533		
KS	56	OH	182		
KY	48	OK	28		
				4,478	

practitioners who had been involved in transition programming, (3) item generation and selection was on the semi-structured interviews and an in-depth literature review, (4) expert panel review, (5) pilot testing and questionnaire revision. Each step is described below.

Semi-structured interviews with nationally recognized occupational therapy experts. Five nationally recognized experts in the field of occupational therapy and transition planning were identified using a "snowballing" strategy (Taylor & Bogdan, 1984). This included selecting informants by reviewing the literature, obtaining recommendations from personal contacts, and asking identified informants to recommend additional national experts for the semi-structured interview process. Semi-structured interviews were completed by telephone contact. Questions for the interviews were generated based on current literature on occupational therapy school-based practice and transition. Each informant was asked the same set of questions and had the opportunity to make additional comments as generated by discussion. National experts were told prior to the interview that notes were being collected during the conversation. The following questions were used for the telephone interviews.

1. Describe the functions that occupational therapists perform in a school-based practice.
2. Describe the role(s) that occupational therapists should play in the transition process for students age 14 and older.
3. What factors do you think are currently prohibiting and/or facilitating occupational therapists' involvement in these roles?
4. Should occupational therapists participate in community-based instruction (e.g., accompany students into the community for skill development)?

5. What role(s) do you think therapists should take in facilitating employment outcomes for students with severe disabilities?

Semi-structured interviews with occupational therapy practitioners. Occupational therapy practitioners who had experience providing therapy services to students of transition age also were identified using a "snowballing" strategy. Specifically, the nationally recognized experts in occupational therapy were asked to recommend therapists in school-based practice. In addition, therapists were asked to identify colleagues who would be willing to discuss their school-based practice. Semi-structured interviews were conducted using the same strategies outlined in the above section to include open-ended questions on occupational therapy school-based practice, barriers to service delivery, and recommended roles of therapists in the transition process. A total of eight therapists provided feedback during this phase.

Item generation and selection. Information from all semi-structured interviews including national experts and practitioners, as well as a review of the literature, were used to generate items for the questionnaire. Items were selected for each of the content areas to include professional demographics, occupational therapy school-based practice characteristics, attitudes toward school-based practice and transition, and occupational therapists' expressed training needs in the area of school-based practice and transition. A total of 69 questions comprised the first draft of the survey.

Expert panel review. After a draft of the questionnaire was developed, it was sent to the national experts and practitioners who assisted in the generation of the survey items. In addition, five other national experts who were unfamiliar with the study were identified to provide feedback on the proposed instrument. Therefore, a total of 18 professionals received

a draft copy of the questionnaire and a review sheet for their comments. All 18 professionals returned the questionnaire with written feedback. Modifications to the survey included rewording items specifically in the attitude section of the questionnaire, deleting 2 items related to duplication of content, and writing additional attitude statements and training items based on the panel review.

At this stage of the process, the questionnaire consisted of 80 items that were formatted into five double-sided pages. The first page consisted of a cover sheet that gave the name of the survey, the originating agency, RRTC/VCU, and the name and address of the researcher. The back of this sheet contained the federal definition of transition programming based on a recommendation made by one of the national experts. The next seven pages contained the questionnaire items. Actual formatting of these items was completed based on the recommendations made by Dillman (1978). Specifically, all questions were in lower case letters, and answers were in upper case. Instructions were provided to direct respondents through the questionnaire including encouraging comments for continuing to respond to the items. The back page was left blank except for a statement encouraging respondents to provide additional information or comments.

Pilot testing and questionnaire revision. The final step was to pilot test the questionnaire and revise it based upon the initial responses. A nonexperimental pilot group of therapists was identified using a list of schools who served as internship sites for the School of Occupational Therapy at Virginia Commonwealth University. The questionnaire and instructions for completion were mailed to the pilot group along with a letter explaining the purpose of the study. In addition to completing the questionnaire, participants were asked to assess the clarity

of the instructions and the clarity of the items, and to provide general feedback concerning the questionnaire. Results of the pilot test were used to modify the wording on several of the questionnaire items prior to professionally printing the final product.

Questionnaire Description

The questionnaire was mailed to the occupational therapists selected by the simple random sample conducted by AOTA's Direct Mailing Department. The actual items on the questionnaire are presented in Table 3.2 and consisted of items on 1) occupational therapy school-based practice characteristics, 2) attitudes toward school-based practice issues and transition, 3) perceived training needs, and 4) professional demographics.

1. Occupational therapy school-based practice characteristics. (Questionnaire items #1 - 22). This section asked therapists to provide information concerning the delivery of occupational therapy in their school-based practices. For instance, therapists responded to questions concerning their participation on ITP teams, inclusion of occupational therapy objectives in the ITP/IEP, location of therapy services, and so forth. Formats for completion of items within this section consisted of multiple choice and ranked items with a scale of (1), (2), (3) where one was the first choice and so on.

2. Attitudes toward school-based practice and transition. (Questionnaire items #23 - 47). A 5-point Likert scale was used to assess occupational therapists' attitudes toward statements regarding "best practices" related to school-based practice and transition. The statements included such issues as integrating therapy techniques into students' daily activities, participating on collaborative teaming, involving the OT in community-based training, and so forth. The Likert scale weights for items in this section

of the questionnaire were assigned as follows: strongly disagree (1), disagree (2), no opinion (3), agree (4), to strongly agree (5).

3. Perceived training needs in the area of school-based practice and transition. (Questionnaire items #48 - 60). Items in this section consisted of Likert scale responses. These questions asked occupational therapists to identify the training needs that they felt were necessary for occupational therapists to work in a school-based practice. The Likert scale weights for items in this section of the questionnaire were assigned as follows: not needed (1), beneficial (2), to very beneficial (3).

4. Professional demographics. (Questions #61 - 80). These items consisted of multiple choice and item completion questions about the respondent's length of employment in school-based practice, age, sex, educational degrees, previous employment experiences, length of time since degree completion, and so forth.

Administration Procedures

The questionnaire was mailed using first class postage to the sample of 1,000 registered occupational therapists from the AOTA Direct Mailing List. The questionnaire was accompanied by a cover letter and a business reply envelope for the respondents' convenience. Table 3.3 contains a copy of this cover letter.

The purpose of the study was described as a national study to identify occupational therapy roles, attitudes, and training needs related to school-based practice and transition. Each questionnaire contained general instructions for completing and returning the survey. All questionnaires were coded with a number located on the front cover in the top right hand corner to identify respondents versus non-respondents for follow-up mailings. Respondents were

Table 3.2

School-Based Practice Survey

Instructions. Currently, we know little about how occupational therapists are involved in transition programming from school to adulthood for students ages 14 and older. Your answers will help us begin to describe and understand what therapists identify as their roles and contributions. First, we would like to ask you some questions related to your school-based practice and your participation in transition planning for students ages 14 and older. Remember, there are no right or wrong answers, and your responses are all confidential. Your name will never appear on this questionnaire. (It will take you approximately 30 minutes to complete the questions.)

Q-1. During the 1993-94 school year, did you have student(s) ages 14 or older on your student case load? (Circle one number)

1 NO

If you **DID NOT** have any students age 14 or older on your caseload, please **STOP HERE** and **RETURN THE QUESTIONNAIRE IN THE ENCLOSED ENVELOPE**. It is very important that you return your questionnaire, since we want to know how many therapists are not serving transition-age students.

2 YES

If you did serve students ages 14 and older during the 1993-94 school year, please go to question 2.

Q-2. How does your school system conduct individual transition planning (ITP) meetings for students ages 14 and older? (Circle one number)

1 I DO NOT KNOW HOW MY SCHOOL SYSTEM CONDUCTS ITP MEETINGS

2 MY SCHOOL DOES NOT HAVE ITP MEETINGS

3 TRANSITION MEETINGS ARE PART OF THE INDIVIDUALIZED EDUCATIONAL PROGRAM (IEP) MEETING

4 ITP MEETINGS ARE CONDUCTED SEPARATELY FROM IEP MEETINGS

Q-3. Is your attendance at ITP/IEP meetings required for those students who have OT services listed on their ITP/IEP? (Circle one number)

1 NO

2 YES

Q-4. How often do you attend ITP/IEP meetings for students who are receiving OT services? (Circle one number)

1 NEVER

2 INFREQUENTLY

3 SOMETIMES

4 MOST OF THE TIME

5 ALWAYS

Q-5. Who makes the final decision regarding an OT's attendance at the ITP/IEP meetings? (Circle one number)

1 SCHOOL ADMINISTRATION

2 SPECIAL EDUCATION SUPERVISOR OR TEACHER

3 OCCUPATIONAL THERAPY SUPERVISOR

4 ITP/IEP MEMBERS AS A TEAM DECISION

5 OT WHO WILL PROVIDE THE SERVICES

6 FAMILY/GUARDIAN

7 STUDENT

8 OTHER _____

(table continues)

Table 3.2 continued

- Q-6. Who do you think should make the final decision regarding an OT's attendance at ITP/IEP team meetings? (Circle one number)
- 1 SCHOOL ADMINISTRATION
 - 2 SPECIAL EDUCATION SUPERVISOR OR TEACHER
 - 3 OCCUPATIONAL THERAPY SUPERVISOR
 - 4 ITP/IEP MEMBERS AS A TEAM DECISION
 - 5 OT WHO WILL PROVIDE THE SERVICES
 - 6 FAMILY/GUARDIAN
 - 7 STUDENT
 - 8 OTHER _____
- Q-7. Who makes the final decision on whether a student will receive OT services? (Circle one number)
- 1 SCHOOL ADMINISTRATION
 - 2 SPECIAL EDUCATION SUPERVISOR OR TEACHER
 - 3 OT SUPERVISOR
 - 4 ITP/IEP TEAM MEMBERS AS A TEAM DECISION
 - 5 OT WHO WILL PROVIDE THE SERVICES
 - 6 FAMILY/GUARDIAN
 - 7 STUDENT
 - 8 OTHER _____
- Q-8. Who do you think should make the final decision on whether a student receives OT? (Circle one number)
- 1 SCHOOL ADMINISTRATION
 - 2 SPECIAL EDUCATION SUPERVISOR OR TEACHER
 - 3 OT SUPERVISOR
 - 4 ITP/IEP MEMBERS AS A TEAM DECISION
 - 5 OT WHO WILL PROVIDE SERVICES
 - 6 FAMILY/GUARDIAN
 - 7 STUDENT
 - 8 OTHER _____
- Q-9. When completing an OT assessment on a transition age student, do you go to the student's home to evaluate activities of daily living skills for developing ITP/IEP objectives? (Circle one number)
- 1 NEVER
 - 2 INFREQUENTLY
 - 3 SOMETIMES
 - 4 MOST OF THE TIME
 - 5 ALWAYS
- Q-10. When completing an OT assessment on a transition age student, do you go to community sites (e.g. restaurants, grocery store, bank, etc.) to evaluate the student in order to develop ITP/IEP objectives? (Circle one number)
- 1 NEVER
 - 2 INFREQUENTLY
 - 3 SOMETIMES
 - 4 MOST OF THE TIME
 - 5 ALWAYS

(table continues)

Table 3.2 continued

- Q-11. How do you develop ITP/IEP objectives for students who receive OT services? Select the strategy that you use most often. (Circle one number)
- 1 THE OT IS EXPECTED TO WRITE ITP OBJECTIVES PRIOR TO A TEAM MEETING, AND THESE ARE WRITTEN ON THE ITP/IEP
 - 2 THE OT CONDUCTS A SEPARATE EVALUATION, AND THE TEAM DEVELOPS ONE SET OF OBJECTIVES BASED ON INPUT FROM ALL MEMBERS AT THE ITP/IEP MEETING.
 - 3 A TRANSDISCIPLINARY TEAM EVALUATION IS COMPLETED (E.G. PT, SPEECH, OT, STUDENT, & TEACHER), AND ONE SET OF OBJECTIVES IS DEVELOPED DURING THE IEP/ITP MEETING
 - 4 OTHER: PLEASE EXPLAIN
- Q-12. During the 1993-94 school year, was OT identified as a needed service to assist in implementing vocational ITP/IEP objectives for transition age students with severe disabilities? (Circle one number)
- 1 NO
 - 2 YES _____ HOW MANY STUDENTS?
- Q-13. During the 1993-94 school year, did you visit vocational training sites in the community (non-paid experiences) to assist in analyzing or modifying work tasks for students to meet ITP/IEP objectives? (Circle one number)
- 1 NOT AT ALL
 - 2 LESS THAN ONCE A MONTH
 - 3 ABOUT ONCE A MONTH
 - 4 ABOUT TWO TO THREE TIMES A MONTH
 - 5 ABOUT ONCE A WEEK
 - 6 MORE THAN ONCE A WEEK
- Q-14. During the 1993-94 school year, did you visit students' job sites in the community to assist in analyzing or modifying jobs for paid employment? (Circle one number)
- 1 NOT AT ALL
 - 2 LESS THAN ONCE A MONTH
 - 3 ABOUT ONCE A MONTH
 - 4 ABOUT TWO TO THREE TIMES A MONTH
 - 5 ABOUT ONCE A WEEK
 - 6 MORE THAN ONCE A WEEK
- Q-15. During the 1993-94 school year, was OT identified as a needed service to assist in implementing community living ITP/IEP objectives (e.g., shopping, preparing a meal, etc.) for transition age students with disabilities? (Circle one number)
- 1 NO
 - 2 YES _____ HOW MANY STUDENTS?
- Q-16. During the past 1993-94 school year, did you provide therapy in community settings (e.g. restaurant, student's home, grocery store, bank, etc.)? Do not include the school as a community setting. (Circle one number)
- 1 NOT AT ALL
 - 2 LESS THAN ONCE A MONTH
 - 3 ABOUT ONCE A MONTH
 - 4 ABOUT TWO TO THREE TIMES A MONTH
 - 5 ABOUT ONCE A WEEK
 - 6 MORE THAN ONCE A WEEK

(table continues)

Table 3.2 continued

Q-17. On the average, how many times per week did you have at least 15 minutes to discuss/review each student on your caseload with other team members (e.g., PT, teacher, speech therapist, etc.)? (Circle one number)

- 1 NOT AT ALL
- 2 LESS THAN ONCE A MONTH
- 3 ABOUT ONCE A MONTH
- 4 ABOUT TWO TO THREE TIMES A MONTH
- 5 ABOUT ONCE A WEEK
- 6 MORE THAN ONCE A WEEK

Q-18. On the average, how many times per week did you have at least 15 minutes to train other team members to integrate OT techniques into the daily activities for each student on your caseload? (Circle one number)

- 1 NOT AT ALL
- 2 LESS THAN ONCE A MONTH
- 3 ABOUT ONCE A MONTH
- 4 ABOUT TWO TO THREE TIMES A MONTH
- 5 ABOUT ONCE A WEEK
- 6 MORE THAN ONCE A WEEK

Q-19. Using the following six categories, indicate where your OT intervention occurs from the most often to least often used location? (Put the number corresponding to the location in the appropriate blank. Use each number only once.)

- 1 THERAPY ROOM
- 2 THERAPY AREA IN THE SPECIAL ED CLASSROOM
- 3 ANY AREA IN THE SPECIAL ED CLASSROOM WHERE A STUDENT PARTICIPATES IN ACTIVITIES
- 4 REGULAR EDUCATION CLASSROOM
- 5 ANY AREA OF THE SCHOOL WHERE THE STUDENTS ARE ENGAGED IN ACTIVITIES (E.G., CAFETERIA, PLAYGROUND, HALLWAYS, SCHOOL BUS, ETC.)
- 6 IN THE COMMUNITY (E.G., GROCERY STORE, BANK, RESTAURANT, MALL, OR LOCAL BUSINESSES)

- ____ MOST USED LOCATION
- ____ SECOND MOST USED LOCATION
- ____ THIRD MOST USED LOCATION
- ____ FOURTH MOST USED LOCATION
- ____ FIFTH MOST USED LOCATION
- ____ SIXTH MOST USED LOCATION

Q-20. Using the six categories in the previous question, decide which location you would consider to be the most preferred to the least preferred if you were totally in charge of where you provide services. (Put the number corresponding to the location in the appropriate blank. Use each number only once.)

- ____ MOST PREFERRED LOCATION
- ____ SECOND MOST PREFERRED LOCATION
- ____ THIRD MOST PREFERRED LOCATION
- ____ FOURTH MOST PREFERRED LOCATION
- ____ FIFTH MOST PREFERRED LOCATION
- ____ SIXTH MOST PREFERRED LOCATION

(table continues)

Table 3.2 continued

Q-21. On which one of the following activities do you spend the most time during a typical work week for transition age students on your caseload? (Circle one number)

- 1 DIRECT THERAPY PROVIDED TO STUDENTS BY YOU AS THE OCCUPATIONAL THERAPIST
- 2 CONSULTING WITH OTHER TEAM MEMBERS TO DEVELOP STUDENT OBJECTIVES (E.G., TEACHER, SPEECH THERAPISTS, PHYSICAL THERAPISTS, AIDES)
- 3 TEACHING OTHER TEAM MEMBERS TO INTEGRATE/IMPLEMENT OCCUPATIONAL THERAPY STRATEGIES INTO STUDENTS' DAILY ACTIVITIES
- 4 MONITORING STUDENT PROGRESS

Q-22. Using the four activities listed in the previous question, rank them in order of importance for students of transition age if you were totally in charge of your schedule. (Put the number corresponding to the activity in the appropriate blank. Use each number only once.)

- ____ MOST IMPORTANT ACTIVITY
 ____ SECOND MOST IMPORTANT ACTIVITY
 ____ THIRD MOST IMPORTANT ACTIVITY
 ____ FOURTH MOST IMPORTANT ACTIVITY

Now, we would like to ask your opinion on issues of interest to occupational therapists who work with transition-age students (14 to 22 years) in school-based practice. Remember, there are no right or wrong answers, and your responses are all confidential. (Circle one answer)

Q-23. Direct therapy provided by a therapist is the best way to improve the functional abilities of students with disabilities.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-24. Developmental Checklists are useful when identifying OT objectives for transition-age students with disabilities.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-25. Stuffing envelopes in the special ed classroom is a good example of a prevocational task for transition students with disabilities.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-26. OTs should teach other ITP/IEP members (e.g., teachers, speech therapists, aides, etc.) to implement OT techniques during the student's day in real-life situations.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-27. Teachers don't want to implement OT techniques. They think OTs should provide direct therapy services.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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(table continues)

Table 3.2 continued

Q-28. There are some intervention techniques that only a therapist should implement (e.g. handling techniques such as physical guidance, tone, and/or sensory normalization.)					
NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	
Q-29. Operating a school store in the special ed. classroom is an example of an activity that will prepare students with severe disabilities to work in the community.					
NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	
Q-30. Parents don't want OTs to teach other team members to implement OT techniques. They think that the OT should provide direct therapy services.					
NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	
Q-31. The ITP/IEP team should make the final decision on whether a student receives OT services.					
NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	
Q-32. Simulating a sheltered workshop in the school building for vocational training is a good idea.					
NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	
Q-33. OT goals and objectives should be in a separate/special section of a student's IEP or ITP.					
NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	
Q-34. When OTs work w/ transition age students, focus should be on teaching functional skills (e.g., ADL/ home management, grocery shopping, self-care, preparing meals).					
NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	
Q-35. Teaching a transition age student wheelchair mobility skills in the community (e.g., crossing streets, riding public transportation, etc.) is something an OT should do.					
NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	
Q-36. OTs don't need to attend ITP meetings as long as they have completed an OT evaluation and submitted the student's goals and objectives prior to team meetings.					
NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	

(table continues)

Table 3.2 continued

Q-37. Students with severe disabilities should receive on-the-job training in real community jobs prior to leaving school.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-38. Providing on-the-job training to students in real community jobs is something an OT should spend time doing.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-39. The OT's role in on-the-job training for students is to provide consultation, job site modifications, and assistive technology devices as needed.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-40. OTs should evaluate students in community sites (e.g., student's home, restaurants, YMCA, etc.) to identify assistive technology needs as part of transition planning.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-41. As students reach transition age (14-22), the need for OT services decreases.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
------------	----------------------	----------	-------	-------------------

Q-42. Working in sheltered workshops or day activity centers is a good transition outcome for students with severe disabilities.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
------------	----------------------	----------	-------	-------------------

Q-43. Students of pre-school and elementary age have priority for OT services over students of transition age.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-44. Students with severe disabilities who receive training at school (e.g. shopping at a simulated store; using a washer in home economics; working in the school's cafeteria) will be able to use (generalize) these skills in other environments (e.g. laundromat, grocery store, job site, etc.).

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-45. As students get older and near graduation, their ability to benefit from OT intervention decreases.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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(table continues)

Table 3.2 continued

Q-46. Students with the most severe disabilities can earn minimum wage in community jobs if given support & training.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Q-47. OTs should use their expertise to facilitate group home/ supervised apartment living for students with severe disabilities.

NO OPINION	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
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Instructions: You have completed the second section of this survey! Thanks for continuing. The next section will ask you to consider the training needs of OTs related to transition programming. Please consider if you think that it would be beneficial for OTs to receive training on a topic in order for OTs to effectively participate in transition planning for students with severe disabilities.

Q-48. The Americans with Disabilities Act (ADA) and its implications for OT practice.

NOT NEEDED	BENEFICIAL	VERY BENEFICIAL
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Q-49. The Individuals with Disabilities Education Act (IDEA) and its implications for OT practice.

NOT NEEDED	BENEFICIAL	VERY BENEFICIAL
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Q-50. The Rehabilitation Act Amendments of 1992 and their implications for OT practice.

NOT NEEDED	BENEFICIAL	VERY BENEFICIAL
------------	------------	-----------------

Q-51. Liability and legal issues for providing OT services in a school-based practice.

NOT NEEDED	BENEFICIAL	VERY BENEFICIAL
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Q-52. Identifying educationally relevant OT services and objectives.

NOT NEEDED	BENEFICIAL	VERY BENEFICIAL
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Q-53. Using a collaborative team model. (Strategies to develop parent/teacher/therapist collaboration in the transition planning process.)

NOT NEEDED	BENEFICIAL	VERY BENEFICIAL
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Q-54. Providing therapy services in the regular education classroom.

NOT NEEDED	BENEFICIAL	VERY BENEFICIAL
------------	------------	-----------------

Q-55. Completing OT assessments in community sites/environments.

NOT NEEDED	BENEFICIAL	VERY BENEFICIAL
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(table continues)

Table 3.2 continued

Q-56. Strategies for delivering OT services in community settings (e.g., home environments, grocery store, bank, YMCA, etc.).

NOT NEEDED BENEFICIAL VERY BENEFICIAL

Q-57. Strategies for training other ITP/IEP team members to implement OT goals and objectives.

NOT NEEDED BENEFICIAL VERY BENEFICIAL

Q-58. Supported employment as a transition outcome for students with disabilities.

NOT NEEDED BENEFICIAL VERY BENEFICIAL

Q-59. Assistive technology to facilitate paid employment in competitive job sites.

NOT NEEDED BENEFICIAL VERY BENEFICIAL

Q-60. Assistive technology to facilitate community/independent living skills.

NOT NEEDED BENEFICIAL VERY BENEFICIAL

Instructions: YOU NOW HAVE COMPLETED THE THIRD SECTION OF THIS QUESTIONNAIRE AND THE MAJORITY OF THE QUESTIONS. This last section asks you some things about yourself which will help us interpret the results of the survey. Please stay with us! You've invested a great deal of time and effort in completing this questionnaire.

Q-61. Indicate the area of study for each of your earned degrees (e.g. occupational therapy, social work, special education, psychology, etc.) Please specify all that apply:

DEGREE	SPECIFY MAJOR	YEAR RECEIVED
1 BACCALAUREATE DEGREE	_____	_____
2 PROFESSIONAL MASTER'S DEGREE	_____	_____
3 POST-PROFESSIONAL MASTER'S DEGREE	_____	_____
4 DOCTORATE	_____	_____

Q-62. Your gender. (Circle number of your answer)

1 FEMALE
2 MALE

Q-63. What is your birthdate?

