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Vocational Education for the Handicapped

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Career/Vocational Education for the Handicapped

By Thomas L. Erikson

One of the major thrusts to expand and improve the education of handicapped persons started 20 years ago as a result of federal initiatives in vocational education legislation. The Vocational Education Act of 1963 allowed the use of federal funds for the vocational education of handicapped and disadvantaged students. The 1968 Amendments to the Vocational Education Act further defined vocational education's role in the education of the handicapped by setting aside 10% of federal aid to states for vocational education programs for handicapped students.

With these federal incentives, many states moved to develop, expand and improve vocational education programming for handicapped students. During the 1970's, the mandates in PL 94-142 for a free, appropriate public education for all handicapped children from ages 3 through 21 required stronger consideration for special education programming for handicapped adolescents. Prior to 94-142 there were relatively few handicapped students in secondary level education programs. These secondary programs often focused on remedial programming in the traditional academic subjects. However, with the increased number of handicapped adolescents demanding educational services, special education leaders realized that many of the handicapped adolescents did not have the ability or desire to attend college. Therefore, effective vocational education programs that would prepare these students with job skills and assist them in making a transition into the workforce became a key priority. In fact, 'Special Education' as defined in the rules and regulations for PL 94-142 includes vocational education.

Vocational Education Still Misunderstood

Vocational education continues to have a low status that stems from general misunderstandings of its purposes. There are three major purposes for vocational education. These are:

1. to provide a skilled workforce
2. to increase individual options
3. to add relevance to general education

When most people consider vocational education, they only look at the job training aspects. Vocational education can increase the individual's options for further education and training by providing access to employment that can provide the financial support while pursuing the options. In many cases vocational education adds the practical application, or relevance, to the academic content that is presented in the public schools.

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This is especially important to educating many handicapped students who need concrete, real-life examples to enhance learning.

Projects-Vocational Education for the Handicapped

There were several research, development and innovative projects funded by the federal and state governments in the area of career/vocational education for the handicapped. In 1973, the state of Illinois' Department of Vocational and Technical Education (now Department of Adult, Vocational and Technical Education, Illinois State Board of Education) funded two projects that dealt with students with 'special needs' (handicapped and disadvantaged). These two projects developed materials for use by vocational teachers to effectively integrate special students into regular vocational education programs. The documents produced by these projects, Handbook for Developing Programs for Disadvantaged Students and To Serve the Handicapped, showed an early commitment by Illinois to effectively provide vocational education programs for special students.

In addition to these two projects, in 1975 the Department of Adult, Vocational and Technical Education sponsored an exemplary planning and development network for the purpose of developing strategies and programs to effectively serve students with special needs. The first year of the network was a planning year, the second year was an implementation and testing year, and the third year was a for demonstration.

Illinois State University became the dissemination center for this effort. ISU conducted various 'awareness' level activities, including a statewide conference at Decatur, Illinois, in the fall of 1977. The Illinois State University dissemination center, under the direction of Catherine Batsche, conducted a number of activities to disseminate the materials and strategies that had been developed through this network in subsequent years.

In 1979, six special needs consultants were employed by ISU to work on a regional basis with local educational agencies in establishing effective programs for students with special needs. The special needs consultants worked for three years assisting local districts in developing and implementing effective vocational education programs for the handicapped. In addition to the consultants, the ISU dissemination center offered minigrants for the development of curriculum materials at the local level to meet the needs of handicapped students in vocational education. ISU also conducted materials dissemination workshops to disseminate a variety of materials that had been developed.

Teacher education institutions were also involved with special needs activities. During

the 1980-81 academic year, each of the nine public universities in Illinois that prepare vocational education teachers were awarded a grant of approximately \$20,000 each to employ a 'catalyst' for special needs programming. The purpose for the catalyst was to work with teacher educators on each campus to assist them in infusing into the existing vocational teacher education programs strategies, materials, and concepts for teaching special students in vocational education.

Other innovative projects funded in the state of Illinois included the development of a series of teacher training modules. These modules were then used as a basis for developing a series of slide tapes for training vocational teachers to work with handicapped students.