____/____/____
Month Day Year

(table continues)

Table 3.2 continued

- Q-64. How many years have you worked as an OT?
 _____ YEARS IN SCHOOL-BASED PRACTICE
 _____ YEARS IN OTHER AREAS OF PRACTICE
 _____ TOTAL NO. OF YEARS AS AN OT
 PLEASE LIST YOUR EXPERIENCES IN OTHER AREAS OF PRACTICE: (e.g., work settings, age range, health problems)
- Q-65. During 1993-94 were you: (Circle one number)
 1 EMPLOYED FULL-TIME
 2 EMPLOYED PART-TIME
- Q-66. During 1993-94, were you: (Circle one number)
 1 CENTER BASED
 2 ITINERANT HOW MANY SCHOOLS: _____
- Q-67. During 1993-94, were you: (Circle one number)
 1 DIRECT EMPLOYEE OF SCHOOL SYSTEM
 2 EMPLOYED BY PRIVATE AGENCY: CONTRACT WITH SCHOOL
 3 EMPLOYED BY A HOSPITAL: CONTRACT WITH SCHOOL
 4 PRIVATE PRACTICE: CONTRACT WITH SCHOOL
- Q-68. Where is your school-based practice? (Circle one number)
 1 RURAL any area that has less than 2,500 people
 2 SUBURBAN any area that has a population of more than 2,500 people without a central city
 3 URBAN any area that has a central city of at least 50,000 people which has one or more surrounding counties with social and/or economic interaction with the central city.
- Q-69. During 1993-94, how many students on your caseload fell in the following age groups? Round months to the nearest year (e.g., 16 years, 5 months = 16 years; 16 years, 6 months = 17 years). (Fill in the number. If you did not serve students in an age group, enter 0.)
- _____ TOTAL NUMBER WHO WERE 0 TO 6 YEARS OF AGE
 _____ TOTAL NUMBER WHO WERE 7 TO 13 YEARS OF AGE
 _____ TOTAL NUMBER WHO WERE 14 TO 16 YEARS OF AGE
 _____ TOTAL NUMBER WHO WERE 17 TO 19 YEARS OF AGE
 _____ TOTAL NUMBER WHO WERE 20 TO 22 YEARS OF AGE
- Q-70. Now consider only those students of transition age, (14-22) for school year 1993-94. Fill in how many students on your caseload were in each location. (Enter 0 for no students in a category).
- _____ HOME BOUND INSTRUCTION
 _____ SPECIALIZED SCHOOL FOR STUDENTS W/ DISABILITIES
 _____ SELF-CONTAINED CLASSES IN A REGULAR SCHOOL WITH NO INTERACTION WITH SAME-AGE PEERS
 _____ SELF-CONTAINED CLASSES IN REGULAR SCHOOL W/ SOME INTERACTION (ATTEND SOME ACTIVITIES W/ SAME-AGE PEERS)
 _____ REGULAR EDUCATION WITH RESOURCE CLASS PART-TIME
 _____ REGULAR EDUCATION (TOTAL INCLUSION)

(table continues)

Table 3.2 continued

Q-71. Again, consider only those students of transition age (14-22) for school year 1993-94. Fill in how many of your students fell into the following special education classifications? (Count each student once by his/her primary diagnosis.)

_____	AUTISM
_____	DEAF-BLINDNESS
_____	HEARING IMPAIRMENT (INCLUDING DEAFNESS)
_____	MENTAL RETARDATION
_____	MULTIPLE DISABILITIES
_____	ORTHOPEdic IMPAIRMENT
_____	SERIOUS EMOTIONAL DISTURBANCE
_____	SPECIFIC LEARNING DISABILITY
_____	TRAUMATIC BRAIN INJURY
_____	VISUAL IMPAIRMENT (INCLUDING BLINDNESS)
_____	NON-CATEGORICAL
_____	OTHER HEALTH IMPAIRMENTS
_____	OTHER (SPECIFY)

Q-72. Have you completed post graduate (degree or non-degree) coursework in Special Education? (Circle one number)

- 1 NO
- 2 YES, ONE COURSE
- 3 YES, TWO COURSES
- 4 YES, MORE THAN TWO COURSES
- 5 DEGREE IN SPECIAL EDUCATION

Q-73. During the 1993-94 school year, did you attend inservice training on OT roles in school-based practice? (Circle one number)

- 1 NO
- 2 YES, LESS THAN HALF A DAY
- 3 YES, ABOUT HALF DAY
- 4 YES, ONE TO TWO DAYS
- 5 YES, THREE TO FOUR DAYS
- 6 YES, ONE WEEK OR MORE

Q-74. During the 1993-94 school year, did you attend inservice training on transition planning for students age 14 and older? (Circle one number)

- 1 NO
- 2 YES, LESS THAN HALF A DAY
- 3 YES, ABOUT HALF DAY
- 4 YES, ONE TO TWO DAYS
- 5 YES, THREE TO FOUR DAYS
- 6 YES, ONE WEEK OR MORE

(table continues)

Table 3.2 continued

Q-75. Have you completed AOTA's 1993 self-study coursework on transition planning and services by Karen Spencer & Pat Sample? (Circle one number)

- 1 YES
- 2 NO, I AM NOT FAMILIAR WITH THE COURSE.
- 3 NO, THE COURSE IS TOO EXPENSIVE.
- 4 NO, I AM NOT INTERESTED.
- 5 NO, I DON'T NEED TO COMPLETE THE COURSE.
- 6 OTHER: _____

Q-76. Do you read the American Journal of Occupational Therapy? (Circle one number)

- 1 NO
- 2 YES, I READ THE ENTIRE JOURNAL EACH MONTH
- 3 YES, I READ ONLY THE ARTICLES ON SCHOOL-BASED PRACTICE PER ISSUE
- 4 YES, I READ 1-3 ARTICLES PER ISSUE THAT SEEM INTERESTING
- 5 YES, I REVIEW PERIODICALLY AND SELECT ARTICLES OF INTEREST

Q-77. Are you or have you ever been a member of the organization, The Association for Persons with Severe Handicaps (TASH)? (Circle one number)

- 1 NO
- 2 YES

Q-78. Have you ever read articles from the Journal of the Association for Persons with Severe Handicaps (JASH)? (Circle one number)

- 1 NO
- 2 YES

Q-79. Where did you learn the majority of your knowledge concerning occupational therapy roles in school based practice? (Circle one number)

- 1 ON THE JOB EXPERIENCE
- 2 OT DEGREE PROGRAM
- 3 INTERNSHIPS/AFFILIATIONS
- 4 SELF-STUDY (E.G. READING, TALKING TO OTHER THERAPISTS, ETC.)
- 5 TRAINING THROUGH THE SCHOOL SYSTEM
- 6 TRAINING PROVIDED BY OT ASSOCIATION(S)
- 7 OTHER: _____

(table continues)

Table 3.2 continued

Q-80. What training formats would you prefer to participate in for occupational therapy school-based practice training? Please circle YES or NO for each of the following:

- | | |
|----------|--|
| YES / NO | SELF-STUDY BOOKLET(S) |
| YES / NO | REGULAR ARTICLES (E.G. OT WEEK, ADVANCE, ETC.) |
| YES / NO | REGULAR JOURNAL ARTICLES IN <u>AJOT</u> |
| YES / NO | COMPUTER ASSISTED SELF-STUDY PROGRAM |
| YES / NO | TELECONFERENCES |
| YES / NO | ONE TO TWO HOUR PRESENTATIONS |
| YES / NO | HALF DAY PRESENTATIONS |
| YES / NO | ONE TO TWO DAY PRESENTATIONS |
| YES / NO | THREE TO FIVE DAY WORKSHOP |
| YES / NO | PRE-CONFERENCE SPECIALTY SESSIONS AT NATIONAL CONFERENCE |
| YES / NO | PRE-CONFERENCE SPECIALTY SESSIONS AT STATE OT MEETINGS |
| YES / NO | ONE TO TWO WEEK SUMMER INSTITUTE |
| YES / NO | OTHER: _____ |

You have now finished all of the questions on this survey. Is there anything else you would like to tell us about the kinds of things that you do as an OT in the school system? Also, please make any comments that you think may help us to understand your role(s) in the transition process for students with disabilities. You may do this on the back of this questionnaire.

Your contribution to this effort is greatly appreciated.

(end of Table 3.2)

Table 3.3

Cover Letter for Survey

Identification Code Number

October 31, 1994

Return Address

Dear _____:

In the past few years, there has been a great deal of discussion about the post school outcomes of students with disabilities. Legislation has been passed that mandates transition planning from school to post-school outcomes for students with disabilities age 14 and older. This legislation also recognizes the importance of including occupational therapists on transition teams. However, we know little about how occupational therapists are involved in transition services.

You are one of a small number of therapists who have been selected from the American Occupational Therapy's special interest group on school-based practice to complete the enclosed survey. This group was drawn in a random sample that included all 50 states and the U.S. territories. In order for the results to be truly representative of the thinking of occupational therapists nationally, it is important that each questionnaire be completed and returned.

You may be assured of complete confidentiality. This letter and the enclosed questionnaire have an identification number for mailing purposes only. We will use this number to check off your name from the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire.

The American Occupational Therapy Association is supportive of this research and will receive the results as soon as they are available. In addition, you may receive a summary of the findings by writing "copy of results requested" on the back of the return envelope, and printing your name and address below it, or by sending a separate letter addressed to me. Please do not put your name on the questionnaire itself.

I estimate that you will need approximately 30 minutes to complete the questionnaire. Please return it in the enclosed business reply envelope no later than **November 18, 1994**. No postage is required.

I would be most happy to answer any questions that you might have. Please write or call. The telephone number is [REDACTED]. Thank you for your assistance.

Sincerely,
Katherine J. Inge, M.Ed., OTR
Project Coordinator

(Adapted from: Dillman, 1978)

assured of survey confidentiality and were told that the identification number would be used only to indicate that they had responded to the survey and not referenced to their responses.

The investigator's name and address was included on the cover of the questionnaire in the event of questions concerning completion, or the respondent misplacing the return envelope. In addition, respondents were asked to write their name and address on the back of the envelope (not on the questionnaire) if they were interested in receiving the results of the study. This served as an incentive for their participation. Finally, respondents were assured that their names would not be placed on the completed questionnaires during any stage of the study.

One week after the initial mailing, a follow-up post card was sent to the entire sample (Dillman, 1978). This card re-stated the importance of the survey and asked that the questionnaire be returned as soon as possible if it had not already been mailed. The post card also thanked those respondents who had completed and returned their questionnaires. Table 3.4 contains the content of the post card.

Two weeks after the postcard reminder, a follow-up letter, additional questionnaire, and return envelope were mailed to all non-respondents using first class postage (Dillman, 1978). The follow-up letter requested the assistance of the recipient and indicated that an additional questionnaire was enclosed in the event that the initial one had been misplaced. A sample of this follow-up letter is located in Table 3.5. Data collection was terminated four weeks after this follow-up mailing.

Data Management

All information regarding the occupational therapists selected for the sample and their responses were maintained in two separate computer files. The first file was housed

Table 3.4

Follow-up Postcard

Center

Virginia Commonwealth University
Rehabilitation Research and TrainingP.O. Box 842011
Richmond, VA 23284-2011

November 7, 1995

Dear Colleague:

Last week a questionnaire seeking your opinion about occupational therapists' roles in school-based practice related to transition issues was mailed to you. Your name was drawn in a random sample of occupational therapists from the American Occupational Therapy Association's Direct Mail List of school-based practice.

If you have already completed and returned it to us, please accept our sincere thanks. If not, please do so today. Because it has been sent to only a small, but representative sample of occupational therapists nationally, it is extremely important that yours also be included in the study if the results are to accurately represent the opinions of therapists working in school systems.

If by some chance you did not receive the questionnaire, or it got misplaced, please call me at [REDACTED] and I will get another one in the mail to you today. Thank you for your time and efforts.

Sincerely,
Katherine J. Inge
Project Coordinator

(Adapted from: Dillman, 1978)

Table 3.5

Second Follow-Up Letter with Questionnaire

Identification Code Number

November 23, 1994

Inside Address

Dear _____:

About three weeks ago, I wrote to you asking your opinion concerning occupational therapy services for students with disabilities and the transition process. As of today, we have not received your completed questionnaire. If it has crossed in the mail with this letter, thank you for your participation and please discard this copy of the questionnaire.

If you have not yet completed the survey, please consider doing so now. Our research department has undertaken this study, because we believe that occupational therapists have a great deal to offer secondary age students with disabilities. In addition, we feel that it is very important to seek the opinions of therapists who are working in school-based practice.

I am writing to you again, because of the significance each questionnaire has to the usefulness of this study. Your name was drawn through a scientific sampling process in which every therapist on the American Occupational Therapy's School Based Practice Mailing List had an equal chance of being selected. In order for the results of this study to be truly representative of the opinions of occupational therapists nationally, it is essential that each therapist in the sample return their questionnaire.

If you did not serve students ages 14 and older you may let us know by checking the blank below and returning this letter in the enclosed business reply envelope. It is equally important for us to record the number of therapists who are not serving this age group.

_____ **I did not have students ages 14 and older on my case load during the 1993-94 school year.**

We are interested in your answers even if you served only 1 student in this age group. In the event that your questionnaire has been misplaced, a replacement is enclosed. I would be most happy to answer any questions that you might have. Please write or call. The telephone number is [REDACTED] Thank you for your assistance.

Cordially,

Katherine J. Inge, M.Ed., OTR
Project Coordinator

(Adapted from: Dillman, 1978)

in a microcomputer using WordPerfect software which contained the names and addresses of the sample. This file was used to generate listings for identifying "respondents" and "non-respondents" for conducting all follow-up mailings. This ensured confidentiality of responses, since data from the completed questionnaires were stored in a second file. This second file was housed on Virginia Commonwealth University's mainframe computer and consisted of the responses from the completed questionnaires.

All data entry was completed by the primary researcher. Respondents directly coded their own answers for the majority of the survey items by circling a number for each question. This number was entered directly into the computer program for data analysis. The remaining items in the attitude section and self-reported training needs were assigned their corresponding number code based on the response circled by a respondent prior to data entry. A second individual not engaged in the research study randomly checked the data entry to ensure consistency and reliability of the data.

Data Analyses and Research Questions

All data generated from this study were analyzed using the Statistical Analysis Systems software. Descriptive and inferential statistics were used to describe the data generated from the questionnaire to address each of the five identified research questions. Specifically, length of employment in school-based practice, educational background, continuing education experiences, and length of previous employment experiences were the independent variables, with occupational therapists' attitudes towards "best practices" as the dependent variable. Frequency information on therapists participation in transition planning is presented as well as the results of conducting an analysis of variance to

determine the relationships between occupational therapists' attitudes toward best practices and the previously identified independent variables. The research questions were as follows:

Research Question #1: What are the demographic characteristics (e.g., educational backgrounds, work experiences, continuing education experiences, age) of occupational therapists who work with transition-age students, and what are the characteristics of their jobs (e.g., What types of students do they serve? Where is therapy provided? Do they participate in transition planning?)

Research Question #2: What are the attitudes of occupational therapists toward "best practices" for transition planning, and do occupational therapists incorporate "best practices" in their service delivery?

Research Question #3: What is the relationship between occupational therapists' length of employment, educational level, continuing education experiences, work experiences, and their attitudes toward "best practices" for transition programming?

Research Question #4: What are the attitudes of occupational therapists towards vocational outcomes for students with severe disabilities?

Research Question #5: What are the self-reported training needs of occupational therapists in the transition process?

CHAPTER IV

Results

Response Rate

A total of 1,000 surveys were mailed to the identified occupational therapists from AOTA's school-based practice list. A total of 755 surveys were returned, representing a 76% response rate. Of the 755 returned surveys, 465 therapists indicated that they did not serve students ages 14 to 22, and they returned their questionnaires unanswered. The remaining 290 surveys, which were returned completed, comprised the sample that was used for data analysis. Table 4.1 provides detailed information regarding the sample size and response rates of occupational therapists by state, territories, and the District of Columbia.

Personnel Demographics

Information regarding the demographic characteristics of the occupational therapists who completed the questionnaire is presented in Table 4.2. This table summarizes questionnaire items #61 - #68 including information on educational level, gender, age, length of employment as an occupational therapist, and other employment characteristics. Information describing the continuing education experiences of occupational therapists in school-based practice is presented in Table 4.3. This table summarizes questionnaire items #72 -#79 and provides a description of the respondents' participation in special education coursework, inservice training, and self-study activities. Tables 4.2 and 4.3 address research question #1: What are the demographic characteristics (educational backgrounds, continuing education experiences, age, etc.) of occupational therapists who work with transition-age students?

Table 4.1

Response Rates of Occupational Therapists Concerning Their Involvement in Transition Planning for Students Ages 14 to 22

State	# of OTs on AOTA List	# Mailed	"NO", I Do Not Serve This Age Group.		"YES", I Do Serve This Age Group.	
			n	%	n	%
AE	17	0	0	0	0	0
AK	28	6	3	50.0	1	16.7
AL	22	5	2	40.0	1	20.0
AR	24	4	2	50.0	1	25.0
AZ	80	20	10	50.0	4	20.0
CA	204	46	25	54.3	8	17.4
CO	98	26	15	57.7	6	23.1
CT	104	27	11	40.7	6	22.2
DC	2	0	0	0	0	0
DE	16	7	4	57.1	2	28.6
FL	160	34	12	35.3	11	32.4
GA	69	16	10	62.5	4	25.0
HI	16	5	1	20.0	2	40.0
IA	29	8	4	50.0	1	12.5
ID	11	9	1	11.1	4	44.4
IL	169	47	25	53.2	9	19.1
IN	83	23	8	34.8	9	39.1
KS	56	18	9	50.0	6	33.3
KY	48	11	4	36.4	4	36.4
LA	48	15	5	33.3	7	46.7
MA	245	50	28	56.0	7	14.0
MD	106	30	18	60.0	8	26.7
ME	54	16	7	43.8	7	43.8
MI	243	46	19	41.3	17	37.0
MN	135	28	13	46.4	11	39.3
MO	71	10	3	30.0	4	40.0
MS	6	5	1	20.0	1	20.0

(table continues)

Table 4.1 continued

Response Rates of Occupational Therapists Concerning Their Involvement in Transition Planning for Students Ages 14 to 22

State	# of OTs on AOTA List	# Mailed	"NO", I Do Not Serve This Age Group.		"YES", I Do Serve This Age Group.	
			n	%	n	%
MT	14	4	2	50.0	1	25.0
NC	79	16	6	37.5	6	37.5
ND	32	10	6	60.0	2	20.0
NE	38	10	2	20.0	7	70.0
NH	79	20	11	55.0	8	40.0
NJ	251	53	35	66.0	7	13.2
NM	53	17	9	52.9	4	23.5
NV	12	3	1	33.3	1	33.3
NY	533	89	43	48.3	18	20.2
OH	182	38	13	34.2	14	36.8
OK	28	6	0	0	2	33.3
OR	45	10	4	40.0	3	30.0
PA	198	44	20	45.5	14	31.8
PR	9	2	1	50.0	1	50.0
RI	20	3	1	33.3	2	66.7
SC	27	6	1	16.7	0	0
SD	20	5	3	60.0	2	40.0
TN	45	14	5	35.7	6	42.9
TX	159	31	13	41.9	15	48.4
UT	20	4	2	50.0	2	50.0
VA	148	32	17	53.1	9	28.1
VT	18	5	3	60.0	2	40.0
WA	152	32	13	40.6	10	31.3
WI	140	32	12	37.5	13	40.6
WV	16	1	0	0	0	0
WY	16	1	1	100.0	0	0
Grand Total:	4,478	1,000	465	46.5	290	29.0

Table 4.2

Demographics of Respondents

	Item	n	%
Q-61.	Indicate the area of study for <u>each</u> of your earned degrees (occupational therapy, social work, special education, psychology, etc.).		
1	OTs with Baccalaureate degree in OT	203	70.0
2	OTs with undergraduate degree in occupational therapy and master's degree in other fields	38	13.1
3	OTs with master's degree <u>AND</u> undergraduate degree in occupational therapy	18	6.2
4	OTs with master's degree in occupational therapy <u>AND</u> undergraduate degree in other area	30	10.4
5	OTs with Ph.D. degree	1	0.3
<hr/>			
Q-62.	Your gender.		
1	female	279	96.2
2	male	11	3.8
<hr/>			
Q-63.	Age		
	Not reported	15	5.2
	21 - 25 Years	11	3.8
	26 - 30 Years	29	10.0
	31 - 40 Years	114	39.3
	41 - 50 Years	87	30.0
	51 - 60 Years	27	9.3
	61 - 72 Years	7	2.4
<hr/>			
NOTE: Mean age of the respondents was 40.2 years.			
<hr/>			

(table continues)

Table 4.2 continued

Demographics of Respondents

Item	n	%	Cumulative %
Q-64. How many years have you worked as an OT?			
# Years of Experience in Schools			
1 - 2 Years of Experience	42	14.5	14.5
3 - 5 Years of Experience	64	22.1	36.6
6 - 8 Years of Experience	57	19.7	56.2
9 - 12 Years of Experience	47	16.2	72.4
13 - 25 Years of Experience	80	27.6	100.0
Note: Mean length of employment in the public schools for respondents was 8.63 years.			
Q-64. # Years of Experience in Other Areas of Practice			
0 years of Experience	49	16.9	16.9
1 - 2 Years of Experience	63	21.7	38.6
3 - 5 Years of Experience	56	19.3	57.9
6 - 10 Years of Experience	76	26.2	84.1
11 - 35 Years of Experience	46	15.9	100.0
Note: Mean length of employment in other areas of practice for respondents was 5.6 years.			
Q-65. During 1993-94 were you:			
1 employed full-time	213	73.4	
2 employed part-time	77	26.6	
Q-66. During 1993-94, were you:			
Center-based:			
1 school	49	16.9	16.9
Itinerant, # of schools:			
2 - 3 schools	29	10.0	26.9
4 - 5 schools	51	17.6	44.5
6 - 9 schools	79	27.2	71.7
10 - 50 schools	82	28.3	100.0

(table continues)

Table 4.2 continued

Demographics of Respondents

Item		n	%
Q-67. During 1993-94, were you:			
1	direct employee of school system	152	52.4
2	employed by private agency: contract with school	56	19.3
3	employed by a hospital: contract with school	10	3.4
4	private practice: contract with school	72	24.8
<hr/>			
Q-68. Where is your school-based practice?			
1	rural	58	20.0
2	suburban	126	43.4
3	urban	105	36.2
<hr/>			

Table 4.3

Response Rates of Occupational Therapists Concerning Continuing Education Activities

Item		N	%	Cumulative %
Q-72. Have you completed post graduate (degree or non-degree) coursework in Special Education?				
1	no	178	61.4	61.4
2	yes, one course	12	4.1	65.5
3	yes, two courses	23	7.9	73.4
4	yes, more than two courses	60	20.7	94.1
5	degree in special education	17	5.9	100.0
Q-73. During the 1993-94 school year, did you attend inservice training on OT roles in school-based practice?				
1	no	86	29.7	29.7
2	yes, less than half a day	11	3.8	33.4
3	yes, about half day	16	5.5	39.0
4	yes, one to two days	100	34.5	73.4
5	yes, three to four days	52	17.9	91.4
6	yes, one week or more	25	8.6	100.0
Q-74. During the 1993-94 school year, did you attend inservice training on transition planning for students age 14 and older?				
1	no	217	74.8	74.8
2	yes, less than half a day	35	12.1	86.9
3	yes, about half day	16	5.5	92.4
4	yes, one to two days	19	6.6	99.0
5	yes, three to four days	1	0.3	99.3
6	yes, one week or more	2	0.7	100.0
Q-75. Have you completed AOTA's 1993 self-study coursework on transition planning and services by Karen Spencer & Pat Sample?				
1	Yes	32	11.0	11.0
2	No, I am not familiar with the course.	200	69.0	80.0
3	No, it is too expensive.	15	5.2	85.2
4	No, I am not interested.	19	6.6	91.7
5	No, I don't need to complete.	4	1.4	93.1
6	Other, No _____	20	6.9	100.0

(table continues)

Table 4.3 continued

Response Rates of Occupational Therapists Concerning Continuing Education Activities

Item		N	%	Cumulative %
Q-76. Do you read the <u>American Journal of Occupational Therapy</u>?				
1	no	12	4.1	4.1
2	yes, I read the entire journal each month	20	6.9	11.0
3	yes, I read only the articles on school-based practice per issue	25	8.6	19.7
4	yes, I read 1-3 articles per issue that seem interesting	70	24.1	43.8
5	yes, I review periodically and select articles of interest	163	56.2	100.0
<hr/>				
Q-77. Are you or have you ever been a member of the organization, The Association for Persons with Severe Handicaps (TASH)?				
1	no	269	92.8	92.8
2	yes	21	7.2	100.0
<hr/>				
Q-78. Have you ever read articles from the <u>Journal of the Association for Persons with Severe Handicaps (JASH)</u>?				
1	no	231	79.7	79.7
2	yes	59	20.3	100.0
<hr/>				
Q-79. Where did you learn the majority of your knowledge concerning occupational therapy roles in school based practice?				
1	on the job experience	166	57.2	57.2
2	OT degree program	2	0.7	57.9
3	internships/affiliations	5	1.7	59.7
4	self-study (e.g. reading, talking to other therapists, etc.)	90	31.0	90.7
5	training through the school system	11	3.8	94.5
6	training provided by OT association(s)	11	3.8	98.3
7	Other	5	1.7	100.0
<hr/>				

The highest educational level achieved by 203 respondents (70.0 percent) was a bachelor's degree in occupational therapy. Eighty-seven respondents reported that they held advanced degrees; 18 OTs (6.2 percent) had earned an undergraduate degree and a master's degree in occupational therapy; 38 OTs (13.1 percent) had earned undergraduate degrees in occupational therapy and masters' degrees in other fields; and 30 OTs (10.4 percent) had earned undergraduate degrees in other fields and masters' degrees in occupational therapy. One occupational therapist had earned a doctoral degree in educational administration. Of the 290 undergraduate degrees held by the respondents, 260 degrees (89.7 percent) are in occupational therapy, 9 degrees (3.1 percent) are in psychology, 7 degrees (2.4 percent) are in education, 2 degrees (0.7 percent) are in sociology, and 2 degrees (.7 percent) are in recreational therapy. The remaining 10 undergraduate degrees (3.4 percent) are in other fields of study to include advertising, biology, business, home economics, human development, music education, philosophy, physical education, pre-dance therapy, and rehabilitation counseling. Of the 38 masters' degrees held by respondents in areas other than occupational therapy, 11 degrees (29.0 percent) are in special education; 9 degrees (23.7 percent) are in education; 4 degrees (10.5 percent) are in health care; 3 degrees (7.9 percent) are in child development; 3 degrees (7.9 percent) are in psychology; 3 degrees (7.9 percent) are in administration; 2 degrees (5.3 percent) are in health education; 1 degree (2.6 percent) is in guidance counseling; 1 degree (2.6 percent) is in rehabilitation; and 1 degree (2.6 percent) is in art education.

The mean age of OTs working with transition students was 40.2 years. Eleven OTs (3.8 percent) responded that they were between 21 and 25 years of age; 29 (10.0 percent) were between 26 and 30 years of age; 114 (39.3 percent) were between 31 and 40 years of age; 87

(30.0 percent) were between 41 and 50 years of age; 27 (9.3 percent) were between 51 and 60 years of age; and 7 (2.4 percent) were over 61 years of age. Fifteen OTs did not respond to this question. Two hundred seventy-nine OTs (96.2 percent) were female and 11 respondents (3.8 percent) were male.

The mean length of employment for OTs in the public schools was 8.63 years. Forty-two therapists (14.5 percent) responded that they had 1 to 2 years of experience; 64 (22.1 percent) had 3 to 5 years of experience; 57 (19.7 percent) had 6 to 8 years of experience; 47 (16.2 percent) had 9 to 12 years of experience; and 80 (27.6 percent) had 13 or more years of public school experience. The mean length of experience for respondents in other occupational therapy settings was 5.6 years. Sixty-three therapists (21.7 percent) reported that they had 1 to 2 years experience as an occupational therapist in other settings; 56 (19.3 percent) had 3 to 5 years of experience; 76 (26.2 percent) had 6 to 10 years of experience; and 46 (15.9 percent) had 11 or more years of experience. Forty-nine respondents (16.9 percent) reported that they did not have experience as an occupational therapist in other settings.

One hundred and fifty-two occupational therapists (52.4 percent) reported that they were employed directly by school systems. Fifty-six OTs (19.3 percent) indicated that they were employed by private agencies that contracted with schools. Ten therapists (3.4 percent) stated that they were employed by a hospital that provided services to students, and 72 OTs (24.8 percent) indicated that they were in private practices that contracted with schools. Two hundred and three respondents (73.4 percent) indicated that they were employed full-time while only 77 (26.6 percent) were employed part-time.

When asked whether they worked in rural, suburban, or urban schools, the majority or

126 OTs (43.4 percent) selected suburban schools as the response. One hundred and five (36.2 percent) indicated that they worked in urban schools, and 58 OTs (20.0 percent) stated that they worked in rural locations. Forty-nine therapists (16.9 percent) responded that they were center-based and served only one school. The remaining 241 OTs (83.1 percent) indicated that they were itinerant therapists; 29 (10.0 percent) served 2 to 3 schools; 51 (17.6 percent) served 4 to 5 schools; 79 (27.2) served 6 to 9 schools; and 82 (28.3 percent) served 10 or more schools.

Continuing education activities. The majority of the respondents or 166 OTs (57.2 percent) indicated that they had obtained their knowledge of school-based practice through "on the job experience." Ninety OTs (31.0 percent) identified self-study (reading, talking to other therapists, etc.); 11 OTs (3.8 percent) identified training through the school systems; 11 (3.8 percent) selected training through the OT association; 5 (1.7 percent) identified internships/affiliations; and 5 (1.7 percent) selected a combination of these strategies. Only 2 OTs (0.7 percent) stated that they had learned the majority of their knowledge concerning occupational therapy roles in school-based practice through an OT degree program.

Over half of the respondents (61.4 percent) stated that they had not completed degree or non-degree coursework in special education. Twelve respondents (4.1 percent) had completed one course, and 23 (7.9 percent) had completed two courses. Sixty OTs (20.7 percent) indicated that they had completed more than two special education courses, while only 17 OTs (5.9 percent) indicated that they had a degree in special education.

Almost three-fourths of the respondents or 217 OTs (74.8 percent) indicated that they had not participated in inservice training on transition planning for students ages 14 and older during the 1993-94 school year. Thirty-five OTs (12.1 percent) responded that they had

participated in less than half a day of training; 16 (5.5 percent) had attended about a half day of training; and 3 (1.0 percent) had attended three or more days of training on transition planning during the 1993-94 school year.

Substantially more therapists indicated that they had attended inservice training on OT roles in school-based practice during the 1993-94 school year. Twenty-five OTs (8.6 percent) had participated in more than one week of training; 52 (17.9 percent) had attended 3 to 4 days; 100 (34.5 percent) had participated in 1 to 2 days of training; 16 (5.5 percent) had participated in about a half day of training; and 11 OTs (3.8 percent) had attended less than a half day of inservice. Eighty-six OTs (29.7 percent) indicated that they had not participated in inservice training on OT roles in school-based practice.

Two hundred occupational therapists (69.0 percent) responded that they were not familiar with AOTA's self-study course that includes a section on transition planning and services by Karen Spencer and Pat Sample. An additional 58 OTs (20 percent) indicated that they had not completed the course for various reasons; it is too expensive; they are not interested; they don't need to complete; or it does not relate to the needs of their current practice. Only 32 respondents (11.0 percent) indicated that they had completed this self-study program.

When asked if they read the American Journal of Occupational Therapy (AJOT), 163 respondents (56.2 percent) revealed that they review the journal periodically and select articles of interest. Seventy OTs (24.1 percent) indicated that they read 1 to 3 articles per issue that seem interesting; 25 (8.6 percent) read only the articles on school-based practice; and 20 (6.9 percent) read the entire journal each month. Twelve respondents indicated that they do not read AJOT.

When asked if they had ever read the Journal of the Association for Persons with Severe Handicaps (JASH), 231 respondents (79.7 percent) replied that they had never read articles from JASH. Fifty-nine OTs (20.3 percent) indicated that they had read articles from this publication. A smaller number, 21 OTs (7.2 percent), stated that they had been a member of the organization which publishes JASH, The Association for Persons with Severe Handicaps, during some time in their careers.

School-Based Practice Demographics

Information describing the demographics of school-based practice for OTs who serve transition-age students is summarized in Tables 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, and 4.10. Table 4.4 presents details from questionnaire items #69 - #71 including the number of transition-age students on the respondents' caseloads as well as where these students attend classes. Table 4.5 summarizes the information from questionnaire items #2 - #8 and addresses issues concerning OTs involvement in ITP/IEP team meetings. Table 4.6 highlights questionnaire items #9 - #18 concerning the development and implementation of ITP/IEP objectives for transition-age students. Tables 4.7 and 4.8 present information from questionnaire items #19 and #20 which asked therapists to indicate where their OT intervention occurs. Finally, Tables 4.9 and 4.10 summarize questionnaire items #21 and #22 concerning the activities on which OTs spend the most time during a typical work week. These 7 tables address research question #2: What are the job characteristics of occupational therapists who work with transition-age students (e.g., how many students do they serve, where are services provided, do they participate in transition planning, and so forth)?

Response Patterns of Occupational Therapists Concerning Students on Their Caseloads.

When asked the ages of the students on their caseloads, the majority of the respondents

indicated that they primarily serve students under 13 years of age. Only 23 OTs (7.9 percent) indicated that the majority of their students were ages 14 years or older. In addition, the respondents reported that they had more students on their caseloads of elementary age than of transition age. The mean number of students served by OTs in the age group, 0 to 13 years, was 33.86. The mean number of students served in the age group, 14 to 16, was 5.69. The mean number of students served by respondents in the age group, 17 to 19, was 2.81, and the mean number served in age group, 20 to 22, was 0.88.

One hundred and thirty-one OTs (45.2 percent) reported that they provided services to 0 - 3 students ages 14 to 16 years during the 1993-94 school year. One hundred OTs (34.5 percent) indicated that they saw between 4 - 8 students in this age group. Forty-eight OTs (13.1 percent) indicated that they served between 9 - 14 students, and 21 (7.2 percent) reported that they provided OT services to more than 15 students ages 14 to 16 years.

One hundred and nine respondents (37.6 percent) indicated that they did not serve students ages 17 to 19 years during the 1993-94 school year. One hundred and one OTs responded that they served between 1 - 3 students in this age group; 55 OTs (19.0 percent) reported that they saw 4 to 8 students; and 25 OTs (8.6 percent) indicated that they saw more than 9 students ages 17 to 19 years.

One hundred and ninety-two OTs (66.2 percent) indicated that they did not serve students ages 20 to 22 years during the 1993-94 school year. Eighty-one respondents (27.9 percent) indicated that they provided services to 1 - 3 students in this age group; and 14 OTs (4.9 percent) reported that they saw between 4 and 8 students. Only 3 respondents (1.0 percent) indicated that they had provided services to more than 9 students ages 20 to 22 years.

Table 4.4

Response Patterns of Occupational Therapists Concerning Students on Their Caseloads

Item	N	%	Cumulative %
Q-69. During 1993-94, how many students on your caseload fell into the following age groups? Round months to the nearest year (e.g., 16 years, 5 months = 16 years, 6 month = 17 years). If you did not serve students in an age group, enter 0.			
Total number who were <u>0 to 13</u> years of age:			
1 - 10 students	28	9.7	9.7
11 - 20 students	60	20.6	30.3
21 - 30 students	58	20.0	50.3
31 - 40 students	57	19.7	70.0
41 - 60 students	64	22.1	92.1
61 - 122 students	23	7.9	100.0
Note: Mean number of students served by respondents in this age group was 33.86			
<hr/>			
Total number who were <u>14 to 16</u> years of age:			
0 students	25	8.6	8.6
1 - 3 students	106	36.6	45.2
4 - 8 students	100	34.5	79.7
9 - 14 students	58	13.1	92.8
15 - 40 students	21	7.2	100.0
Note: Mean number of students served by respondents in this age group was 5.69			
<hr/>			
Total number who were <u>17 to 19</u> years of age:			
0 students	109	37.6	37.6
1 - 3 students	101	34.8	72.4
4 - 8 students	55	19.0	91.4
9 - 40 students	25	8.6	100.0
Note: Mean number of students served by respondents in this age group was 2.81			
<hr/>			
Total number who were <u>20 to 22</u> years of age:			
0 students	192	66.2	66.2
1 - 3 students	81	27.9	94.1
4 - 8 students	14	4.9	99.0
9 - 25 students	3	1.0	100.0
Note: Mean number of students served by respondents in this age group was 0.88			

(table continues)

Table 4.4 continued

Response Patterns of Occupational Therapists Concerning Students on Their Caseloads

Item	N	%	Cumulative %
Q-70. How many students on your caseload (ages 14 - 22) were in:			
home bound instruction			
0 students	267	92.1	92.1
1 - 2 students	23	7.9	100.0
specialized school for students w/ disabilities			
0 students	235	81.0	81.0
1 - 2 students	15	5.2	86.2
3 - 5 students	13	4.5	90.7
6 - 10 students	12	4.1	94.8
11 - 95 students	15	5.2	100.0
self-contained classes in a regular school with <u>no</u> interaction with same-age peers			
0 students	259	89.3	89.3
1 - 2 students	8	2.8	92.1
3 - 5 students	15	5.2	97.2
6 - 24 students	8	2.8	100.0
self-contained classes in regular school, some interaction w/ <u>same-age</u> peers			
0 students	94	32.4	32.4
1 - 2 students	60	20.7	53.1
3 - 5 students	60	20.7	73.8
6 - 10 students	53	18.3	92.1
11 - 40 students	23	7.9	100.0
regular education with resource class part-time			
0 students	167	57.6	57.6
1 - 2 students	55	19.0	76.6
3 - 5 students	43	14.8	91.4
6 - 48 students	25	8.6	100.0
regular education (total inclusion)			
0 students	219	75.5	75.5
1 - 2 students	49	16.9	92.4
3 - 5 students	19	6.6	99.0
6 - 45 students	3	1.0	100.0

(table continues)

Table 4.4 continued

Response Patterns of Occupational Therapists Concerning Students on Their Caseloads

Item	N	%
Q-70b The majority of the transition-age students seen by occupational therapists are in:		
home bound instruction	2	0.7
specialized school for students w/ disabilities	35	12.1
self-contained classes in a regular school with no interaction with same-age peers	16	5.5
self-contained classes in regular school, some interaction w/ same-age peers	141	48.6
regular education with resource class part-time	54	18.6
regular education (total inclusion)	14	4.8
students are equally distributed across settings	28	9.7
<hr/>		
Q-71. Did you provide services to students (age 14 - 22) in 1993-94 within the following special education classifications?		
	YES	NO
autism	17.6	82.4
deaf-blindness	6.9	93.1
hearing impairment (including deafness)	6.9	93.1
mental retardation	45.5	54.5
multiple disabilities	58.6	41.4
orthopedic impairment	34.1	65.9
serious emotional disturbance	7.7	92.4
specific learning disability	24.5	75.5
traumatic brain injury	18.6	81.4
visual impairment (including blindness)	6.2	93.8
non-categorical	2.1	97.9
other health impairments	12.8	87.2
other	2.1	97.9

Note.

- a. For special education classifications, more than one response was allowed; percentages sum to more than 100.

One hundred and forty-one respondents (48.6 percent) indicated that most of their transition-age students attended self-contained classes in regular schools having some interaction with their same-age peers. Fifty-four OTs (18.6 percent) indicated that most of their transition-age students attended regular education classes with resource class part-time. Thirty-five OTs (12.1 percent) indicated that they primarily served transition-age students who were placed in specialized schools for students with disabilities. Sixteen respondents (5.5 percent) indicated that most of their students attended self-contained classes having no interaction with peers; 14 (4.8 percent) indicated that most of their students were totally included in regular classrooms; 2 OTs (0.7 percent) indicated that their transition students were in home-bound instruction; and 28 OTs (9.7 percent) indicated that their students were equally distributed across all of these classroom types.

When asked if they provided services to students (ages 14 - 22) within specific special education classifications, 58.6 percent of the respondents indicated that they served students who were identified as having multiple disabilities while 41.4% did not provide OT services to this group. Mental retardation was the next most identified special education classification, with 45.5% of the respondents indicating that they served students with this diagnosis. The third largest group of students by disability type was orthopedic impairments, with 34.1% of the respondents indicating that they had provided services to students (ages 14 - 22) with this disability. Students with learning disabilities received services from 24.5% of the respondents; students with traumatic brain injury received OT services from 18.6% of the respondents; and students with autism received services from 17.6% of the respondents. The remaining disability groups received limited OT services; 7.7% of the respondents served students with serious

emotional disturbance; 6.9% served students with deaf-blindness; 6.9% served students with hearing impairments; 6.2% served students with visual impairments; and 2.1% indicated that they served students in a non-categorical classification.

Response patterns of occupational therapists concerning their involvement in ITP/IEP team meetings. The majority of the respondents (67.2%) indicated that their school system held transition meetings as part of the IEP meeting while only 37 OTs (12.8%) indicated that their school systems held separate ITP meetings. Forty-three respondents (14.8%) indicated that they did not know how ITP team meetings were conducted, and 15 (5.2%) responded that their schools did not have ITP meetings. When asked if their attendance was required at these meetings, 149 OTs (51.4 percent) replied no and 141 (48.6 percent) replied yes.

One hundred and forty-three OTs (49.3 percent) indicated that they attended ITP/IEP meetings most of the time for students who were receiving OT services. Fifty therapists (17.2 percent) attended sometimes; 35 OTs (12.1 percent) attended infrequently; and 16 (5.5 percent) never attended. Only forty-six respondents (15.9 percent) indicated that they always attended meetings for students who were receiving OT services.

When asked who made the final decision regarding an OT's attendance at ITP/IEP meetings, 139 respondents (47.9 percent) replied that they made the final decision. Sixty-two respondents indicated that the special education supervisor or teacher decided if the OT attended the meetings; 40 OTs (13.8 percent) indicated that the ITP/IEP team made the decision; 33 (11.4 percent) indicated that the school administration determined who attended; 10 (3.4 percent) identified the OT supervisor; and 4 (1.4 percent) identified the family/guardian. Two OTs (0.7 percent) indicated that it was a combined decision by several individuals listed on the survey.

Table 4.5

Response Patterns of Occupational Therapists Concerning Their Involvement in ITP/IEP Team Meetings

	Item	N	%
Q-2. How does your school system conduct individual transition planning (ITP) meetings for students ages 14 and older?			
1	I do not know how my school system conducts ITP meetings	43	14.8
2	My school does not have ITP meetings	15	5.2
3	Transition meetings are part of the individualized educational program (IEP) meeting	195	67.2
4	ITP meetings are conducted separately from IEP meetings	37	12.8
<hr/>			
Q-3. Is your attendance at ITP/IEP meetings required for those students who have OT services listed on their ITP/IEP?			
1	no	149	51.4
2	yes	141	48.6
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Q-4. How often do you attend ITP/IEP meetings for students who are receiving OT services?			
1	never	16	5.5
2	infrequently	35	12.1
3	sometimes	50	17.2
4	most of the time	143	49.3
5	always	46	15.9
<hr/>			
Q-5. Who makes the final decision regarding an OT's <u>attendance</u> at the ITP/IEP meetings?			
1	school administration	33	11.4
2	special education supervisor or teacher	62	21.4
3	occupational therapy supervisor	10	3.4
4	ITP/IEP members as a team decision	40	13.8
5	OT who will provide the services	139	47.9
6	family/guardian	4	1.4
7	student	0	0
8	other	2	0.7
<hr/>			

(table continues)

Table 4.5 continued

Response Patterns of Occupational Therapists Concerning Their Involvement in ITP/IEP Team Meetings

	Item	N	%
Q-6. Who do you think should make the final decision regarding an OT's <u>attendance</u> at ITP/IEP team meetings?			
1	school administration	10	3.4
2	special education supervisor or teacher	22	7.6
3	occupational therapy supervisor	12	4.1
4	ITP/IEP members as a team decision	76	26.2
5	OT who will provide the services	162	55.9
6	family/guardian	6	2.1
7	student	1	0.3
8	other	1	0.3
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Q-7. Who makes the final decision on whether a student <u>will receive OT</u> services?			
1	school administration	22	7.6
2	special education supervisor or teacher	8	2.8
3	OT supervisor	7	2.4
4	ITP/IEP team members as a team decision	146	50.3
5	OT who will provide the services	96	33.1
6	family/guardian	9	3.1
7	student	0	0
8	other	2	0.7
<hr/>			
Q-8. Who do you think should make the final decision on whether a student <u>receives</u> OT?			
1	school administration	3	1.0
2	special education supervisor or teacher	1	0.3
3	OT supervisor	7	2.4
4	ITP/IEP members as a team decision	159	54.8
5	OT who will provide services	114	39.3
6	family/guardian	3	1.0
7	student	0	0
8	other	3	1.0
<hr/>			

When asked who they thought should make the decision regarding an OT's attendance at ITP/IEP meetings, 162 OTs (55.9 percent) indicated that they thought that the OT should make the decision. Only 76 respondents (26.2 percent) replied that the ITP/IEP team should determine if the OT attended the ITP/IEP meetings. Twenty-two OTs (7.6 percent) indicated that the special education supervisor or teacher should decide; 12 (4.1 percent) identified the occupational therapy supervisor; 10 (3.4 percent) selected the school administration; 6 (2.1 percent) identified the family/guardian; and 1 OT (0.3 percent) felt that the student should decide if the OT attended ITP/IEP meetings.

Respondents were also asked to identify who made the final decision on whether a student received OT services. One hundred and forty-six of the respondents (50.3 percent) indicated that the ITP/IEP team makes this decision. Ninety-six OTs (33.1 percent) responded that the OT who provides the service decides; 22 (7.6 percent) identified the school administration; 9 (3.1 percent) identified the family/guardian; 8 (2.8 percent) identified the special education supervisor or teacher; 7 (2.4 percent) identified the OT supervisor; and 2 OTs (0.7 percent) indicated that it was a joint decision made by several individuals listed in the survey question.

When asked who they thought should make the decision on whether a student received OT services, the number of respondents who selected the ITP/IEP team increased slightly to 159 (54.8 percent). One hundred and fourteen respondents (39.3 percent) indicated that the OT should make the decision on whether a student receives OT services; 7 (2.4 percent) responded that the person should be the OT supervisor; 3 OTs (1.0 percent) selected the school administration; 3 OTs (1.0 percent) selected the family/guardian; and 3 (1.0 percent) indicated that it was a joint decision made by several of the individuals listed in the survey question.

Response patterns of occupational therapists concerning the development and implementation of ITP/IEP objectives. Respondents were asked a number of questions concerning how they evaluated students ages 14 to 22, developed ITP/IEP objectives, and delivered occupational therapy services during the 1993-94 school year. This information is provided in Table 4.6. When asked if they went to a student's home to evaluate activities of daily living for developing ITP/IEP objectives, 175 OTs (60.3 percent) said that they never went to the student's home for this purpose. Seventy-two respondents (24.8 percent) indicated that they evaluated students at home infrequently, and 38 (13.1 percent) responded sometimes. Three OTs (1.0 percent) indicated that they evaluated students at home most of the time, and only 2 respondents replied always.