Another project, operated from Northern Illinois University, dealt with surmounting architectural barriers to the handicapped in vocational education. This project produced a handbook for vocational education personnel that included strategies and techniques for removing barriers. Workshops to disseminate the handbook were delivered throughout the state during the second year of this project.

There were several other activities funded to improve vocational education programming for handicapped students. The strong commitment by the state of Illinois for the development of these programs and materials identified the state as a leader in vocational education for the handicapped. Many of the products produced by these initiatives are available on a cost recovery basis from the Curriculum Publications Clearinghouse at Western Illinois University, Macomb, Illinois.

Future Perspectives

There are several issues that will affect the vocational education of the handicapped in the future. First, the national attention drawn to education has raised several questions about vocational education and its appropriateness as a part of secondary education. Many reports suggest that vocational education may not belong at the secondary level. However, without these programs, many handicapped students will lack access to effective job training to prepare them for work and life in our society.

The changing technology and changing nature of the workplace will affect future vocational programming. The introduction of high technology will affect the way we work, learn, play and live in the future. However, this new technology will make many jobs easier. By making jobs easier, this new technology will open up new fields of work for students who are handicapped who previously might not have had the ability to succeed at such jobs.

Other key issues, such as certification, assessment, program evaluation, rural program delivery, and so forth, are addressed throughout this issue of Thresholds. Of course, the issues addressed are not intended to be all inclusive, rather they are representative of the issues that face the field.

While vocational and career education for the handicapped was a priority of the 1970's, it may not be a priority of the 1980's. With all of the emphasis in the 1970's placed on merging the fields of vocational and special education, effective linkages and lines of communication have not been institutionalized in many areas. These 'lines' are going to have to be developed for effective vocational education of the handicapped to continue. It often appears that special education personnel and the parents of the handicapped do not understand vocational education, its roles, programs and purposes. An effective awareness program needs to be initiated to assure that effective programs continue. It is imperative that professionals, parents, and legislators work effectively together to make sure that effective programming happens.



A Crisis in Appropriate Education: The Dearth of Data on Programs for Secondary Handicapped Adolescents

By Sidney R. Miller and Paul Bates

The push by federal, state, and local educational agencies to build appropriate services for secondary handicapped youths is being impeded by a lack of data. A review of the literature suggests that no significant research has been conducted with adolescents with educational handicaps in the areas of achievement motivation, labeling, memory and retrieval, moral development, and cognitive development and integration. Without research into these areas, educators will be faced with the continuing responsibility of building identification, assessment, program, placement, and ancillary services while lacking the necessary information.

The Problem

The mandating of services for handicapped individuals, 3 through 21 years, awakening many to the reality that handicaps, such as learning disabilities, educable mental retardation, and severe and profound retardation, continue into adolescence. The laws specifically require that all school-aged handicapped receive free and appropriate education. With the implementation of the law, there resulted an increase in publications addressing the presumed needs of adolescents with educational handicaps (Bellamy, Petersen & Close, 1975; Brodin & D'Alonzo, 1979; Clark, 1976; D'Alonzo & Miller, 1977; and Miller, Schloss & White, 1983).

The lack of data regarding the needs of these youth and strategies for serviceable instructional alternatives remains the major underlying problem in designing and implementing programs and services. Such data are also necessary if we are to design curriculum that interfaces with the adolescent's psychological, sociological, and educational characteristics. The data employed in developing services have generally not emanated from research conducted on handicapped youth (Bates, Renzaglia, & Clees, 1980; Cullinan & Epstein, 1979; Miller, 1981).

Prior to 1980, the few data generated come from studies by educators and psychologists addressing normal populations (Handel, 1975; Yussen & Levy, 1977). Since 1980, some data has been generated, but it remains inadequate to meet the field's needs.

achievement motivation: the study of factors that either promote or inhibit learning (Clarizio & McCoy, 1976);

labeling: the study of the effects of a specific word or phrase intended to identify or describe a student's learning problem and/or characteristics (Schloss, Miller, Sedlak, & White, in press);

memory and information retrieval: the retention and retrieval of information that has been stored and evaluated;

moral development: the maturation and emergence of three psychological characteristics: moral judgment, moral feelings, and moral conduct (Clarizio & McCoy, 1976); and

maintenance and generalization: the process in which one seeks to provide instruction that increases the probability that a behavior will be sustained over time in a specified setting and that behavior can be transferred to new settings, times, and tasks.