Respondents reported that they went to community sites (restaurants, grocery store, bank, etc.) to evaluate transition-age students at a slightly higher frequency. One hundred and fifteen OTs (39.7 percent) reported that they never participated in this activity; however, 79 OTs (27.2 percent) evaluated transition-age students in these locations infrequently; and 72 (24.8 percent) responded sometimes. Eighteen OTs (6.2 percent) indicated that they evaluated students in the community most of the time, and 6 (2.1 percent) indicated that they always conducted an evaluation in the community for their transition-age students.

When asked how they developed ITP/IEP objectives for students who receive OT services, 115 OTs (39.7 percent) indicated that the OT is expected to write objectives prior to the team meeting and these are written on the ITP/IEP. One hundred and twelve therapists (38.6 percent) responded that the OT conducts a separate evaluation prior to the team meeting and the team develops one set of objectives based on input from all members at the ITP/IEP meeting.

Table 4.6

Response Patterns of Occupational Therapists Concerning the Development and Implementation of ITP/IEP Objectives

Item	N	%	Cumulative %
Q-9. When completing an OT assessment on a transition-age student, do you go to the <u>student's home</u> to evaluate activities of daily living skills for developing ITP/IEP objectives?			
1 never	175	60.3	60.3
2 infrequently	72	24.8	85.2
3 sometimes	38	13.1	98.3
4 most of the time	3	1.0	99.3
5 always	2	0.7	100.0
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Q-10. When completing an OT assessment on a transition-age student, do you go to <u>community sites</u> (e.g. restaurants, grocery store, bank, etc.) to evaluate the student in order to develop ITP/IEP objectives?			
1 never	115	39.7	39.7
2 infrequently	79	27.2	66.9
3 sometimes	72	24.8	91.7
4 most of the time	18	6.2	97.9
5 always	6	2.1	100.0
<hr/>			
Q-11. How do you develop ITP/IEP objectives for students who receive OT services? Select the strategy that you use most often.			
1 the OT is expected to write ITP objectives prior to a team meeting, and these are written on the ITP/IEP.	115	39.7	
2 the OT conducts a <u>separate</u> evaluation, and the team develops one set of objectives based on input from all members at the ITP/IEP meeting.	112	38.6	
3 a <u>transdisciplinary team</u> evaluation is completed (e.g. pt, speech, OT, student, & teacher), and one set of objectives is developed during the ITP/IEP meeting.	60	20.7	
4 other: please explain	3	1.0	
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(table continues)

Table 4.6 continued

Response Patterns of Occupational Therapists Concerning the Development and Implementation of ITP/IEP Objectives

Item	N	%	Cumulative %
Q-12. During the 1993-94 school year, was OT identified as a needed service to assist in implementing vocational ITP/IEP objectives for transition-age students with severe disabilities?			
1 NO	166	57.2	57.2
2 YES, how many students?			
1 student	25	8.6	65.9
2 students	25	8.6	74.5
3 students	19	6.6	81.5
4 students	9	3.1	84.1
5 students	12	4.1	88.3
6 students	4	1.4	89.1
7 students	4	1.4	91.0
8 students	6	2.1	93.1
9 students	1	0.3	93.4
10 students	8	2.8	96.2
11 - 30 students	11	3.8	100.0
Q-13. During the 1993-94 school year, did you visit vocational training sites in the community (non-paid experiences) to assist in analyzing or modifying work tasks for students to meet ITP/IEP objectives?			
1 not at all	191	65.9	65.9
2 less than once a month	66	22.8	88.6
3 about once a month	21	7.2	95.9
4 about two to three times a month	6	2.1	97.9
5 about once a week	4	1.4	99.3
6 more than once a week	2	0.7	100.0
Q-14. During the 1993-94 school year, did you visit students' job sites in the community to assist in analyzing or modifying jobs for paid employment?			
1 not at all	224	77.2	77.2
2 less than once a month	49	16.9	94.1
3 about once a month	11	3.8	97.9
4 about two to three times a month	4	1.4	99.3
5 about once a week	2	0.7	100.0
6 more than once a week	0	0	

(table continues)

Table 4.6 continued

Response Patterns of Occupational Therapists Concerning the Development and Implementation of ITP/IEP Objectives

Item	N	%	Cumulative %
Q-15. During the 1993-94 school year, was OT identified as a needed service to assist in implementing <u>community living</u> ITP/IEP objectives (e.g., shopping, preparing a meal, etc.) for transition-age students with disabilities?			
1 NO	194	66.9	66.9
2 YES, how many students?			
1 student	26	9.0	75.9
2 students	10	3.4	79.3
3 students	12	4.1	83.4
4 students	7	2.4	85.9
5 students	9	3.1	89.0
6 students	5	1.7	90.7
8 students	5	1.7	92.4
9 students	1	0.3	92.8
10 students	7	2.4	95.2
11 - 50 students	14	4.8	100.0
<hr/>			
Q-16. During the past 1993-94 school year, did you provide OT services in <u>community settings</u> (e.g. restaurant, student's home, grocery store, bank, etc.)? Do not include the school as a community setting.			
1 not at all	189	65.2	65.2
2 less than once a month	58	20.0	85.2
3 about once a month	21	7.2	92.4
4 about two to three times a month	13	4.5	96.9
5 about once a week	7	2.4	99.3
6 more than once a week	2	0.7	100.0
<hr/>			
Q-17. On the average, how many times per week did you have at least 15 minutes to <u>discuss/review</u> each student on your caseload with other team members (e.g., PT, teacher, speech therapist, etc.)?			
1 not at all	33	11.4	11.4
2 less than once a month	71	24.5	35.9
3 about once a month	76	26.2	62.1
4 about two to three times a month	54	18.6	80.7
5 about once a week	35	12.1	92.8
6 more than once a week	21	7.2	100.0

(table continues)

Table 4.6 continued

Response Patterns of Occupational Therapists Concerning the Development and Implementation of ITP/IEP Objectives

Item		N	%	Cumulative %
Q-18. On the average, how many times per week did you have at least 15 minutes to <u>train</u> other team members to integrate OT techniques into the daily activities for each student on your caseload?				
1	not at all	25	8.6	8.6
2	less than once a month	79	27.2	35.9
3	about once a month	79	27.2	63.1
4	about two to three times a month	52	17.9	81.0
5	about once a week	39	13.4	94.5
6	more than once a week	16	5.5	100.0

Only 60 respondents (20.7 percent) indicated that they participated in transdisciplinary team evaluations which resulted in one set of objectives that were developed at an ITPIEP meeting. Three respondents (1.0 percent) indicated that the procedure varied for each of the schools that they served.

Respondents reported that they had limited involvement in implementing vocational objectives for transition-age students. One hundred and sixty-six OTs (57.2 percent) indicated that occupational therapy was not identified as a needed service to assist in implementing vocational ITP/IEP objectives for students ages 14 - 22 during the 1993-94 school year. Twenty-five OTs (8.6 percent) indicated that they had provided services to only one student; 25 (8.6 percent) assisted 2 students; 19 (6.6 percent) assisted 3 students; 9 (3.1 percent) assisted 4 students; 12 (4.1 percent) assisted 5 students; and 4 OTs (1.4 percent) assisted 6 students. Only 30 respondents (10.9 percent) indicated that they had assisted with implementing vocational objectives for more than 6 students of transition age during the 1993-94 school year.

When asked if they had visited vocational training sites in the community (non-paid work experiences) to assist in analyzing or modifying work tasks for students, 191 OTs (65.9 percent) responded that they had not participated in this activity. Sixty-six (22.8 percent) indicated that they had been to non-paid work sites less than once a month; 21 (7.2 percent) responded about once a month; and 6 OTs (2.1 percent) responded about 2 to 3 times a month. Only 6 respondents (2.1 percent) indicated that they had gone to non-paid work sites once or more a week.

Respondents had even less involvement in analyzing or modifying community jobs for students' paid employment. Two hundred and twenty-four OTs indicated that they did not visit

job sites in the community for this purpose during the 1993-94 school year. Forty-nine OTs (16.9 percent) had analyzed or modified paid jobs for students less than once a month; 11 (3.8) responded about once a month; 4 (1.4 percent) responded about two to three times a month; and 2 OTs (0.7 percent) indicated about once a week. None of the respondents indicated that they had assisted in analyzing or modifying students' job sites for paid employment more than once a week.

When asked if OT had been identified as a needed service to assist in implementing community living ITP/IEP objectives (shopping, preparing a meal, etc.) for transition-age students, 194 OTs (66.9 percent) indicated that they had not participated in these activities during the 1993-94 school year. Twenty-six OTs (9.0 percent) responded that they had assisted with 1 student's objectives; 10 (3.4 percent) had assisted with 2 students' objectives; 12 (4.1 percent) had assisted with 3 students' objectives; 7 (2.4 percent) had assisted with 4 students' objectives; and 9 OTs (3.1 percent) had assisted with implementing 5 students' objectives. Only 32 OTs (11.0 percent) had assisted in implementing community living ITP/IEP objectives for more than 5 transition-age students during the 1993-94 school year.

One hundred and eighty-nine respondents (65.2 percent) indicated that they had not provided OT services in community settings (restaurant, student's home, grocery store, bank, etc) during the 1993-94 school year. Fifty-eight OTs (20.0 percent) had provided services in the community less than once a month; 21 (7.2 percent) had provided services about once a month; and 13 OTs (4.5 percent) had provided OT services in community settings about 2 to 3 times a month. Nine respondents (3.1 percent) indicated that they had provided OT services in the community once a week or more.

Respondents also were asked how many times a week that they had at least 15 minutes to discuss each student on their caseloads with other team members or to train other team members to integrate OT techniques into their students' daily activities. Thirty-three respondents (11.4 percent) indicated that they never had the time to discuss or review students on their caseloads with other team members. Seventy-one OTs (24.5 percent) had less than once a month; 76 (26.2 percent) had about once a month; 54 (18.6 percent) had about two to three times a month; 35 (12.1 percent) had about once a week; and 21 (7.2 percent) had 15 minutes more than once a week to discuss each student with other team members.

Twenty-five respondents (8.6 percent) indicated that they never had at least 15 minutes to train other team members to integrate OT techniques into the daily activities of each student on their caseloads. Seventy-nine OTs (27.2 percent) had less than once a month for this activity; 79 (27.2 percent) had about once a month; 52 (17.9 percent) had about two to three times a month; and 39 (13.4 percent) had about once a week. Only 16 respondents (5.5 percent) indicated that they had more than once a week to train other team members to integrate OT techniques into the daily activities of each student on their caseloads.

Response patterns of occupational therapists concerning the most used location for their services. Respondents were asked to indicate where their OT intervention occurred from the most used to least used location. Six choices were provided to include therapy room, therapy area in the special education classroom, any area in the special education classroom where students engage in activities, the regular education classroom, any area of the school, or in the community. Table 4.7 summarizes the information from this question.

Table 4.7

Response Patterns of Occupational Therapists Concerning the Most Used Location for Their Services

Q-19. Using the following six categories, indicate where your OT intervention <u>occurs</u> from the most often to least often used location?		Most Used Location		Second Most Used Location	Third Most Used Location	Fourth Most Used Location	Fifth Most Used Location	Sixth Most Used Location
1	therapy room	n	87	22	30	24	52	56
		%	30.0	7.6	10.3	8.3	17.9	19.3
2	therapy area in the special ed classroom	n	20	58	43	71	53	13
		%	6.9	20.0	14.8	24.5	18.3	4.5
3	any area in the special ed classroom where a student participates in activities	n	93	74	78	24	10	1
		%	32.1	25.5	26.9	8.3	3.4	0.3
4	regular education classroom	n	11	50	54	63	61	29
		%	3.8	17.2	18.6	21.7	21	10.0
5	any area of the school where the students are engaged in activities (e.g., cafeteria, playground, hallways, school bus, etc.)	n	74	79	53	42	32	2
		%	25.5	27.2	18.3	14.5	11	.7
6	in the community (e.g., grocery store, bank, restaurant, mall, or local businesses)	n	5	6	21	36	43	148
		%	1.7	2.1	7.2	12.4	14.8	51.0
	No response	n	0	1	11	30	39	41
		%	0	.03	3.8	10.3	13.4	14.1

The location cited as the most used by the majority of the respondents was any area in the special education classroom where a student participates in activities. Ninety-three respondents (32.1 percent) indicated that this was their most used location. Eighty-seven OTs (30.0 percent) indicated that their most frequently used location was a therapy room. Seventy-four OTs (25.5 percent) indicated that any area of the school where the students were engaged in activities was their most frequently used location. Twenty OTs (6.9 percent) indicated that they used a therapy area in the special education classroom most frequently. Eleven OTs (3.8 percent) indicated that they provided services in regular education classrooms most frequently. Five OTs (1.7 percent) indicated that they provided services in the community as their most frequently used location of services.

When asked what was the second most used location, the largest number of respondents cited any area of the school where students are engaged in activities as the location. This option was chosen by 79 respondents (27.2 percent). Seventy-four OTs (25.5 percent) selected any area in the special education classroom where a student participates in activities as their second most used location; 58 (20.0 percent) identified a therapy area in the special education classroom; 50 (17.2 percent) identified the regular education classroom; 22 (7.6 percent) identified the therapy room; and 6 (2.1 percent) identified the community. One OT did not respond to this question.

Seventy-eight respondents (26.9 percent) indicated that any area in the special education classroom where a student participates in activities was their third most used location. Fifty-four OTs (18.6 percent) indicated that their third most used location was the regular education classroom; 53 OTs (18.3 percent) selected any area of the school where the students were

engaged in activities; 43 OTs (14.8 percent) selected a therapy area in the special education classroom; 30 OTs (10.3 percent) selected a therapy room; and 21 OTs (7.2 percent) indicated that they provided services in the community as their third most used location. Eleven OTs (3.8 percent) did not respond to this question.

Seventy-one respondents (24.5 percent) indicated that a therapy area in the special education classroom was their fourth most used location. Sixty-three OTs (21.7 percent) indicated that their third most used location was the regular education classroom; 42 OTs (14.5 percent) selected any area of the school where the students were engaged in activities; 36 OTs (12.4 percent) selected the community; 24 OTs (8.3 percent) selected a therapy room; 24 OTs (8.3 percent) selected any area in the special education classroom where a student participates in activities as their third most used location. Thirty OTs (10.3 percent) did not respond to this question.

When asked what was the fifth most used location, the largest number of respondents cited the regular education classroom as the location. This option was chosen by 61 respondents (21.0 percent). Fifty-three OTs (18.3 percent) selected a therapy area in the special education classroom as their fifth most used location. Fifty-two respondents (17.9 percent) identified a therapy room; 43 (17.2 percent) identified the community; 32 (11.0 percent) identified any area of the school where students are engaged in activities; 10 (3.4 percent) identified any area in the special education classroom. Thirty-nine respondents (13.4 percent) failed to answer this question.

One hundred and forty-eight respondents (51.0 percent) indicated that the community was their least used location. Fifty-six OTs (19.3 percent) indicated that their sixth used location

was a therapy room; 29 OTs (10.0 percent) selected the regular education classroom; 13 OTs (4.5 percent) selected a therapy area in the special education classroom; 2 OTs (0.7 percent) selected any area of the school where the students are engaged in activities; 1 OT (0.3 percent) selected any area in the special education classroom where a student participates in activities as their sixth most used location. Forty-one OTs (14.1 percent) did not respond to this question.

Respondents also were asked to rank the six locations in order of importance based on their preferences. A shift in responses occurred, and a number of respondents moved away from identifying isolated areas for service delivery such as a therapy room or therapy area to more integrated locations as their preferred choices. For instance, 116 OTs (40.0 percent) identified any area of the school where the students are engaged in activities (cafeteria, playground, hallways, school bus, etc.) as the most preferred location. Eight-six respondents (29.7 percent) selected this as their second most preferred location.

Increases in selection of the community for OT services also occurred when therapists ranked the six locations by order of preference. For instance, 44 OTs (15.2 percent) identified the community as their most preferred location; 53 (18.3 percent) selected it as their second most preferred location; and 47 (16.2 percent) identified the community as their third choice for OT services. Only 62 OTs (21.4 percent) identified the community as the sixth preferred location as opposed to 148 OTs (51.0 percent) who identified it as the sixth most used location.

Conversely, a therapy room or therapy area in the special education classroom were the fifth or sixth locations of choice for the majority of the respondents. Thirty-six OTs (12.4 percent) identified a therapy room as their fifth choice, and 140 OTs (48.3 percent) indicated that it would be their sixth choice if they were totally in charge of their schedules. One hundred

Table 4.8

Response Patterns of Occupational Therapists Concerning the Most Preferred Location for Their Services

Q-20. Using the six categories in the previous question, decide which location you would consider to be the most preferred to the least preferred if you were totally in charge of where you provide services.		Most Preferred Location		Second Most Preferred Location		Third Most Preferred Location		Fourth Most Preferred Location		Fifth Most Preferred Location		Sixth Most Preferred Location	
1	therapy room	n	45	11	22	30	36	140					
		%	15.5	3.8	7.6	10.3	12.4	48.3					
2	therapy area in the special ed classroom	n	11	30	25	45	138	30					
		%	3.8	10.3	8.6	15.5	47.6	10.3					
3	any area in the special ed classroom where a student participates in activities	n	53	62	84	71	13	1					
		%	18.3	21.4	29.0	24.5	4.5	0.3					
4	regular education classroom	n	21	47	74	60	41	36					
		%	7.2	16.2	25.5	20.7	14.1	12.4					
5	any area of the school where the students are engaged in activities (e.g., cafeteria, playground, hallways, school bus, etc.)	n	116	86	34	28	20	6					
		%	40.0	29.7	11.7	9.7	6.9	2.1					
6	in the community (e.g., grocery store, bank, restaurant, mall, or local businesses)	n	44	53	47	45	26	62					
		%	15.2	18.3	16.2	15.5	9.0	21.4					
	No response	n	0	1	4	11	16	15					
		%	0	0.3	1.4	3.8	5.5	5.2					

thirty-eight respondents (47.6 percent) selected a therapy area in the special education classroom as their fifth choice, and 30 OTs (10.3 percent) identified a therapy area as their sixth choice. Additional information on questionnaire item #20 is summarized in Table 4.8.

Response patterns of occupational therapists concerning service delivery activities.

Therapists were provided a list of four activities and were asked to identify the one on which they spent the most time for students ages 14 to 22 during a work week. The four activities included direct therapy, consulting, teaching other team members, and monitoring student progress. Ninety-eight respondents (33.8 percent) indicated that they spent the most time providing direct therapy to students as the occupational therapist. Seventy-eight OTs (26.9 percent) identified consulting with other team members as their most frequent activity. Seventy-five OTs (25.9 percent) selected teaching other team members to integrate/implement occupational therapy strategies into students' daily activities as their most frequent activity. Thirty-seven OTs (12.8 percent) identified monitoring student progress as the activity on which they spent the most time. Two OTs did not respond to this question.

When asked to rank the four OT activities in order of importance for students of transition age, the majority of the respondents felt that teaching other team members was the first or second activity of choice. One hundred OTs (48.3 percent) felt that teaching other team members to integrate OT strategies into students' daily activities was the most important activity, while 106 (36.6 percent) felt that it was the second most important activity. Consulting with other team members to develop student objectives was the next activity selected by the largest number of respondents. One hundred OTs (34.5 percent) felt that it was the most important activity while 119 (41.0 percent) felt it was the second most important.

Table 4.9

Response Patterns of Occupational Therapists Concerning Their Primary Activity for Service Delivery

	Item	n	%
Q-21. On which <u>one</u> of the following activities do you spend the <u>most time</u> during a typical work week for transition-age students on your caseload?			
1.	direct therapy provided to students by you as the occupational therapist.	98	33.8
2.	consulting with other team members to develop student objectives (e.g., teacher, speech therapists, physical therapists, aides)	78	26.9
3.	teaching other team members to integrate/implement occupational therapy strategies into students' daily activities.	75	25.9
4	monitoring student progress.	37	12.8
	No Response	2	0.7

Table 4.10

Response Patterns of Occupational Therapists Concerning the Ranking of OT Activities

Q-22. Using the four activities listed in the previous question, rank them in order of importance for students of transition age if you were totally in charge of your schedule.		Most Important Activity	Second Most Important	Third Most Important	Fourth Most Important
1. direct therapy provided to students by you as the occupational therapist	n	39	31	72	146
	%	13.4	10.7	24.8	50.3
2. consulting with other team members to develop student objectives (e.g., teacher, speech therapists, physical therapists, aides)	n	100	119	58	11
	%	34.5	41.0	20.0	3.8
3. teaching other team members to integrate/implement occupational therapy strategies into students' daily activities	n	140	106	37	5
	%	48.3	36.6	12.8	1.7
4 monitoring student progress	n	9	32	121	126
	%	3.1	11.0	41.7	43.4
No Response.	n	2	2	2	2
	%	0.7	0.7	0.7	0.7

Monitoring student progress was identified as the third most important activity by the greatest number of respondents. One hundred and twenty-one OTs (41.7 percent) identified this as the third most important activity. Finally, direct therapy provided to students by the occupational therapist was identified as the fourth most important activity by 146 respondents (50.3 percent). Additional information on the ranking of OT activities by order of importance can be found in Table 4.10.

Attitudes Toward "Best Practices" for Transition Planning

Twenty-five statements assessed occupational therapists' attitudes toward OT involvement in transition planning for students with severe disabilities. A 5-point Likert scale was used ranging in weights from Strongly Disagree (1) to Strongly Agree (5), with a mid-range of no opinion (3). Statements included issues related to ITP/IEP team process, OT implementation strategies such as integrating OT services into students' daily routines, and OT involvement in vocational programming and post school employment outcomes. Table 4.1 summarizes these statements and addresses research question #3: What are the attitudes of occupational therapists towards "best practices" for transition planning, and what are the attitudes of occupational therapists towards vocational outcomes for students with severe disabilities?

Response patterns of occupational therapists to ITP/IEP team and OT implementation statements. A total of seventeen items on the survey addressed issues related to ITP/IEP teams and OT implementation issues for students ages 14 to 22 years. These attitude statements are identified as questionnaire items #23, #24, #26, #27, #28, #30, #31, #33, #34, #35, #36, #40, #41, #43, #44, #45, and #47. Therapists' responses to a number of these statements suggest positive attitudes related to ITP/IEP team functioning and OT service delivery for students of

Table 4.11

Response Patterns of Occupational Therapists to Attitude Statements

Attitude Statement	No Opinion	Strongly Disagree	Disagree	Agree	Strongly Agree
Q-23.* Direct therapy provided by a therapist is the best way to improve the functional abilities of students with disabilities.	% 1.0 n 3	20.0 58	51.7 150	22.8 66	4.5 13
Q-24.* Developmental Checklists are useful when identifying OT objectives for transition-age students with disabilities.	% 4.5 n 13	20.0 58	32.8 95	39.0 113	3.8 11
Q-25.* Stuffing envelopes in the special ed classroom is a good example of a prevocational task for transition students with disabilities.	% 10.0 n 29	7.2 21	40.3 117	40.3 117	2.1 6
Q-26. OTs should teach other ITP/IEP members (e.g., teachers, speech therapists, aides, etc.) to implement OT techniques during the student's day in real-life situations.	% 0.3 n 1	0.3 1	0.7 2	43.8 127	54.8 159
Q-27.* Teachers don't want to implement OT techniques. They think OTs should provide direct therapy services.	% 1.7 n 5	7.6 22	44.8 130	36.2 105	9.7 28
Q-28.* There are some intervention techniques that only a therapist should implement (e.g. handling techniques such as physical guidance, tone, and/or sensory normalization.)	% 1.7 n 5	2.8 8	31.0 90	45.5 132	19.0 55
Q-29.* Operating a school store in the special ed. classroom is an example of an activity that will prepare students with severe disabilities to work in the community.	% 2.1 n 6	1.7 5	16.9 49	65.9 191	13.4 39
Q-30.* Parents don't want OTs to teach other team members to implement OT techniques. They think that the OT should provide direct therapy services.	% 5.2 n 15	7.6 22	39.0 113	39.7 115	8.6 25

* Indicates that item was recoded for data analysis

(table continues)

Table 4.11 continued

Response Patterns of Occupational Therapists to Attitude Statements

Attitude Statement	No Opinion	Strongly Disagree	Disagree	Agree	Strongly Agree
Q-31. The ITP/IEP team should make the final decision on whether a student receives OT services.	% 1.7 n 5	10.7 31	21.7 63	53.1 154	12.8 37
Q-32.* Simulating a sheltered work-shop in the school building for vocational training is a good idea.	% 7.2 n 21	3.1 9	18.6 54	59.0 171	12.1 35
Q-33.* OT goals and objectives should be in a separate/special section of a student's IEP or ITP.	% 4.1 n 12	34.5 100	47.2 137	11.4 33	2.8 8
Q-34. When OT's work w/ transition-age students, focus should be on teaching functional skills (e.g., ADL/home management, grocery shopping, self-care, preparing meals).	% 1.4 n 4	1.0 3	6.9 20	48.6 141	42.1 122
Q-35. Teaching a transition-age student wheelchair mobility skills in the community (e.g., crossing streets, riding public transportation, etc.) is something an OT should do.	% 5.2 n 15	2.1 6	25.2 73	53.4 155	14.1 41
Q-36.* OTs don't need to attend ITP meetings as long as they have completed an OT evaluation and submitted the student's goals and objectives prior to team meetings.	% 2.1 n 6	33.4 97	55.2 160	9.3 27	0 0
Q-37. Students with severe disabilities should receive on-the-job training in real community jobs prior to leaving school.	% 2.8 n 8	.3 1	5.9 17	54.1 157	36.9 107
Q-38. Providing on-the-job training to students in real community jobs is something an OT should spend time doing.	% 9.0 n 26	2.8 8	37.2 108	39.0 113	12.1 35
Q-39. The OT's role in on-the-job training for students is to provide consultation, job site modifications, and assistive technology devices as needed.	% 0.3 n 1	0 0	0.7 2	57.6 167	41.4 120

* Indicates that item was recoded for data analysis.

(table continues)

Table 4.11 continued

Response Patterns of Occupational Therapists to Attitude Statements

Attitude Statement	No opinion	Strongly Disagree	Disagree	Agree	Strongly Agree
Q-40. OTs should evaluate students in community sites (e.g., student's home, restaurants, YMCA, etc.) to identify assistive technology needs as part of transition planning.	% 3.4 n 10	0.3 1	2.4 7	66.9 194	26.9 78
Q-41.* As students reach transition age (14-22), the need for OT services decreases.	% 5.9 n 17	14.1 41	51.0 148	26.2 76	2.8 8
Q-42.* Working in sheltered workshops or day activity centers is a good transition outcome for students with severe disabilities.	% 10.0 n 29	1.7 5	11.7 34	70.3 204	6.2 18
Q-43.* Students of pre-school and elementary age have priority for OT services over students of transition age.	% 3.8 n 11	8.3 24	45.9 133	32.4 94	9.7 28
Q-44.* Students with severe disabilities who receive training at school (e.g. shopping at a simulated store; using a washer in home economics; working in the school's cafeteria) will be able to use (generalize) these skills in other environments (e.g. laundromat, grocery store, job site, etc.).	% 4.8 n 14	7.2 21	42.8 124	43.8 127	1.4 4
Q-45.* As students get older and near graduation, their ability to benefit from OT intervention decreases.	% 5.9 n 17	11.4 33	58.6 170	22.1 64	2.1 6
Q-46. Students with the most severe disabilities can earn minimum wage in community jobs if given support & training.	% 13.4 n 39	5.5 16	26.6 77	49.7 144	4.8 14
Q-47. OTs should use their expertise to facilitate group home/ supervised apartment living for students with severe disabilities.	% 14.1 n 41	0.7 2	10.7 31	66.9 194	7.6 22

* Indicates that item was recoded for data analysis.

transition age. For instance, 286 OTs (98.6 percent) agreed or strongly agreed with the statement: "OTs should teach other ITP/IEP members to implement OT techniques during the student's day in real-life situations." Two hundred and fifty-seven respondents (88.6 percent) strongly disagreed or disagreed with the statement: "OTs don't need to attend ITP meetings as long as they have completed an OT evaluation and submitted the student's goals and objectives prior to team meetings." Two hundred and thirty-seven OTs (81.7 percent) disagreed or strongly disagreed with the statement: "OT goals and objectives should be in a separate/special section of a student's IEP or ITP." One hundred and ninety-one OTs (65.9 percent) agreed or strongly agreed with the statement: "the ITP/IEP team should make the final decision on whether a student receives OT services."

Respondents were divided on several other attitude statements related to ITP/IEP team functioning. Even though respondents felt that they should teach other team members to implement OT techniques, 187 (64.5 percent) strongly agreed or agreed with the statement: "there are some intervention techniques that only a therapist should implement." Ninety-eight OTs (33.8 percent) strongly disagreed or disagreed with this statement, while 5 OTs (1.7 percent) did not have an opinion. Respondents also were divided on whether they felt that teachers wanted to implement OT techniques. One hundred and fifty-two respondents (52.4 percent) strongly disagreed or disagreed with the statement, while 133 (45.9 percent) agreed or strongly agreed. Five OTs did not have an opinion on this statement. Finally, respondents were divided almost equally on whether parents wanted OTs to teach other team members to implement OT techniques. One hundred and forty OTs (48.3 percent) agreed or strongly agreed with this statement, while 135 (46.6 percent) disagreed or strongly disagreed.

Therapists' responses to a number of statements related to OT service delivery for transition-age students also suggest positive attitudes toward best practices. For instance, 272 OTs (93.8 percent) agreed or strongly agreed with the statement: "OTs should evaluate students in community sites to identify assistive technology needs as part of transition planning." Two hundred sixty-three respondents (90.7 percent) agreed or strongly agreed with the statement: when OTs work with transition-age students, focus should be on teaching functional skills (e.g., ADL/home management, grocery shopping, self-care, preparing meals). Two hundred and sixteen respondents (74.5 percent) agreed or strongly agreed with the statement: "OTs should use their expertise to facilitate group home/supervised apartment living for students with severe disabilities," while only 33 OTs (11.4 percent) strongly disagreed or disagreed. Forty-one respondents (14.1 percent) did not have an opinion on whether OTs should use their expertise to facilitate group home/supervised apartment living. One hundred and ninety-six respondents (67.5 percent) agreed or strongly agreed with the statement: "teaching a transition-age student wheelchair mobility skills in the community is something an OT should do." Seventy-nine OTs (27.2 percent) disagreed or strongly disagreed with this statement; 15 respondents (5.2 percent) did not have an opinion.

Two hundred and eight respondents (71.7 percent) disagreed or strongly disagreed with the statement: "direct therapy provided by a therapist is the best way to improve the functional abilities of students with disabilities." Seventy-nine OTs (27.3 percent) strongly agreed or agreed with this statement. Two hundred and three respondents (70.0 percent) disagreed or strongly disagreed with the statement: "as students get older and near graduation, their ability to benefit from OT intervention decreases." One hundred and eighty-nine respondents (65.1 percent) strongly disagreed or disagreed: "as students reach transition age, the need for OT

services decreases," while only 84 OTs (29.0 percent) agreed or strongly agreed. Seventeen OTs (5.9 percent) did not have an opinion.

Respondents were divided more equally on the statement: "students of pre-school and elementary age have priority for OT services over students of transition age." One hundred fifty-seven respondents (54.2 percent) strongly disagreed or disagreed with this statement; while 122 (42.1 percent) strongly agreed or agreed. Eleven OTs did not have an opinion on this statement.

Respondents were also divided on the statement: "students with severe disabilities who receive training at school will be able to use (generalize) these skills in other environments." One hundred forty-five OTs (50.0 percent) strongly disagreed or disagreed with this statement; 131 (45.1 percent) strongly agreed or agreed. Fourteen OTs (4.8 percent) did not have an opinion on this issue.

Finally, respondents were divided somewhat equally on the statement: "developmental checklists are useful when identifying OT objectives for transition-age students with disabilities." One hundred fifty-three OTs (52.8 percent) strongly disagreed or disagreed with this statement, while 124 (42.8 percent) strongly agreed or agreed. Thirteen OTs (4.5 percent) did not have an opinion.

Response patterns of occupational therapists to vocational statements. A total of eight items on the survey addressed issues related to vocational programming and post school outcomes for students ages 14 to 22 years. These attitude statements are identified as questionnaire items #25, #29, #32, #37, #38, #39, #42, and #46. Therapists responses to several of these statements suggest limited knowledge of best practices for vocational programming. For instance, 230 OTs (79.3 percent) agreed or strongly agreed with the statement: "operating

a school store in the special education classroom is an example of an activity that will prepare students with severe disabilities to work in the community." Two hundred and six OTs (71.1 percent) agreed or strongly agreed with the statement: "simulating a sheltered workshop in the school building for vocational training is a good idea." Two hundred and twenty-two respondents (76.5 percent) agreed or strongly agreed with the statement: "working in sheltered workshops or day activity centers is a good transition outcome for students with severe disabilities."

Respondents were divided almost equally on whether stuffing envelopes in the special education classroom is a good prevocational task. One hundred and twenty-three OTs (42.3 percent) agreed or strongly agreed, while 138 (47.5 percent) disagreed or strongly disagreed. Twenty-nine respondents (10.0 percent) did not have an opinion. Respondents also were divided on whether OTs should spend time providing on-the-job training to students in community jobs. One hundred and forty-eight respondents (51.0 percent) agreed or strongly agreed with this statement, while 116 OTs (41.0 percent) disagreed or strongly disagreed. Twenty-six OTs did not have an opinion. Finally, respondents were divided on whether students with severe disabilities could earn minimum wage in community jobs if given support and training. One hundred fifty-eight respondents (54.5 percent) agreed or strongly agreed, while 93 OTs (32.1 percent) disagreed or strongly disagreed. Thirty-nine OTs (13.4 percent) did not have an opinion on this issue.

Respondents demonstrated more positive attitudes to vocational items #37 and #39. Two hundred sixty-four OTs (91.0 percent) agreed or strongly agreed that students of transition age should receive on-the-job training in real community jobs prior to leaving school. Two hundred and eighty-seven (99.0 percent) agreed or strongly agreed that OTs should provide consultation,

job-site modifications, and assistive technology devices to students as needed.

Relationships Between Educational Background, Continuing Education Experiences,

Length of Employment in School-Based Practice, Work Experiences, and

Occupational Therapists' Attitudes of Best Practices for Transition

Attitudes toward best practices for transition. Questionnaire items #23 - #47 were combined to create an Attitude Index to assess therapists' attitudes toward best practices for transition programming. Cronbach Alpha computation for inter-item consistency of the Index (McMillan & Schumacher, 1989) produced a coefficient of .71 when all 25 items were used for computation. Review of the data revealed that item 41 ("as students reach transition age, 14 - 22, the need for OT services decreases) showed poor correlation with the total, -.09, and a decision was made to delete it from the analysis. When item 41 was deleted, Cronbach Alpha computation produced a coefficient of .74, indicating adequate inter-item consistency.

An attempt was made to create three subscales from the remaining 24 attitude statements: 1.) ITP/IEP team functioning, 2.) OT implementation issues, and 3.) vocational programming issues. Cronbach Alpha computation for inter-item consistency produced coefficients < .5 for each subscale, indicating poor inter-item consistency. Therefore, the decision was made to conduct the analysis using all 24 items to comprise one Attitude Index Scale.

A mean Attitude Index score was computed for each respondent by summing the scores for the 24 individual items and then computing a mean score. The scores for 14 of the items were recoded, because these statements expressed negative attitudes while the remaining 10 statements expressed positive attitudes. These 14 statements are marked in Table 4.11 with an asterisk (*). The recoding of the scores for these statements was conducted only when

computing the mean Attitude Index scores; the response patterns presented in Table 4.11 were not recoded. As such, higher mean Attitude Index scores were reflective of positive attitudes toward best practices for transition planning while lower scores were reflective of less acceptance. The observed range for mean Attitude Index scores was 2.5 to 4.6. Analysis of Variance (ANOVA) was conducted to assess differences in the Attitude Index scores among therapists based on a number of independent variables. The results of these analyses follow.

What is the relationship between occupational therapists' educational backgrounds and their attitudes toward "best practices?" Relationships between therapists' educational backgrounds and their attitudes toward best practices were tested using a one by three analysis of variance. Educational background, which was an open-ended questionnaire item, initially was categorized into four types representing a bachelor's degree, master's degree, post-professional master's degree, and doctorate and was treated as an independent variable. Only one respondent indicated that she had a doctorate degree, and subsequently this level was collapsed into the post-professional master's degree level. Therefore, the three levels of the independent variable for this analysis were as follows. Level one consisted of all respondents who had only an undergraduate degree in occupational therapy. Level two consisted of all respondents who had an undergraduate degree in occupational therapy and a post-professional master's degree in occupational therapy. Level three consisted of all respondents who had either one of the following combinations: 1.) undergraduate degree in another field of study and a master's degree in occupational therapy, or 2.) undergraduate degree in occupational therapy and a master's degree in another field of study. Table 4.12 presents the results of the univariate ANOVA for the relationship between educational background and therapists' attitudes. A significant difference was not found between educational backgrounds and therapists' attitudes toward best

Table 4.12

Summary Table of ANOVA:

Type of Degree and Attitude Index Scores

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
Type of Degree	2	0.39	0.19	1.53	.218
Error	287	36.25	0.126		

Note: N = 290

practices for transition planning.

Relationships between when occupational therapists received their most recent degrees and their attitudes of best practices for transition planning also was assessed using a univariate ANOVA. Year of degree, which was an open-ended questionnaire item, was treated as an independent variable and was categorized into four levels representing 1.) most recent degree was earned between 1947 and 1969; 2.) most recent degree was earned between 1970 and 1975; 3.) most recent degree was earned between 1976 and 1985; and 4.) most recent degree was earned between 1986 and 1994. Attitude Index score was treated as the dependent variable. Table 4.13 presents the results of the univariate ANOVA for the relationship between year of most recent degree and therapists' attitudes. A significant difference was not found between therapists' attitudes and when they received their most recent degrees.

What is the relationship between occupational therapists' continuing education experiences and their attitudes toward "best practices?" Two independent variables were identified to assess the relationship between continuing education experiences and therapists' attitudes toward "best practices for transition planning. This included self-study activities through the American Occupational Therapy Association or the Association for Persons with Severe Handicaps. Separate univariate ANOVAs were conducted using these independent variables.

Completion of AOTA's self-study course was treated as an independent categorical variable for the first analysis. This variable was coded as a categorical yes/no response on the questionnaire and consisted of two levels, representing those respondents who had completed the AOTA self-study coursework on transition and those who had not. The Attitude Index score was treated as the dependent variable. Table 4.14 presents the results of this analysis. No

Table 4.13

Summary Table of ANOVA:Year of Most Recent Degree and Attitude Index Scores

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
Year of Degree	3	0.34	0.11	0.89	.448
Error	284	36.22	0.128		

Note: Due to missing values, only 288 observations can be used in this analysis.

Table 4.14

Summary Table of ANOVA:**Completion of AOTA Self-Study Section on Transition and Attitude Index Scores**

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
AOTA Self-Study	1	0.099	0.099	0.78	.3787
Error	288	36.54	0.127		

Note: N = 290

significant difference was found between completion of the AOTA self-study coursework on transition planning and therapists' attitudes toward best practices.

Membership or self-study through TASH was treated as an independent categorical variable for the second univariate ANOVA concerning therapists' continuing education experiences. This variable was coded on the questionnaire as a categorical yes/no response for membership with TASH and a yes/no response for self-study consisting of reading articles published by this organization. For the purpose of this analysis, the independent variable was collapsed into two levels in order to have a sufficient sample size for analysis. The first level consisted of all respondents who fell into one or both of the following categories: 1.) respondents who answered "yes", indicating that they were current or past TASH members; 2.) respondents who answered "yes", indicating that they had read articles published by JASH. The second level consisted of all respondents who indicated that they had never been members of TASH and had never read articles published by this association. Attitude Index score was the dependent variable.

Table 4.15 presents the results for this analysis. A statistically significant relationship was found at the $p < .001$. A post hoc test was then conducted to identify the source of the significance. The Student-Newman-Keuls test showed that respondents who had been associated with TASH had significantly higher Attitude Index scores, indicating more positive attitudes.

What is the relationship between occupational therapists' length of employment and their attitudes toward "best practices" for transition planning? Relationships between occupational therapists' attitudes toward best practices for transition planning and the length of time that they had been employed in school-based practice or in other areas of practice was assessed using a

Table 4.15

Summary Table of ANOVA:**TASH Association and Attitude Index Scores**

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
Association with TASH	1	1.656	1.656	13.63	.0003*
Error	288	34.98	0.121		

* p<.001

Note: N = 290

3 x 3 factorial ANOVA. Length of employment in school-based practice, which was an open-ended questionnaire item, was treated as one of the independent variables and was categorized into three levels representing: 1.) therapists who had minimal experience in school-based practice (1 - 3 years of experience); 2.) therapists who had moderate amounts of experience (4 - 10 years of experience); and 3.) therapists who had high levels of experience (11 or more years). Length of employment in other areas of practice, which was also an open-ended questionnaire item, was treated as the second independent variable and was categorized into three levels representing: 1.) therapists who had minimal experience in other areas of practice (0 - 3 years of experience); 2.) therapists who had moderate amounts of experience (4 - 10 years of experience); and 3.) therapists who had high levels of experience (11 or more years). Attitude Index score was treated as the dependent variable. Table 4.16 presents the results of this bivariate ANOVA. No significant differences were detected among Attitude Index scores and the length of employment in school settings and length of employment in other areas of practice.

What is the relationship between work experiences and occupational therapists' attitudes of best practices for transition? The relationship between who employs occupational therapists and their attitudes toward best practices for transition planning was assessed using a 1 x 3 ANOVA. Employment relationship, which was a categorical item on the questionnaire, was treated as an independent variable and initially was coded into four levels representing 1.) direct employee of the school system; 2.) employed by a private agency, contracts with school; 3.) employed by a hospital, contracts with school; and 4.) private practice, contracts with school. Subsequently, levels 2 and 3 were combined to create an adequate sample size, resulting in three groups for analysis. Attitude Index score was treated as the dependent variable. Table 4.17 presents the results of this univariate ANOVA for the relationship between who employs

Table 4.16

Summary Table of ANOVA:**Years of Experience and Attitude Index Scores**

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
Length of employment in other settings	2	0.032	0.0162	0.13	.8806
Length of employment in schools	2	0.348	0.1742	1.37	.2559
Interaction	4	0.381	0.0952	0.75	.5598
Error	285	36.256	0.1272		
Total	289				

Note: N = 290

Table 4.17

Summary Table of ANOVA:**Employee of School System vs. Private Practice and Attitude Index Scores**

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
Employer	2	0.036	0.018	0.14	.8679
Error	287	36.60	0.128		

Note: N = 290

occupational therapists and their attitudes towards best practices. A significant difference was not found between therapists' attitudes and their employers.

The relationship between full or part-time employment and occupational therapists' attitudes toward best practices for transition planning was assessed using a 1 x 2 ANOVA. Employment hours, which was a categorical item on the questionnaire, was treated as an independent variable and was coded into two levels representing 1.) full-time; and 2.) part-time. Attitude Index score was treated as the dependent variable. Table 4.18 presents the results of this univariate ANOVA. A significant difference was not found between therapists' attitudes and full or part-time employment.

The relationship between how OTs spend the majority of their time and their attitudes toward best practices for transition planning was assessed using a 1 x 4 ANOVA. Service delivery, which was a categorical item on the questionnaire, was treated as an independent variable consisting of four levels representing 1.) direct therapy, 2.) consulting, 3.) teaching other team members, and 4.) monitoring student progress. Attitude Index score was treated as the dependent variable.

Table 4.19 presents the results for this univariate ANOVA. A statistically significant relationship was found at the $p < .001$. A post hoc test was then conducted to identify the source of the significance. The Student-Newman-Keuls test showed that respondents who spend the majority of their time teaching other team members to integrate/implement occupational therapy strategies into students' daily activities had significantly higher Attitude Index scores, indicating more positive attitudes.

The relationship between where occupational therapists deliver the majority of their

Table 4.18

Summary Table of ANOVA:**Full-Time vs. Part-Time Employment and Attitude Index Scores**

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
Hours Worked	1	0.042	0.042	0.33	.5665
Error	288	36.59	0.127		

Note: N = 290

Table 4.19

Summary Table of ANOVA:Strategies for Delivering Occupational Therapy Services and Attitude Index Scores

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
Service Delivery Model	3	2.323	0.774	6.46	.0003*
Error	284	34.021	0.119		

* p<.001

Note: Due to missing values, only 288 observations can be used in this analysis.

services and their attitudes toward best practices for transition planning was assessed using a 1 x 3 ANOVA. Where occupational therapists deliver services, which was a categorical item on the questionnaire, was treated as an independent variable and initially consisted of six levels representing 1.) therapy room, 2.) therapy area in the special education classroom, 3.) any area of the special education classroom, 4.) regular education classroom, 5.) any area in the school building where students participate in activities, and 6.) the community. These categories were regrouped based on inadequate sample sizes for analysis for categories #2, #4, and #6. The resulting categories for analysis were as follows: 1.) all respondents who indicated therapy room or therapy area as their most used location; 2.) all respondents who indicated any area in the special education classroom; 3.) all respondents who indicated regular education classroom, any area of the school, or the community. Attitude Index score was the dependent variable.

Table 4.20 presents the results for this analysis. A statistically significant relationship was found at the $p < .001$. A post hoc test was then conducted to identify the source of the significance. The Student-Newman-Keuls test showed that respondents who spend the majority of their time delivering services in therapy rooms or therapy areas had significantly lower mean Attitude Index scores, indicating less positive attitudes.

Relationships between occupational therapists' attitudes toward best practices for transition planning and the number of students on their caseloads was assessed using a 3 x 3 factorial ANOVA. Number of students ages 14 - 22, which was an open-ended questionnaire item, was treated as one independent variable and was categorized into three levels representing: 1.) therapists who had a low number of transition-age students on their caseloads (3 or less); 2.) therapists who had a medium number on their caseloads (6 - 15); and 3.) therapists who a high number on their caseloads (16 or more). Number of students ages birth to 13, which was

Table 4.20

Summary Table of ANOVA:**Location of Services and Attitude Index Scores**

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
Location of Services	2	2.73	1.367	11.58	.0001*
Error	287	33.90	0.118		

* $p < .001$

Note: N = 290

an open-ended questionnaire item, was treated as the second independent variable and was categorized into three levels representing: 1.) therapists who had a low number of students ages birth to 13 on their caseloads (10 or less); 2.) therapists who had a medium number on their caseloads (11 - 20); and 3.) therapists who a high number on their caseloads (21 or more). Attitude Index score was treated as the dependent variable.

Table 4.21 presents the results from this factorial ANOVA. The relationship among Attitude Index scores, number of students of transition-age on therapists' caseloads, and number of students ages birth to 13 was observed to be significant ($p < .05$). A significant main effect for number of transition-age students on a therapist's caseload was detected. A post hoc test was conducted to identify the source of significance. The Student-Newman-Keuls Test revealed that respondents who had low numbers of transition-age students on their caseloads had significantly lower mean Attitude Index scores, indicating less positive attitudes toward best practices.

Finally, the relationship between how therapists participate on ITP/IEP teams for developing student objectives and their attitudes toward best practices for transition planning was assessed using an 1 x 3 ANOVA. Team participation, which was a categorical item on the questionnaire, was treated as an independent variable and initially was coded into four levels representing 1.) 1.) the OT is expected to write ITP objectives prior to a team meeting, and these are written on the ITP/IEP; 2.) the OT conducts a separate evaluation, and the team develops one set of objectives based on input from all members at the ITP/IEP meeting; 3.) a transdisciplinary team evaluation is completed and one set of objectives is developed during the ITP/IEP meeting; and 4.) other. Subsequently, level 4 was deleted from the analysis due to

Table 4.21

Summary Table of ANOVA:**Number Students on Caseload and Attitude Index Scores**

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
# of Transition Students	2	1.123	0.561	4.53	.0115*
# of Students Birth to 13	2	0.214	0.107	0.86	.4222
Interaction	4	1.337	0.334	2.70	.0310*
Error	285	35.299	0.124		
Total	289				

* p<.05

Note: N = 290

insufficient number in this group for data analysis. Attitude Index score was treated as the dependent variable. Table 4.22 presents the results of this univariate ANOVA for the relationship between how teams develop ITP/IEP objectives and occupational therapists' attitudes towards best practices. A significant difference was not found between therapists' attitudes and how they participate on teams to develop student objectives.

Self-Reported Training Needs of Occupational Therapists in the Transition Process

Information regarding the self-reported training needs of OTs who work with transition-age students is presented in Table 4.23. This table summarizes questionnaire items #48 - #60. Information describing their preferred training formats can be found in Table 4.24, which summarizes questionnaire item #80. Tables 4.23 and 4.24 address research question #5: What are the self-reported training needs of occupational therapists in the transition process?

A review of Table 4.23 shows that the majority of the respondents indicated that the topics listed were either beneficial or very beneficial for training OTs to work in school-based practice. A very small number indicated that the identified topics were not needed. When asked which training formats were preferred, respondents indicated "yes" to one-two day presentations (87.2 percent), regular articles in OT Week or Advance (87.2 percent), self-study booklets (85.2 percent), regular journal articles in AJOT (80.0 percent), and half-day presentations (72.4 percent) as their training formats of choice. The least preferred formats included three to five day workshops (20.3 percent), one to two week summer institute (27.9 percent), and pre-conference specialty sessions at national conference (37.6 percent). Respondents were divided equally on whether they preferred computer-assisted self-study, one to two hour presentations, teleconferences, or pre-conference sessions at state OT meetings.

Table 4.22

Summary Table of ANOVA:**Occupational Therapists' Participation on Teams and Attitude Index Scores**

Source of Variance	df	Sum of Squares	Mean Square	F Value	p
Strategy for Developing ITP/IEP Objectives	2	0.657	0.329	2.61	.0750
Error	284	35.699	0.126		

Note: Due to missing values, only 287 observations can be used in this analysis.

Table 4.23

Response Patterns of Occupational Therapists Concerning Training Needs

Training Need		Not Needed	Beneficial	Very Beneficial
Q-48. The Americans with Disabilities Act (ADA) and its implications for OT practice.	n	4	188	98
	%	1.4	64.8	33.8
Q-49. The Individuals with Disabilities Education Act (IDEA) and its implications for OT practice.	n	5	181	104
	%	1.7	62.4	35.9
Q-50. The Rehabilitation Act Amendments of 1992 and their implications for OT practice.	n	13	195	82
	%	4.5	67.2	28.3
Q-51. Liability and legal issues for providing OT services in a school-based practice.	n	14	149	127
	%	4.8	51.4	43.8
Q-52. Identifying educationally relevant OT services and objectives.	n	10	119	161
	%	3.4	41.0	55.5
Q-53. Using a collaborative team model. (Strategies to develop parent/ teacher/therapist collaboration in the transition planning process.)	n	11	110	169
	%	3.8	37.9	58.3
Q-54. Providing therapy services in the regular education classroom.	n	26	157	107
	%	9.0	54.1	36.9
Q-55. Completing OT assessments in community sites/environments.	n	15	154	121
	%	5.2	53.1	41.7
Q-56. Strategies for delivering OT services in community settings (e.g., home environments, grocery store, bank, YMCA, etc.).	n	17	150	123
	%	5.9	51.7	42.4
Q-57. Strategies for training other ITP/IEP team members to implement OT goals and objectives.	n	16	149	125
	%	5.5	51.4	43.1
Q-58. Supported employment as a transition outcome for students with disabilities.	n	13	178	99
	%	4.5	61.4	34.1
Q-59. Assistive technology to facilitate paid employment in competitive job sites.	n	10	133	147
	%	3.4	45.9	50.7
Q-60. Assistive technology to facilitate community/independent living skills.	n	5	136	149
	%	1.7	46.9	51.4

Table 4.24

Response Rates of Occupational Therapists Concerning Continuing Education Activities

	Item	N	%
Q-80.	What training formats would you prefer to participate in for occupational therapy school-based practice training? Please circle <u>YES</u> or <u>NO</u> for <u>each</u> of the following:		
1	Self-study booklet(s)		
	YES	247	85.2
	NO	43	14.8
2	Regular articles (e.g. OT Week, advance, etc.)		
	YES	253	87.2
	NO	37	12.8
3	Regular journal articles in AJOT		
	YES	232	80.0
	NO	58	20.0
4	Computer assisted self-study program		
	YES	139	47.9
	NO	151	52.1
5	Teleconferences		
	YES	113	39.0
	NO	177	61.0
6	One to two hour presentations		
	YES	171	59.0
	NO	119	41.0
7	Half day presentations		
	YES	210	72.4
	NO	80	27.6
8	One to two day presentations		
	YES	253	87.2
	NO	37	12.8
9	Three to five day workshop		
	YES	59	20.3
	NO	231	79.7
10	Pre-conference specialty sessions at national conference		
	YES	109	37.6
	NO	181	62.4
11	Pre-conference specialty sessions at state OT meetings		
	YES	169	58.3
	NO	121	41.7
12	One to two week summer institute		
	YES	81	27.9
	NO	209	72.1
13	Other		
	YES	19	6.6
	NO	271	93.4

CHAPTER V

Discussion

The purpose of this dissertation was to assess occupational therapists' involvement in transition planning, to determine their attitudes toward this process, and to identify areas which therapists need additional information and training. A nationally representative sample of 1,000 occupational therapists was randomly drawn from the American Occupational Therapy's Direct Mailing List for school-based therapists. A total of 755 surveys were returned representing a 76% return rate. The size and national scope of this sample is sufficient for the results to be considered externally valid and representative of occupational therapists who work in school-based practices.

Summary of Major Findings

Several important findings from this study relate to the research questions which were posed in Chapter 3. Several findings were statistically significant. Results are summarized below.

1. Nationally, more occupational therapists do not provide services to transition-age students than occupational therapists who do serve this age group.
2. Students, ages birth to 13, are the primary recipients of the occupational therapy services that are provided in school-based practice.
3. As students move through the transition process, occupational therapy services decrease. By the time students near graduation, few are receiving occupational therapy services.
4. Occupational therapists' involvement in community-based instruction for students ages 14 -22 is minimal.

5. Occupational therapists' involvement in community job sites for students ages 14 - 22 is minimal.
6. Occupational therapists are not full participants in the ITP/IEP team process.
7. Occupational therapists who work with transition-age youth appear to have rather positive attitudes towards many best practices in transition.
8. Occupational therapists who work with transition-age students appear to have less positive attitudes toward best practices for vocational programming.
9. Occupational therapists who reported that they have been members of the Association for Persons with Severe Handicaps or read articles from this organization, expressed more positive attitudes toward transition best practices than occupational therapists who were not associated with TASH.
10. Occupational therapists who indicated that they spent the majority of their time teaching other team members to integrate OT techniques into students' daily activities expressed more positive attitudes toward transition best practices.
11. Occupational therapists who reported that they spent the majority of their work day delivering services in therapy rooms or therapy areas expressed significantly less positive attitudes toward transition best practices.
12. Occupational therapists who reported serving three or fewer transition-age youth during the 1993-94 school year expressed less positive attitudes toward transition best practices.
13. Occupational therapists who work with transition-age youth have had limited training on transition planning.

Relevance of the Study

The results of this study should be viewed as baseline data on occupational therapists'

involvement in transition planning and their attitudes toward educational best practices for students ages 14 - 22. Because occupational therapy involvement in transition planning is a relatively new area, little was known about the characteristics of school-based therapists who serve this age group. The data obtained from this study provide information on the current level of therapists' participation in transition planning, the roles that therapists identify for themselves in this process, their attitudes towards best practices for serving students ages 14 - 22, and occupational therapists' future training needs if they are to participate fully in the national transition initiative.

Occupational Therapists' Involvement with Students of Transition Age

One of the major findings of this dissertation is that occupational therapists reported minimal involvement in the national transition initiative for students ages 14 - 22. Four hundred and sixty-five therapists (61.6 percent) indicated that they did not provide services to transition-age students during the 1993-94 school year. Of the 290 respondents who reported that they served these students, the majority indicated that their caseloads consisted primarily of students under 13 years of age. Specifically, the mean number of students on therapists' caseloads in the age group, birth to 13 years, was 33.86.

This number sharply declined when therapists were asked to report the number of transition-age students on their caseloads. Respondents indicated that the mean number of students that they served in age group, 14 to 16, was 5.69; the mean number served in age group, 17 to 19, was 2.81; and the mean number served in age group, 20 to 22, was 0.88. However, the following data may be even more revealing. One hundred and nine OTs (37.6 percent) reported that they did not serve students ages 17 to 19 years of age, while another 101

respondents (34.8 percent) reported that they served only 1 to 3 students in this age group. One hundred and ninety-two OTs (66.2 percent) indicated that they did not serve students ages 20 - 22, and an additional 81 respondents (27.9 percent) reported that they served only 1 to 3 students in this age group. It seems evident that few students are receiving occupational therapy services by the time they leave school.

Occupational Therapists' Participation in Community-Based Instruction

The second major finding from this study is that occupational therapists reported minimal involvement in community-based planning and instruction for transition-age students. However, this minimal involvement is not surprising in light of the limited numbers of transition-age youth on therapists' caseloads. Specifically, 194 respondents (66.9 percent) indicated that OT was not identified as a needed service to assist in implementing community-living ITP/IEP objectives for transition-age students. The majority of the remaining respondents (22.1 percent) indicated that OT was identified as a needed service for 5 or fewer students. Subsequently, only 5 respondents (1.7 percent) indicated that they consistently went to a student's home to evaluate activities of daily living skills; and 24 respondents (9.3 percent) indicated that they consistently went to community-sites other than the school setting for developing ITP/IEP objectives in this area. One hundred and eighty-nine OTs (65.2 percent) indicated that they never went to community sites to provide OT services, while another 79 (27.2 percent) indicated that they went infrequently. Only 9 OTs (3.1 percent) indicated that they had provided services in community settings once a week or more.

The data on occupational therapists' involvement in community-based vocational activities reveal equally limited participation by respondents. One hundred and sixty-six

therapists (57.2 percent) indicated that OT was not identified as a needed service to assist in implementing vocational ITP/IEP objectives for transition-age students, while another 90 respondents (31.0 percent) indicated that OT was identified as a needed service for 5 or fewer students. Two hundred and fifty-seven respondents (88.6 percent) indicated that they never visited non-paid work sites, or went less than once a month, to assist in analyzing or modifying work tasks for students to meet their ITP/IEP objectives. Respondents had even less involvement in analyzing or modifying community jobs for students' paid employment. Two hundred and seventy-three respondents (94.1 percent) reported that they had never gone to students' paid employment sites, or went less than once a month, during the 1993-94 school year.

Spencer and Sample (1993) stressed the importance of occupational therapists' involvement in transition planning for students ages 14 - 22. They stated that the mandated transition content of P.L. 101-476 reflects the major performance areas central to the profession of occupational therapy. These include work, education, and independent living (e.g., activities of daily living, community participation, mobility, recreation/leisure). In addition, occupational therapists often are the team members with knowledge and expertise related to assistive technology (Brollier et al., 1994; Royeen & Marsh, 1988). It seems logical to assume that many students with severe and multiple disabilities will need assistive technology assessment, training, as well as assistance with device acquisition to function within future adult roles such as work, home, leisure, and community (Flippo, Inge, & Barcus, in press). These needs should become most evident for students when they reach ages 14 - 22, yet the majority of these students nationally are not receiving occupational therapy services.

Therapists' attitudes toward serving transition-age youth. Limited involvement by occupational therapists in the transition process had been anticipated (Brollier et al., 1994), although not to the degree revealed by this study. Several attitude statements asked therapists to consider whether younger students have priority for OT services and if transition-age students needed their services. Only 84 respondents (29.0 percent) agreed that the need for OT services decreases as students reach transition age, and even fewer respondents (24.2 percent) agreed that as students near graduation, their ability to benefit from OT intervention decreases. A somewhat higher number, 122 OTs (42.1 percent), agreed that students of pre-school and elementary age have priority for OT services over students of transition age. In summary, the majority of the respondents seem to feel that transition-age students continue to need OT services and that they can benefit from them; however, elementary-age students have priority for OT services.

Additional insight on why occupational therapists are not serving transition-age youth may be found in the informal comments made by respondents on the backs of their questionnaires. Several recurring themes emerged from this information including: 1.) school policies that set priorities for OT services for students ages 13 years or younger; 2.) school administrators who do not value OTs' roles in transition; 3.) school administrators who refuse to expand OT services due to financial constraints; 4.) parents who demand OT services for elementary-age students but rarely for older students; 5.) time and staff shortages; and 6.) therapists who think that special educators are addressing transition issues. While these recurring themes provide insight into why occupational therapists are not serving transition-age youth, they are not presented here as reasons for this problem. However, they do provide a foundation on which to conduct future research. Refer to the appendix for a representative

sample of respondents' comments.

Occupational Therapists' Participation in the ITP/IEP Team Process

Insight into occupational therapists' limited involvement with transition-age youth also can be found in the survey results on the ITP/IEP team process. Therapists' participation was assessed using a series of questionnaire items that asked OTs to specify their level of involvement in various ITP/IEP activities, as well as identify how they delivered services to transition-age students. An accurate understanding of how therapists are participating on transition teams and providing services to students ages 14 - 22 was considered essential for beginning to understand the roles that therapists identify for themselves in the transition process.

The resulting data indicate that occupational therapists' involvement in the ITP/IEP team process is often inconsistent with the concepts of collaborative teaming and the integrated service delivery model. For instance, only 46 of the OTs (15.9 percent) responding to the questionnaire indicated that they always attended ITP/IEP meetings for students who receive OT services; 143 OTs (49.3 percent) indicated that they attended meetings most of the time, while 101 OTs (34.8 percent) indicated that they sometimes, infrequently, or never attended team meetings. When asked if their attendance was required at ITP/IEP meetings, 149 respondents (51.4 percent) indicated "no".

Giangreco (1990) speculated that professional authority continues to "plague group decision making, and consequently the quality of educational and related services provided to students with handicapping conditions" (p. 29). It is clear from the data generated by this study that many occupational therapists continue to see themselves in this role of authority. When asked who makes the final decision regarding an OT's attendance at ITP/IEP meetings, 139

respondents (47.9 percent) replied that they made the final decision, while only 40 OTs (13.8 percent) indicated that the ITP/IEP team made the decision. When asked who they thought should make this decision, 162 respondents (55.9 percent) felt that it should be the OT, while 76 (26.2 percent) felt that it should be the ITP/IEP team. Substantial numbers of respondents also felt that the OT should be the final decision maker on whether a student received OT services; however, a greater number identified the ITP/IEP team as the decision makers. One hundred and fifty-nine OTs (54.8 percent) indicated that the team should make the decision regarding a student's receiving OT services, while 114 respondents (39.3 percent) selected the OT.

Another concept central to the theme of collaborative teamwork is the joint development and implementation of students' objectives by teams (Dunn & Campbell, 1991; Rainforth et al., 1992). Respondents were asked to specify how they developed ITP/IEP objectives for students who receive OT services. The resulting data indicate that this is not always a team process. For instance, only 60 respondents (20.7 percent) indicated that their teams conducted transdisciplinary evaluations and developed one set of objectives during ITP/IEP meetings. One hundred and fifteen OTs (39.7 percent) indicated that the OT writes the student's objectives prior to the team meeting, and these are placed on the ITP/IEP.

Respondents also were asked how often they had at least 15 minutes to discuss students' objectives or to train other team members. If teams are to function collaboratively, they must have time to work together (Rainforth & York, 1987); however, time is not typically available to many therapists who work with transition-age students. Sixty-two percent of the respondents selected one of the following responses: 1.) I have 15 minutes once a month to discuss each

student on my caseload with other team members; 2.) I have less than once a month for this activity; or 3.) I do not have any time to discuss each student on my caseload with other team members. Sixty-three percent selected the same responses when asked how often they had time to train other team members to integrate OT techniques into students' daily activities.

Use of a direct therapy model for service delivery also creates an obstacle to collaborative teaming and transition planning (Dunn, 1991a; Giangreco et al., 1989; Rainforth et al., 1992). The data from this study reveal that one-third of the respondents (33.8 percent) indicated that they spent most of their time providing direct therapy services to students ages 14 - 22. In addition, 107 OTs (36.9 percent) reported that the primary location for their service delivery to this age group was a therapy room or therapy area of the special education classroom. It is clear from the literature that this isolated approach to service delivery does not assist students in developing the needed skills to function within current and future natural environments (Brown, Branston-McLean et al., 1979; Dunn, 1991a; Gaylord-Ross, 1989; Spencer & Sample, 1993; Wehman, Moon et al., 1988).

Barriers to Occupational Therapists' Participation in the ITP/IEP Team Process. Many of the findings from this dissertation seem to indicate that OTs function within school districts that place a low priority on OTs' participation on collaborative teams and the transition process. Occupational therapists' inability to attend team meetings, failure to discuss and develop students' goals in collaborative teams, limited time to train other team members, and failure to participate in community-based instruction, in some instances, may be beyond the control of the individual therapists. This conclusion is supported by much of the following data.

When asked to identify the activity that they spent the most time on during a typical

work week, 98 OTs (33.8 percent) reported direct therapy, while 75 OTs (25.9 percent) identified teaching other team members. When asked what they would do if they were given total control of their schedules, however, the majority of the respondents selected teaching or consulting with other team members. Specifically, 246 OTs (84.9 percent) identified teaching other teams members as their first or second activity of choice. In contrast, 218 OTs (75.2 percent) indicated that direct therapy would be their third or fourth activity of choice.

Another noticeable difference in what therapists say they do and what they would like to do was found when OTs' were asked to indicate where the majority of their services occurred. Seventy-four respondents (25.5 percent) indicated that their most used location was any area of the school where students engage in activities. However, when asked to indicate their preferred location, 116 OTs (40.0 percent) selected any area of the school as their first choice, an increase of 14.5%.

Increases in the selection of the community for OT services also occurred when therapists ranked locations by order of their preference. For instance, 44 OTs (15.2 percent) identified the community as their most preferred location, 53 (18.3 percent) selected it as their second most preferred location, and 47 (16.2 percent) identified the community as their third location of choice. Only 62 OTs (21.4 percent) identified the community as their last location of choice for transition-age students, as opposed to 148 OTs (51.0 percent), who identified it as their sixth most used location. These data seem to indicate that many of the respondents did not have total control over their service delivery activities or the location of these activities.

Therapists' Attitudes Toward Transition Best Practices

Therapists' attitudes toward best practices for transition planning was considered a critical variable affecting participation on collaborative transition teams and OT service delivery to students ages 14 - 22. It was assumed that relationships would exist between therapists' educational backgrounds, continuing education experiences, years of experiences, work experiences, and therapists' attitudes toward best practices for transition planning. Based upon the results of this survey, many occupational therapists appear to have established rather positive attitudes towards transition best practices. This finding again raises the question concerning therapists' individual control over their involvement in the national transition initiative.

Attitudes toward ITP/IEP team participation. The data generated from the attitude statements on ITP/IEP team process clearly indicate that the majority of the respondents feel that they should be participating members of ITP/IEP teams. They believe that OTs need to attend team meetings, integrate OT objectives into students' ITP/IEPs, and teach other team members to integrate OT techniques into students' daily activities. The respondents seem to be less clear, however, on who should make the final decision on whether a student receives OT services.

For instance, 286 respondents (98.6 percent) agreed or strongly agreed that OTs should teach other ITP/IEP team members to implement OT techniques during the student's day in real-life situations. Two hundred and fifty-seven OTs (88.6 percent) disagreed or strongly disagreed with the statement: OTs don't need to attend ITP meetings as long as they have completed an OT evaluation and submitted the student's goals and objectives prior to team meetings. Two hundred and thirty-seven respondents (81.7 percent) disagreed or strongly disagreed with the statement: OT goals and objectives should be in a separate/special section of a student's

ITP/IEP. Two hundred and eight OTs (71.7 percent) disagreed or strongly disagreed with the statement: direct therapy provided by a therapist is the best way to improve the functional abilities of students with disabilities. One hundred and ninety-one respondents (65.9 percent) agreed or strongly agreed with the statement: the ITP/IEP team should make the final decision on whether a student receives OT services. It appears that many therapists who work with transition-age students hold very positive attitudes toward ITP/IEP team activities, however most OTs reported limited involvement in the ITP/IEP team process.

Attitudes toward community-based programming for the development of independent living skills. The data generated by this study clearly indicate that the majority of the respondents think that community-based programming is needed for transition-age students. Therapists also see a role for themselves in this activity. For instance, therapists feel that OTs should complete evaluations in the community, identify students' assistive technology needs, and assist in teaching functional skills to transition-age youth.

Specifically, 272 respondents (93.8 percent) agreed or strongly agreed with the statement: OTs should evaluate students in community sites to identify assistive technology needs as part of transition planning. Two hundred and sixty-three OTs (90.7 percent) agreed or strongly agreed with the statement: when OTs work with transition-age students, focus should be on teaching functional skills(ADL/home management, grocery shopping, self-care, preparing meals). Two hundred and sixteen (74.5 percent) agreed or strongly agreed with the statement: OTs should use their expertise to facilitate group home/supervised apartment living for students with severe disabilities. Finally, 196 respondents (67.6 percent) agreed or strongly agreed with

the statement: teaching a transition-age student wheelchair mobility skills in the community is something an OT should do.

These findings are in sharp contrast to the data which revealed minimal involvement by OTs in the development and implementation of functional, community-living skills for transition-age students during the 1993-94 school year. Therapists undoubtedly identify roles for themselves in community-based programming, but they are not assuming them.

Attitudes toward community-based vocational programming. Many of the respondents also expressed positive attitudes towards community-based vocational instruction. The data suggest that therapists believe that community-based vocational training is needed for transition-age students and that they see a role for themselves in this activity. More specifically, 264 OTs (91.0 percent) agreed or strongly agreed with the statement: students with severe disabilities should receive on-the-job training in real community jobs prior to leaving school.

The most indisputable role that therapists identified for themselves in vocational, community-based training is one of consultant for the purpose of providing on-the-job modifications and assistive devices. Two hundred and eighty-seven respondents (99.0 percent) indicated that OTs should provide consultation, job-site modifications, and assistive technology devices for students participating in on-the-job training. However, fewer respondents see themselves in the role of trainer within community job sites. Only 148 respondents (51.0 percent) indicated that OTs should spend time providing on-the-job training to students. Again, these data are in sharp contrast to the data on occupational therapists' actual involvement in vocational, community-based programming which was minimal during the 1993-94 school year.

It is apparent that further research is needed to identify the barriers to therapists' participation in community-based programming activities.

Attitudes toward functional vocational programming and post-school vocational outcomes. Respondents seem to hold less positive attitudes toward functional vocational programming and post-school vocational outcomes. For instance, many respondents believe that students can generalize skills learned at school using simulated materials and settings to the community. This becomes evident when the data are reviewed related to vocational training. For instance, the majority of the respondents agreed that instruction in school classrooms and in simulated school stores and sheltered workshops facilitates community employment. The vast majority also felt that sheltered employment in a workshop or day treatment program is an acceptable post school outcome for students with severe disabilities.

Specifically, 230 OTs (79.3 percent) agreed or strongly agreed with the statement: operating a school store in the special education classroom is an example of an activity that will prepare students with severe disabilities to work in the community. Two hundred and twenty-two OTs (76.5 percent) agreed or strongly agreed with the statement: working in sheltered workshops or day activity centers is a good transition outcome for students with severe disabilities. Two hundred and six OTs (71.1 percent) agreed or strongly agreed with the statement: simulating a sheltered workshop in the school building for vocational training is a good idea. One hundred and twenty-four (42.8 percent) agreed or strongly agreed with the statement: developmental checklists are useful when identifying OT objectives for transition-age students with disabilities. One hundred and twenty-three OTs (42.4 percent) agreed or strongly

agreed with the statement: stuffing envelopes in the special education classroom is a good example of a prevocational task for transition students with disabilities.

This survey does not provide insight into the reasons why therapists' seem to have less positive attitudes towards functional vocational programming. It may be hypothesized that many school systems still are not implementing best practices for transition planning such as community-referenced vocational programs (Wehman, 1993). Consequently, therapists may only be familiar with activities such as simulated stores and school workshops. Therapists also may be accepting of sheltered employment or day treatment programs, because these are the primary post-school outcomes achieved by students with severe disabilities. Clearly, future research is needed concerning therapists' knowledge of best practices for vocational programming, knowledge of supported employment, and the relationship between therapists' knowledge and attitudes toward these important transition issues.

Relationships between educational background, continuing education experiences, length of employment, and work experiences and therapists' attitudes.

Originally, it was hypothesized that significant differences would be seen in therapists' attitudes towards transition best practices based on therapists' educational backgrounds, previous work experiences, and school-based work experiences. For instance, it was hypothesized that therapists who had spent many years working in non-school related practices would hold less positive attitudes toward transition best practices. In addition, it was speculated that therapists who were contractual employees rather than direct employees of the school system may hold less positive attitudes toward transition best practices. However, this study failed to establish significant differences in therapists' attitudes based on educational backgrounds, length of

employment in school-based practice or other areas of practice, or employment relationship (e.g., direct employee of the school system vs. private practice or part time vs. full time employees). These findings have specific implications for school systems related to hiring therapists to work in school-based practice. For instance, school systems may be justified in hiring contractual OTs or OTs with minimal years of experience in the schools to fill the void currently existing in OT services for transition-age youth.

While, the data from this study can only establish that there is no relationship between OTs' attitudes and educational backgrounds or employment relationships, it does seem to indicate that therapists have rather similar attitudes on transition best practices in relationship to these variables. This may be related to the philosophical foundation of occupational therapy which states that occupational therapy is "based on the belief that purposeful activity (occupation), including its interpersonal and environmental components, may be used to prevent and mediate dysfunction.. "(American Occupational Therapy Association, 1979, p. 786). Since the ultimate goal of occupational therapy is the optimum function of people in their daily living, leisure, and vocational skills, it seems reasonable to speculate that occupational therapists should have very positive attitudes toward transition best practices. This core value of occupational therapy may well prepare therapists to participate in transition planning and programming. Further research is needed to explore this relationship between therapists' knowledge and acceptance of the basic concepts of occupational therapy and therapists' attitudes toward best practices for transition. However, it is an encouraging preliminary finding, since many school administrators rely on hiring contractual OTs for their school systems.

Relationships between therapists' attitudes and school-based work experiences.

Significant differences were found between therapists' attitudes and several work-related variables for school-based practice. Specifically, occupational therapists who indicated that they spent the majority of their time teaching other team members to integrate OT techniques into students' daily activities expressed more positive attitudes toward transition best practices. In addition, occupational therapists who reported that they spent the majority of their work day delivering services in therapy rooms or therapy areas expressed less positive attitudes toward transition best practices.

While the results of this survey can only indicate that a relationship exists between these variables and therapists' attitudes, several reasons for the differences in therapists' attitudes can be proposed. Specifically, therapists who spend the majority of their work days in therapy rooms may be more likely to have less positive attitudes toward transition best practices because they are isolated from other team members. These therapists also deliver their services away from "natural environments", and therefore may hold beliefs that conflict with the best practices identified in this survey (e.g., training in natural environments, integrating OT intervention into daily activities, teaching other team members, and so forth). Conversely, it seems logical to conclude that therapists who spend the majority of their time teaching other team members would hold beliefs compatible with the majority of the best practices for transition planning.

These preliminary findings do point to the existence of a positive relationship between a therapists' participation in best practice activities and their attitudes toward those activities. In this study, at least one best practice for transition, teaching other team members, is related to therapists' attitudes. Conversely, a negative relationship exists between using one component

of the isolated service delivery model and therapists' attitudes toward transition best practices. This data does not provide information, however, on whether participation in best practices results in positive attitudes or positive attitudes result in participation. Nor does it reveal that participation in a negative practice causes negative attitudes or negative attitudes cause negative practices. Further research is needed to investigate the relationships between therapists' participation in best practice activities and their attitudes toward those practices. This information would be critical for school administrators who are in charge of facilitating occupational therapist involvement on transition teams.

Relationship between therapists' attitudes and number of transition-age students receiving OT services. Therapists who indicated that they had low numbers (1 - 3) of transition-age students on their caseloads expressed less positive attitudes toward transition best practices. However the data generated by this study does not provide specific explanations for this relationship. It may be plausible to speculate that therapists who have less positive attitudes toward transition best practices may also have less positive attitudes toward serving transition-age students (e.g., "as students reach transition age, the need for OT services decreases; students of pre-school and elementary age have priority for OT services over students of transition age). Consequently, these therapists may be more inclined to serve primarily younger students on their caseloads. It is evident from this preliminary finding that future research is needed to determine the relationship between therapists' attitudes and their participation on collaborative teams for transition-age youth.

Relationships between therapists' attitudes and continuing education experiences. This study failed to confirm a relationship between completion of AOTA's self-study coursework on

transition planning by Karen Spencer and Pat Sample and therapists' attitudes toward best practices for transition. However, the failure to establish a relationship may be related to the limited number of therapists (32) who actually had completed this self-study course. What may be revealing is the finding that the majority of the respondents were not familiar with the material. Two hundred respondents (69.0 percent) indicated that they were not familiar with AOTA's self-study course that included transition planning. These data clearly indicate that AOTA needs to develop a marketing plan for better disseminating the availability of this product to its membership.

This study confirmed a statistically significant relationship between therapists' attitudes toward best practices for transition and membership or self-study with the Association for Persons with Severe Handicaps (TASH). Those therapists who reported being a member of TASH during some time in their careers or having read journal articles from this association had significantly higher Attitude Index Scores, indicating more positive attitudes toward transition best practices. It seems reasonable to assume that therapists who have read articles from TASH would have more knowledge of best practices. In addition, the basic philosophy of the association incorporates such principles as inclusion, participation in community settings, and training in age-appropriate, and functional activities. Therefore, it also seems logical to assume that therapists who have been TASH members would have knowledge of and be accepting of these values. However, this study does not provide data that can support this hypothesis.

Future research would be needed to further assess the relationship between knowledge of best practices related to TASH affiliation or self-study and therapists' attitudes towards best practices for transition. Data from this study do lend support to the inclusion of TASH

materials and articles within the curriculum content of occupational therapy university programs as well as continuing education programs. AOTA may also want to consider establishing a relationship with TASH such as encouraging OTs to join or read articles from this association.

Therapists' limited participation in continuing education experiences. It seems equally important to discuss respondents' limited participation in continuing education activities. Few OTs attended inservice training on OTs' roles in transition; almost three-fourths of the respondents, 217 OTs (74.8 percent), indicated that they had not participated in inservice training on transition planning during the 1993-94 school year. Another 17.6 percent indicated that they had a half day or less of training on this topic. As already mentioned, only 32 respondents had completed the AOTA self-study course including transition programming, and only 66 OTs (22.8 percent) indicated that they been members of TASH or read articles by the association.

While this study did not directly address the relationship between therapists' knowledge of transition best practices and their attitudes toward those practices, some of the preliminary data indicate that therapists have training needs in this area. Specifically, therapists may need training in the area of functional programming as indicated by their attitudes toward vocational best practices and vocational outcomes for students. In addition, many therapists continue to see uses for developmental checklists and simulated materials for transition-age youth. Further research is needed to provide more specific data on therapists' continuing education needs.

The majority of the respondents recognized the benefits of participating in continuing education based on their responses to the items listed in the self-reported training needs section of the survey. However the data do not provide information on how therapists would see these topics prioritized. It seems evident, however that most OTs would like to see one to two day

presentations, regular articles in OT Week or Advance, and self-study materials developed for their use. It seems equally important, however for a marketing strategy to be developed to encourage therapists to participate in continuing education activities based on their limited self-reported participation to date.

Limitations of the Study

Several methodological considerations should be identified that may restrict the generalization of this study. In addition, the lack of research in this area suggest these findings are preliminary and a baseline from which future research may be generated. First, this study involved only those therapists who were on AOTA's Direct Mail List for School-Based Practice, and generalizations to therapists on other AOTA mailing lists of practice (e.g., developmental disabilities, assistive technology, sensory integration) should be made with caution. This study also included only those therapists who had at least one student of transition age (14 - 22) on their caseloads during the 1993-94 school year. Therefore, the results are not generalizable to therapists who serve students younger than transition age.

Second, the purpose of this study was to assess the attitudes of occupational therapists towards best practices for transition planning, their current level of involvement in the national transition initiative, and their self-reported training needs for participation in this process. As such, the findings describe what their attitudes are towards a number of best practice concepts and how they have participated in transition planning and programming. It does not measure the relationship between their attitudes toward best practice and their level of participation in these practices. For instance, it is not clear whether therapists who have more positive attitudes toward transition best practices are more likely to serve students in this age group. Conversely,

therapists with less positive attitudes may be more likely to serve only younger students. This question is raised in light of the findings indicating that therapists who serve fewer students of transition-age have less positive attitudes toward transition best practices.

Third, this study does not measure occupational therapists' knowledge level of transition best practices or possible relationships between knowledge level and therapists' attitudes. For instance, therapists who responded to this survey seem to have less positive attitudes toward vocational best practices, however the survey did not evaluate their knowledge level related to these practices. Future research might address the relationship between measured knowledge, attitudes, and participation using a more comprehensive and sensitive instrument.

Finally, the design of this study, especially the instrumentation, did not allow for a more comprehensive breakdown of previous employment experiences. Specifically, the inability to categorize previous employment experiences into specific groups (e.g., psychiatric experience, physical disabilities) may have influenced the lack of relationship found between length of employment in other areas of practice and therapists' attitudes toward best practices for transition. Type as well as length of employment may be more likely to yield a relationship with therapists' attitudes. In addition, the sample size and instrumentation did not allow for a more comprehensive breakdown of specific educational backgrounds (e.g., occupational therapists with education degrees versus special education versus psychology). Collapsing educational backgrounds into three categories may have influenced the lack of relationships found between educational backgrounds and therapists' attitudes toward best practices. Finally, the limited numbers of transition-age students served by therapists did not allow for grouping respondents by type of students served (e.g., therapists who served primarily students with

learning disabilities versus multiple disabilities). Future research is needed to further assess the relationship between these variables and therapists' attitudes toward best practices for transition.

Implications for Future Research

The results of this dissertation raise some interesting questions that merit future research. First, it is apparent from the data that many occupational therapists hold supportive and positive attitudes toward transition best practices; however, they reported extremely limited participation in the transition process. This points to a need to explore other team members' knowledge of occupational therapists' roles in the transition process and their attitudes towards OTs participating on collaborative transition teams. This would include, but is not limited to, school administrators, special education supervisors, special education teachers, parents, and students. Relationships should be studied among knowledge of therapists' roles, attitudes toward those roles, and the inclusion of therapists in the transition process. The resulting data would provide valuable information concerning the need for continuing education experiences for school personnel working with transition-age youth. Specifically, training may be indicated on the roles of related service personnel, the value of including these professionals in the transition process, and collaborative teaming.

Building upon the findings of this research related to therapists' attitudes, future research should assess the relationship between therapists' knowledge of best practices for transition planning, their attitudes toward best practices, and their level of participation in the transition process. For instance, do therapists with more knowledge of best practices for transition have more positive attitudes toward these best practices? Do therapists with more knowledge of and

positive attitudes toward best practices report higher levels of participation in best practice activities?

Finally, this study addressed the attitudes of therapists who self-identified as having provided occupational therapy to at least one student of transition age during the 1993-94 school year. It did not address the attitudes of therapists who did not serve this age group. Since the data in this study indicate that therapists with fewer students have less positive attitudes towards transition best practices, it would be critical to determine the attitudes of therapists who do not serve transition-age students. For instance, it would be important to determine their attitudes toward transition best practices and their knowledge of the transition process. Relationships could then be assessed between their knowledge of transition programming, their attitudes toward best practices, and their participation in the transition process.

Summary

Many students continue to leave school without the skills to function in adult roles. Most graduate only to join the ranks of the unemployed or underemployed (Halpern, 1990; Haring & Lovett, 1990; Wagner, 1993; Wehman, 1993). Few adult service programs have the trained staff with the necessary skills to meet the needs of individuals with severe disabilities (Sowers & Powers, 1991). Subsequently, only 3% of the individuals currently employed in supported employment nationally have physical disabilities (G. Revell, personal communication, February 21, 1995).

Clearly, research has shown that community-based instruction, work experiences in real community jobs, and assistance with support needs prior to graduation can lead to successful post school outcomes (Inge & Dymond, 1994; Inge, Moon, & Parent, 1993; Renzaglia,

Hutchins, & Koterba-Buss, 1992; Sowers & Powers, 1991). Schools must begin to do a better job of providing services and training to students prior to graduation in order for them to become productive members of their communities.

Occupational therapists with their unique focus on "occupation" including work, education, and independent living (e.g., activities of daily living, community participation, mobility, recreation/leisure) have much to offer students as they transition from school to adult living. Their expertise in these areas could greatly enhance the transition process for many students with severe disabilities. However, the data generated by this study undeniably reveal that occupational therapists are not participating in the national transition initiative. In addition, those therapists who are providing services to a minimum number of students are not full participants on students' transition teams.

More importantly, the findings from this survey reveal that many OTs have very supportive and positive attitudes toward serving students as they prepare to exit the nation's schools. Clearly, occupational therapists see a role for themselves within the transition process. They feel that they should be participating members of ITP/IEP teams. Specifically, they believe that OTs need to attend team meetings, integrate OT objectives into students' ITP/IEPs, and teach other team members to integrate OT techniques into students' daily activities. Therapists also feel that they should be involved in conducting community evaluations; assessing students' assistive technology needs at school, home, work, and in the community; and providing OT services in the students' daily living environments.

While OTs undoubtedly identify roles for themselves in transition programming, they are not assuming these roles. Transition planning must involve the entire team in setting goals

and implementing objectives (Spencer, 1991). This team effort is the core of the entire transition process which facilitates successful post-school outcomes for many students with disabilities. Clearly, further research is needed to identify the barriers to occupational therapy involvement in collaborative transition teams.

Occupational therapists have much to offer students as they prepare for adult living. They can provide assistance in daily living, leisure, and vocational skills evaluation and programming. They also can provide expertise in the identification, design, and fabrication of assistive technology and compensatory strategies for independent living and work. However, as long as substantial numbers of students are not receiving the benefit of occupational therapy, it seems unlikely that they will fully realize their transition goals.

References

- American Occupational Therapy Association. (1979). The philosophical base of occupational therapy (Resolution 531-79). American Journal of Occupational Therapy, 33(12), 785.
- American Occupational Therapy Association. (1987). Standards of practice for occupational therapy services in schools. American Journal of Occupational Therapy, 41(12), 804-808.
- Asselin, S.B., Hanley-Maxwell, C., & Szymanski, E.M. (1992). Transdisciplinary personnel preparation. In F.R. Rusch, L. Destefano, J. Chadsey-Rusch, L.A. Phelps, & E. Szymanski (Eds.), Transition from school to adult life: Models, linkages, and policy (pp. 265-283). Sycamore, IL: Sycamore Publishing Company.
- Barnes, R.M. (1980). Motion and time study: Design and measurement of work (7th ed.). New York: John Wiley & Sons.
- Bates, P., Morrow, S.A., Pancsofar, E., & Sedlak, R. (1984). The effect of functional vs. non-functional activities on attitudes/expectations of non-handicapped college students: What they see is what we get. Journal of the Association for Persons with Severe Handicaps, 9(2), 73-78.
- Baumgart, D., Brown, L., Pumpian, I., Nisbet, J., Ford, A., Sweet, M., Messina, R., & Schroeder, J. (1982). Principle of partial participation and individualized adaptations in educational programs for severely handicapped students. Journal of the Association for the Severely Handicapped, 7(2), 17-27.

- Braddock, D. (1987). Federal policy toward mental retardation and developmental disabilities. Baltimore: Paul H. Brookes Publishing Co.
- Brodsky, M.M. (1983). A five year statewide follow-up of the graduates of school programs for trainable mentally retarded students in Oregon. Unpublished doctoral dissertation, University of Oregon, Eugene.
- Brollier, C., Shepherd, J., & Flick, K. (1994). Transition from school to community living. American Journal of Occupational Therapy, 48(4), 346-354.
- Brown, L., Branston, M.B., Hamre-Nietupski, S., Pumpian, I., Certo, N., & Gruenewald, L. (1979). A strategy for developing chronological-age-appropriate and functional curricular content for severely handicapped adolescents and young adults. Journal of Special Education, 13(1), 81-90.
- Brown, L., Branston-McLean, M., Baumgart, D., Vincent, L., Falvey, M., & Schroeder, J. (1979). Utilizing the characteristics of current and subsequent least restrictive environments as factors in the development of curricular content for severely handicapped students. AAESPH Review, 4(4), 407-424.
- Brown, L., Falvey, M., Vincent, L., Kaye, N., Johnson, F., Ferrara-Parrish, P., & Gruenewald, L. (1980). Strategies for generating comprehensive, longitudinal, and chronological- age-appropriate individualized education programs for adolescent and young adult severely handicapped students. Journal of Special Education, 14(2), 199-215.

- Brown, L., Ford, A., Nisbet, J., Sweet, M., Donnellan, A., & Gruenewald, L. (1983). Opportunities available when severely handicapped students attend chronological age appropriate regular schools. The Journal of the Association for Persons with Severe Handicaps, 8(1), 16-29.
- Brown, L., Long, E., Udvari-Solner, A., Davis, L., VanDeventer, P., Ahlgren, C., Johnson, F., Gruenewald, L., & Jorgensen, J. (1989). The home school: Why students with severe intellectual disabilities must attend the schools of their brothers, sisters, friends, and neighbors. Journal of the Association for Persons with Severe Handicaps, 14(1), 1-7.
- Brown, L., Long, E., Udvari-Solner, A., Schwarz, P., VanDeventer, P., Ahlgren, C., Johnson, F., Gruenewald, L., & Jorgensen, J. (1989). Should students with severe intellectual disabilities be based in regular or in special education classrooms in home schools? Journal of the Association for Persons with Severe Handicaps, 14(1), 8-12.
- Brown, L., Nietupski, J., & Hamre-Nietupski, S. (1976). Criterion of ultimate functioning. In M.A. Thomas (Ed.), Hey, don't forget about me! (pp. 2-15). Reston, VA: Council for Exceptional Children.
- Brown, L., Nisbet, J., Ford, A., Sweet, M., Shiraga, B., York, J., & Loomis, R. (1983). The critical need for nonschool instruction in educational programs for severely handicapped students. The Journal of the Association for Persons with Severe Handicaps, 8(3), 71-77.

- Brown, L., Schwarz, P., Udvari-Solner, A., Kampschroer, E.F., Johnson, F., Jorgensen, J., & Gruenewald, L. (1991). How much time should students with severe intellectual disabilities spend in regular education classrooms and elsewhere? Journal of the Association for Persons with Severe Handicaps, 16(1), 39-47.
- Bundy, A.C. (1993). Will I see you in September? A question of educational relevance. American Journal of Occupational Therapy, 47(9), 848-850.
- Button, C. (1992, October/November). P.L. 102-569: A new season for the rehabilitation act. Word from Washington. Washington, DC: United Cerebral Palsy Association Publication.
- Campbell, P.H. (1987a). Integrated programming for students with multiple handicaps. In L. Goetz, D. Guess, & K. Stemel-Campbell (Eds.), Innovative program design for individuals with dual sensory impairments (pp. 159-188). Baltimore: Paul H. Brookes.
- Campbell, P. (1987b). The integrated programming team: An approach for coordinating professionals of various disciplines in programs for students with severe and multiple handicaps. Journal of the Association for Persons with Severe Handicaps, 12(2), 107-116.
- Campbell, P. (1989a). Dysfunction in posture and movement in individuals with profound disabilities: Issues and practices. In F. Brown & D.H. Lehr (Eds.), Persons with profound disabilities: Issues and practices (pp. 163-189). Baltimore: Paul H. Brookes Publishing Co.

- Campbell, P.H. (1989b). Integration strategies for students with handicaps. In R. Gaylord-Ross (Ed.), Integration strategies for students with handicaps (pp. 53-76). Baltimore: Paul H. Brookes Publishing Co.
- Campbell, P.H., McInerney, W.F., & Cooper, M.A. (1984). Therapeutic programming for students with severe handicaps. American Journal of Occupational Therapy, 38(9), 594-602.
- Carr, S.H. (1989). Louisiana's criteria of eligibility for occupational therapy services in the public school system. American Journal of Occupational Therapy, 43(8), 503-506.
- Clark, P.N. (1979). Human development through occupation: A philosophy and conceptual model of practice. Part 2. American Journal of Occupational Therapy, 33(10), 577-585.
- Colman, W. (1988). The evolution of occupational therapy in the public schools: The laws mandating practice. The American Journal of Occupational Therapy, 42(11), 701-705.
- Dillman, D. A. (1978). Mail and telephone surveys: The total design method. New York: John Wiley & Sons.
- DuBois, S.A. (1993). Commentary on lesson 10. In C.B. Royeen (Ed.), American occupational therapy association self study series: Classroom applications for school-based practice (pp. 53-57). Rockville, MD: American Occupational Therapy Association, Inc.

- Dunn, W. (1988). Models of occupational therapy service provision in the school system. The American Journal of Occupational Therapy, 42(11), 718-723.
- Dunn, W. (1991a). Integrated related services. In L. Meyer, C. Peck, & L. Brown (Eds.), Critical issues in the lives of people with severe disabilities (pp. 353-377). Baltimore: Paul H. Brookes Publishing Co.
- Dunn, W. (1991b). The sensorimotor systems: A framework for assessment and intervention. In F.P. Orelve & D. Sobsey, Educating children with multiple disabilities: A transdisciplinary approach (2nd ed.) (pp. 33-78). Baltimore: Paul H. Brookes Publishing Co.
- Dunn, W., & Campbell, P. (1991). Designing pediatric service provision. In W. Dunn (Ed.), Pediatric occupational therapy: Facilitating effective service provision (pp. 140-159). Thorofare, NH: Slack Publishers.
- Dymond, S., Inge, K.J., & Brooke, V. (1993). Supported employment for school-age students with severe disabilities: Issues and applications. In K.J. Inge & P. Wehman (Eds.), Designing community-based vocational programs for students with severe disabilities (pp. 122-165). Richmond, VA: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.
- Education for All Handicapped Children Act of 1975, (Public Law 94-142), 20 U.S.C. § 1401 et seq.
- Education for Handicapped Children Amendments of 1983, (Public Law 98-199), 20 U.S.C. § 1401 et seq.

- Education of the Handicapped Act Amendments of 1986, (Public Law 99-457), 20 U.S.C. § 1400 et seq.
- Everson, J.M. (1993). Youth with disabilities: Strategies for interagency transition programs. Stoneham, MA: Butterworth-Heinemann.
- Everson, J.M., Barcus, M., Moon, M.S., & Morton, M.V. (1987). Achieving outcomes: A guide to interagency training in transition and supported employment. Richmond, VA: Virginia Commonwealth University, Project Transition into Employment.
- Everson, J.M., & Goodwyn, R. (1987). A comparison of the use of adaptive microswitches by students with cerebral palsy. The American Journal of Occupational Therapy, 41(11), 739-744.
- Everson, J.M., & Moon, M.S. (1987). Transition services for young adults with severe disabilities: Defining professional and parental roles and responsibilities. The Journal of the Association for Persons with Severe Handicaps, 12(2), 87-95.
- Falvey, M.A. (1989). Community-based curriculum: Instructional strategies for students with severe handicaps (2nd ed.). Baltimore: Paul H. Brookes Publishing Co.
- Federal Register. (1987, August 14). Final regulations. Washington, DC: U.S. Government Printing Office.

- Ferguson, P.M., Ferguson, D.L., & Jones, D. (1988). Generations of hope: Parental perspectives on the transition of their children with severe retardation from school to adult life. Journal of the Association for Persons with Severe Handicaps, 13(3), 177-187.
- Fidler, G.S., & Fidler, J.W. (1978). Doing and becoming: Purposeful action and self actualization. The American Journal of Occupational Therapy, 32, 305-310.
- Flippo, K.F., Inge, K.J., & Barcus, J.M. (in press). Assistive technology: A resource for school, work, and community. Baltimore: Paul H. Brookes Publishing Co.
- Gaylord-Ross, R. (1989). Vocational integration for persons with handicaps. In R. Gaylord-Ross (Ed.), Integration strategies for students with handicaps (pp. 195-211). Baltimore: Paul H. Brookes Publishing Co.
- Gaylord-Ross, C., Forte, J., & Gaylord-Ross, R. (1987). The community classroom: Technological vocational training for students with serious handicaps. Career Development for Exceptional Individuals, 9, 25-33.
- Gaylord-Ross, R., Forte, J., Storey, K., Gaylord-Ross, C., & Jameson, D. (1987). Community-referenced instruction in technological work settings. Exceptional Children, 54(2), 112-120.
- Giangreco, M.F. (1986a). Delivery of therapeutic services in special education programs for learners with severe handicaps. Physical and Occupational Therapy in Pediatrics, 6(2), 5-15.
- Giangreco, M.F. (1986b). Effects of integrated therapy: A pilot study. Journal of the Association for Persons with Severe Handicaps, 11(3), 205-208.

- Giangreco, M.F. (1990). Making related services decisions for students with severe disabilities: Roles, criteria, and authority. Journal of the Association for Persons with Severe Handicaps, 15(1), 22-31.
- Giangreco, M., York, R., & Rainforth, B. (1989). Providing related services to learners with severe handicaps in educational settings: Pursuing the least restrictive option. Pediatric Physical Therapy, 1(2), 55-63.
- Gold, M. (1972). Stimulus factors in skill training of retarded adolescents on a complex assembly task: Acquisition, transfer, and retention. American Journal of Mental Deficiency, 76, 517-526.
- Halpern, A. (1990). A methodological review of follow-up and follow-along studies tracking school leavers from special education. Career Development for Exceptional Individuals, 13(1), 13-27.
- Haring, K., & Lovett, D. (1990). A study of the social and vocational adjustment of young adults with mental retardation. Education and Training in Mental Retardation, 25(1), 52-61.
- Hasazi, S.B., Gordon, L.R., Roe, C.A., Finck, K., Hull, M., & Salembier, G. (1985). A statewide follow-up post high school employment and residential status of students labeled, "mentally retarded". Education and Training of the Mentally Retarded, 20(4), 222-234.
- Heward, W.L., & Orlansky, M.D. (1984). Exceptional children (2nd ed.). Columbus, OH: Charles E. Merrill.

- Hill, J.W., Hill, M., Wehman, P., Banks, P.D., Pendleton, P., & Britt, C. (1985). Demographic analyses related to successful job retention for competitively employed persons who are mentally retarded. In P. Wehman & J.W. Hill (Eds.), Competitive employment for persons with mental retardation: From research to practice (Vol. 1., pp. 65-93). Richmond, VA: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.
- Hutchison, D.J. (1978). The transdisciplinary approach. In J.B. Curry & K.K. Peppe (Eds.), Mental retardation: Nursing approaches to care (pp. 65-74). St. Louis: C.V. Mosby.
- Idol, L., Paolucci-Whitcomb, P., & Nevin, A. (1986). Collaborative consultation. Rockville, MD: Aspen.
- Individuals with Disabilities Education Act, (Public Law 101-476), 20 U.S.C. § 1401 et seq.
- Inge, K.J. (1992). Cerebral palsy. In P.J. McLaughlin & P. Wehman (Eds.), Developmental disabilities: A handbook for best practices (pp. 30-53). Stoneham, MA: Butterworth-Heinemann.
- Inge, K.J., & Brooke, V. (Eds.) (1993, Winter). Rehabilitation Act Amendments of 1992 Newsletter. Richmond, VA: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.

- Inge, K.J., & Dymond, S. (1994). Challenging behaviors in the work place: Increasing one student's access to community-based vocational instruction using a changing criterion design. Journal of Vocational Rehabilitation, 4(4), 272-284.
- Inge, K.J., Dymond, S., Wehman, P., Sutphin, C., Johnston, C., & Faina, M. (1993). Community-based vocational preparation for students with severe disabilities: Designing the process. In K.J. Inge & P. Wehman (Eds.), Designing community-based vocational programs for students with severe disabilities (pp. 1-50). Richmond, VA: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.
- Inge, K.J., Johnston, C., & Sutphin, C. (1993). The application of a self-management procedure to increase work production: A community-based case study example. In K.J. Inge & P. Wehman (Eds.), Designing community-based vocational programs for students with severe disabilities (pp. 166-190). Richmond, VA: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.
- Inge, K.J., Moon, M.S., & Parent, W. (1993). Applied behavior analysis in supported employment settings. Journal of Vocational Rehabilitation 3(3), 53-60.
- Inge, K.J., & Shepherd, J. (in press). Assistive technology: Applications and strategies for school system personnel. In K. Flippo, K. Inge, & M. Barcus (Eds.), Assistive technology: The future is now. Baltimore: Paul H. Brookes Publishing Co.

- Inge, K.J., & Wehman, P. (Eds.) (1993). Designing community-based vocational programs for students with severe disabilities. Richmond, VA: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.
- Kokaska, C.J., & Brolin, D.E. (1985). Career education for handicapped individuals (2nd ed.). Columbus, OH: Charles E. Merrill.
- Kregel, J., & Wehman, P. (1989). Supported employment: Promises deferred for persons with severe disabilities. Journal of the Association for Persons with Severe Handicaps, 14(4), 293-303.
- LaVor, M.L. (1976). Federal legislation for exceptional persons: A history. In F.J. Weintraub, A. Abeson, J. Ballard, & M.L. LaVor (Eds.), Public policy and the education of exceptional children (pp. 96-111). Reston, VA: Council for Exceptional Children.
- Lin, C.H., & Browder, D.M. (1990). An application of the engineering principles of motion study for the development of task analyses. Education and Training in Mental Retardation, 25(4), 367-375.
- Lyon, S., & Lyon, G. (1980). Team functioning and staff development: A role release approach to providing integrated educational services for severely handicapped students. Journal of the Association of the Severely Handicapped, 5(3), 250-263.

- McCarthy, P., Everson, J., Moon, M.S., & Barcus, M. (1985). School-to-work transition for youth with severe disabilities. Richmond, VA: Virginia Commonwealth University, Project Transition into Employment.
- McDonnell, J., Hardman, M.L., & Hightower, J. (1989). Employment preparation for high school students with severe handicaps. Mental Retardation, 27(6), 396-405.
- McNair, J., & Ashcroft, R. (1993). Providing transition training for teachers of students with disabilities. Issues in Teacher Education, 2(1), 7-18.
- Mitchell, M., Rourke, J.D., & Schwarz, J. (1989). A team approach to vocational services. American Journal of Occupational Therapy, 43(6), 378-383.
- Moon, M.S., & Inge, K.J. (1993). Vocational preparation and transition. In M.E. Snell (Ed.), Instruction of students with severe disabilities (4th ed.) (pp. 556-587). New York: Macmillan Publishing Co.
- Moon, M.S., Inge, K.J., Wehman, P., Brooke, V., & Barcus, J.M. (1990). Helping persons with severe mental retardation get and keep employment: Supported employment issues and strategies. Baltimore: Paul H. Brookes Publishing Co.
- Neistadt, M.E. (1987). An occupational therapy program for adults with developmental disabilities. The American Journal of Occupational Therapy, 41(7), 433-438.
- Nesbit, S.G. (1993). Direct occupational therapy in the school system: When should we terminate? American Journal of Occupational Therapy, 47(9), 845-847.
- Niebel, B.W. (1982). Motion and time study (7th ed.). Homewood, IL: Richard D. Irwin.

- Nietupski, J., Hamre-Nietupski, S., Houselog, M., Donder, D.J., & Anderson, R.J. (1988). Proactive administrative strategies for implementing community-based programs for students with moderate/severe handicaps. Education and Training in Mental Retardation, 23(2), 138-146.
- Noonan, M.J. (1984). Teaching postural reactions to students with severe cerebral palsy: An evaluation of theory and technique. Journal of the Association for Persons with Severe Handicaps, 9(2), 111-122.
- Orellove, F.P., & Sobsey D. (1991). Educating children with multiple disabilities: A transdisciplinary approach (2nd ed.). Baltimore: Paul H. Brookes Publishing Co.
- Ottenbacher, K. (1982). Occupational therapy and special education: Some issues and concerns related to Public Law 94-142. American Journal of Occupational Therapy, 36(2), 81-84.
- Ottenbacher, K. (1983). Transdisciplinary service delivery in school environments: Some limitations. Physical and Occupational Therapy in Pediatrics, 3(4), 9-16.
- Pumpian, I., Shepard, H., & West, E. (1988). Negotiating job-training stations with employers. In P. Wehman, & M.S. Moon (Eds.), Vocational rehabilitation and supported employment (pp. 177-192). Baltimore: Paul H. Brookes Publishing Co.
- Pumpian, I., West, E., & Shepard, H. (1988). Vocational education of persons with severe handicaps. In R. Gaylord-Ross (Ed.), Vocational education for persons with handicaps (pp. 355-386). Mountain View, CA: Mayfield Publishing Co.

- Rainforth, B., & York, J. (1987). Integrating related services in community instruction. Journal of the Association for Persons with Severe Handicaps, 12(3), 190-198.
- Rainforth, B., & York, J. (1991). Handling and positioning. In F.P. Orelve & D. Sobsey, Educating children with multiple disabilities: A transdisciplinary approach (2nd ed.) (pp. 79-117). Baltimore: Paul H. Brookes Publishing Co.
- Rainforth, B., York, J., & Macdonald, C. (1992). Collaborative teams for students with severe disabilities: Integrating therapy and educational services. Baltimore: Paul H. Brookes Publishing Co.
- Ravitch, D. (1980). Desegregation: Varieties of meaning. In D. Bell (Ed.), Shades of Brown: New perspectives on school desegregation. New York: Teachers College Press.
- Renzaglia, A., & Hutchins, M. (1988). A community referenced approach to preparing persons with disabilities for employment. In P. Wehman & M.S. Moon (Eds.), Vocational rehabilitation and supported employment (pp. 91-112). Baltimore: Paul H. Brookes Publishing Co.
- Renzaglia, A., Hutchins, M., & Koterba-Buss, L. (1992). Facilitating employment for persons with multiple disabilities: A process and example. Unpublished manuscript, University of Illinois at Urbana-Champaign.
- Renzaglia, A., Hutchins, M., Koterba-Buss, L., & Strauss, M. (1992). Action inventory. Unpublished manuscript, University of Illinois at Urbana-Champaign.

- Revell, G. (1991). Current regulations and guidelines. In S. L. Griffin & G. Revell (Eds.). Rehabilitation counselor desk top guide to supported employment (pp. 25-35). Richmond, VA: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.
- Royeen, C.B. (1986). Evaluation of school-based occupational therapy programs: Need, strategy, and dissemination. American Journal of Occupational Therapy, 40(12), 811-813.
- Royeen, C.B. (1988). Occupational therapy in the schools. American Journal of Occupational Therapy, 42(11), 697-698.
- Royeen, C.B., & Marsh, D. (1988). Promoting occupational therapy in the schools. American Journal of Occupational Therapy, 42(11), 713-717.
- Rusch, F.R. (1986). Competitive employment: Issues and strategies. Baltimore: Paul H. Brookes Publishing Co.
- Sailor, W. (1989). The educational, social, and vocational integration of students with the most severe disabilities. In Lipsky & Gartner (Eds.), Beyond separate education (pp. 53-74). Baltimore: Paul H. Brookes Publishing Co.
- Snell, M.E., & Browder, D.M. (1986). Community-referenced instruction: Research and issues. Journal of the Association for Persons with Severe Handicaps, 11(1), 1-11.
- Sontag, E., Burke, P., & York, R. (1973). Considerations for serving the severely handicapped in public schools. Education and Training of the Mentally Retarded, 8, 20-26.

- Sowers, J.A., Jenkins, C., & Powers, C. (1988). Vocational education of persons with physical handicaps. In R. Gaylord-Ross (Ed.), Vocational education for persons with handicaps (pp. 387-416). Mountain View: CA: Mayfield Publishing Company.
- Sowers, J.A., & Powers, L. (1991). Vocational preparation and employment of students with physical and multiple disabilities. Baltimore: Paul H. Brookes Publishing Co.
- Spencer, K.C. (1991). From school to adult life: The role of occupational therapy in the transition process. Fort Collins, CO: Department of Occupational Therapy, Colorado State University.
- Spencer, K.C., & Sample, P.L. (1993). Classroom applications for school-based practice: Transition planning and services. In C.B. Royeen (Ed.), American occupational therapy association self study series: Classroom applications for school-based practice (pp. 6-49). Rockville, MD: American Occupational Therapy Association, Inc.
- Stainback, S., Stainback, W., & Jackson, H.J. (1992). Toward inclusive classrooms. In S. Stainback & W. Stainback (Eds.), Curriculum considerations in inclusive classrooms: Facilitating learning for all students (pp. 3-18). Baltimore: Paul H. Brookes Publishing Co.
- Sternat, J., Messina, R., Nietupski, J., Lyon, S., & Brown, L. (1977). Occupational and physical therapy services for severely handicapped students: Toward a naturalized public school service delivery model. In E. Sontag, J. Smith, & N.

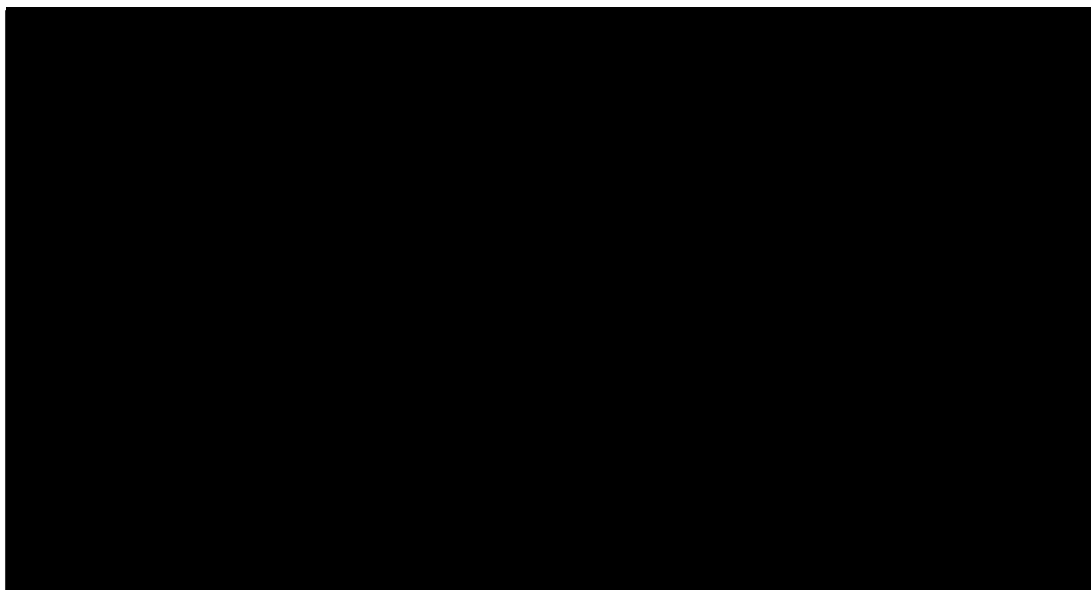
- Certo (Eds.), Educational programming for the severely and profoundly handicapped (pp. 263-278). Reston, VA: Council for Exceptional Children.
- Stokes, T., & Baer, D.M. (1977). An implicit technology of generalization. Journal of Applied Behavior Analysis, 10(2), 349-367.
- Strully, J., & Strully, C. (1990). Foreword. In W. Stainback & S. Stainback (Eds.), Support networks for inclusive schooling: Interdependent integrated education (pp. ix-xi). Baltimore: Paul H. Brookes Publishing Co.
- Taylor, S. (1982). From segregation to integration: Strategies for integrating severely handicapped students in normal school and community settings. Journal of the Association for Persons with Severe Handicaps, 7(3), 42-49.
- Test, D. W., Grossi, T., & Keul, P. (1988). A functional analysis of the acquisition and maintenance of janitorial skills in a competitive work setting. Journal of the Association for Persons with Severe Handicaps, 13(1), 1-7.
- The Association for Persons with Severe Handicaps. (1985). Definition of the people TASH serves. Seattle, WA: Author.
- The Association for Persons with Severe Handicaps. (1986). Position statement on the provision of related services. Seattle, WA: Author.
- The Rehabilitation Act Amendments of 1986, Public Law 99-506. Washington, DC: U.S. Government Printing Office.
- The Rehabilitation Act Amendments of 1992, Public Law 102-569. Washington, DC: U.S. Government Printing Office.

- Van Deusen, J. (1990). Can we delimit the discipline of occupational therapy? American Journal of Occupational Therapy, 44(2), 175-176.
- Vocational Rehabilitation Act of 1973, Public Law 93-112. Washington , DC: U.S. Government Printing Office.
- Vogel, K.A. (1991). Perceptions of practitioners, educators, and students concerning the role of the occupational therapy practitioner. American Journal of Occupational Therapy, 45(2), 130-136.
- Wagner, M. (1993). Trends in postschool outcomes of youth with disabilities: Findings from the national longitudinal transition study of special education students. Menlo Park, CA: SRI International.
- Warren, L. (1986). Nationally speaking: Helping the developmentally disabled adult. American Journal of Occupational Therapy, 40(4), 227-229.
- Wehman, P. (1992). Achievements and challenges: A five-year report on the status of the national supported employment initiative. Richmond, VA: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.
- Wehman, P. (1993). Life beyond the classroom: Transition strategies for young people with disabilities. Baltimore: Paul H. Brookes Publishing Co.
- Wehman, P., & Kregel, J. (1985). A supported work approach to competitive employment of individuals with moderate and severe handicaps. Journal of the Association for Persons with Severe Handicaps, 10(1), 3-11.

- Wehman, P., Kregel, J., & Barcus, J.M. (1985). From school to work: A vocational transition model for handicapped students. Exceptional Children, 52(1), 25-37.
- Wehman, P., Kregel, J., & Seyfarth, J. (1985). Transition from school to work for individuals with severe handicaps: A follow-up study. Journal of the Association for Persons with Severe Handicaps, 10(3), 132-136.
- Wehman, P., Moon, M.S., Everson, J.M., Wood, W., & Barcus, J.M. (1988). Transition from school to work: New challenges for youth with severe disabilities. Baltimore: Paul H. Brookes Publishing Co.
- Wehman, P., Wood, W., Everson, J.M., Goodwyn, R., & Conley, S. (1988). Vocational education for multihandicapped youth with cerebral palsy. Baltimore: Paul H. Brookes Publishing Co.
- West, W.L. (1984). A reaffirmed philosophy and practice of occupational therapy for the 1980's. The American Journal of Occupational Therapy, 38, 15-23.
- Westling, D.L. (1986). Introduction to mental retardation. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Will, M. (1984). OSERS programming for the transition of youth with disabilities: Bridges from school to working life. Washington, DC: Office of Special Education and Rehabilitation Services, U.S. Department of Education.
- Wright, G.N. (1980). Total rehabilitation. Boston: Little, Brown, and Company.
- York, J., & Rainforth, B. (1987). Integrating related services in community instruction. The Journal of the Association for Persons with Severe Handicaps, 12(3), 190-198.

- York, J., & Rainforth, B. (1991). Developing instructional adaptations. In F.P. Orelove & D. Sobsey, Educating children with multiple disabilities: A transdisciplinary approach (2nd ed.) (pp. 259-295). Baltimore: Paul H. Brookes Publishing Co.
- York, J., Rainforth, B., & Dunn, W. (1990). Training needs of physical and occupational therapists who provide services to children and youth with severe disabilities. In A.P. Kaiser & C.M. McWhorter (Eds.), Preparing personnel to work with persons with severe disabilities (pp. 153-180). Baltimore: Paul H. Brookes Publishing Co.
- York, J., Rainforth, B., & Giangreco, M.F. (1990). Transdisciplinary teamwork and integrated therapy: Clarifying the misconceptions. Pediatric Physical Therapy, 2(2), 73-79.

VITA



Appendix

Part A: Respondent Comments

Part A: Respondent Comments

- "I feel that being able, time-wise, to evaluate transition needs in the home, community, and at work site would be very valuable. However, the large caseload does not allow for this nor do finances in arranging for community trips."...Ohio
- "It seems that special education administrators believe that priority OT candidates are age 3 - 13. In addition, parents of this age group are more powerful than previous generations. "The squeaky wheel gets the oil" appears to be administrators' deciding factor on 14 - 22 year olds receiving OT."...Indiana
- "Your questions on transitional goals and needs for students is an area that hit home. Our district was really trying to develop a more consistent way of meeting the students' needs, unfortunately the policy was that after 5th grade there was no need for special services unless the parents responded or requested services...In one district, a transition specialist is employed. Her role includes many of the functions discussed here ... which are also OT functions. Many of the other schools I have worked in do not want to involve OT in additional areas as they contract for OT services, which are very expensive for districts with limited financial resources. I hope that this project goes well as I believe this area of OT needs much more attention to increase awareness." ...Missouri
- "My caseload of 14+ year old's is a very small part of what I do. In the counties I work in the 14+ y.o.'s [sic] are not a main concern for the special ed. directors. The majority of transitioning is done by teachers and workshop coordinators."...Tennessee

(Part A continues)

Part A: Respondent Comments continued

- "This is an area that has not been developed by OT in this geographic area. Focus of OT is more on small children with fine motor and visual motor deficits. With budget deficits, it would probably be difficult to advocate for OT in this area, since the school systems are trying to cut the amount of OT they are receiving now. It's discouraging. School systems view us as a luxury instead of a necessity!...New York

- "...Other factors come into play that severely impacts on what an OT can do - such as the teacher remembering to notify the OT of the IEP meeting, parent pressure for direct, hands-on treatment, despite our functional goals, state regulations that prevent us from changing our practice from a clinic-medical model to include children that "don't qualify" for OT treatment: especially older severe kids."...Wisconsin

- "I believe the transition process is one which OTs would greatly enhance. My time for community and home assessments, etc. is limited as the views regarding OTs working in the educational setting continue to be that OTs should be focusing on in-school activities. I feel that OTs need more education/training in this area **as do those who help to structure the OTs' role in the educational system.**"...Pennsylvania

- "In my community, several therapists have a smattering of transition-age caseloads. They are not well informed or well integrated into school services for this age group. Many of the administrators, teachers, and other team members have not caught the vision of transition planning. Functional IEP goals are not the norm. Often the OT is overlooked or excluded from the establishment of transition goals."...Nebraska

(Part A continues)

Part A: Respondent Comments continued

- "In our educational setting, special education teachers are doing most of the traditional OT training - self-care, homemaking, prevocational. I believe OTs are under-utilized and have stressed this whenever I have been invited to lecture on it in special education before special educators. OTs are stretched thin in special education in our area. There are not enough OTs to serve students who have OT already established on IEPs so it is very difficult to find time to make inroads in expanding our expertise to areas where we can be beneficial but are presently under-utilized."....California
- "In this school system, as in other school systems and other settings which provided occupational therapy, we have a shortage of occupational therapists. If occupational therapists are to participate, as you have implied, in the ITP plan, we would need more occupational therapists. Generally, we do not treat many students in high school."....Louisiana