Despite the increase in secondary research, it is the literature of psychology that primarily must be searched to begin establishing a data base for providing efficacious identification, assessment, placement, programming, curriculum, instruction, and other services.

In an attempt to establish the parameters of knowledge on secondary aged handicapped students, the authors present a selected review of the literature addressing each of the areas listed. Following each review is a discussion of the implications for research and program development for secondary-aged handicapped students.

Literature Review

Achievement Motivation

The area tends to encompass a variety of sub-themes, such as self-esteem, competition, incentives, birth order, sex stereotypes, and goal setting. In the area of goal setting, Locke (1968) found that the types of goals individuals set were mediated by the incentives associated with the goals' achievement. Rosswork (1977) found, through further exploration of the goal-setting theme, that more specific goals improved performance of students regardless of type of incentives--or even whether incentives were used at all. Prawat (1976) sought to establish whether sex played a role in goal setting in early adolescence. Using sixth, seventh, and eighth grade students, Prawat found that the goals of both boys and girls declined during grades 6 and 7, but girls in the eighth grade began to demonstrate

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increased personal expectation. Based on the research, the investigator concluded that females were better able to withstand negative school-related peer pressure. In other sex-related research conducted by Etaugh and Rose (1975), using neutral stories, it was found that both male and female students in the seventh, ninth, and eleventh grades judged behavior on the basis of stereotypical values and thus tended to devalue the achievement of females. This conclusion followed findings by Goldberg (1968) and Mischel (1974).

In addressing a similar issue, Horner (1970, 1972) found that achievement-motivation findings appropriate to males were not appropriate to females. Monahan, Kuhn, and Shaver (1974), replicating Horner's earlier findings, studied students 10 through 16 years of age. They confirmed Horner's results, noting that sex-role stereotyping was primarily responsible for the fear of success and that the fear of success was largely found in females. Winchell, Fenner, and Shavers (1974), using 252 high school seniors, again confirmed the earlier studies and added that increased intersex competition increased the fear of success among females.

Johnson and Ahlgren (1976), addressing the sole issue of competition and cooperation among over 6,000 students in grades 1 through 12, found that competition was an intrinsic motivator, correlating highly with the desire for the consistent enforcement of the rules. In addition, it was found that being highly competitive did not preclude also being highly cooperative when the social and motivational conditions were provided.

With regard to birth order, Glass, Nenlinger, and Brim (1974) found that this factor affected achievement motivation only for persons coming from high socioeconomic backgrounds, and that it had little or no effect on the school attitudes of students coming from lower socioeconomic environments.

In other studies dealing with peer interaction, Burlingame (1967), Condry and Siman (1974), and Siman (1977) found that the antisocial behavior of both male and female students was associated with peer-group pressure. Building upon the peer concept, Carter, DeTine, Spero, and Benson (1975) found that middle-school students judged individuals on school performance rather than on other variables such as race, social class, and physical appearance.

Research and program goals. The literature review points up two factors. First, there is minimal achievement-motivation research related to educationally handicapped adolescents, whether addressing high- or low-incidence populations. Second, several aspects require investigation to assess and determine their influence on the learning behavior of these populations, including: clearly stated goals; susceptibility to peer pressure as inhibitor/encourager of academic performance and general school behavior; stereotypical perceptions of roles in society and the anxieties and hostilities that result; the positive and negative effects of competition and cooperation in school performance; the significance of cooperation between handicapped and nonhandicapped students in a mainstreamed environment; and the reality that high achievement and vocational aspirations are not the salient factors that measure aspiration level or vocational achievement

level. These areas are but a few of the areas which require the attention of educators as they seek to build viable programs that meet the appropriate needs of the student. Failure to address these issues will prohibit the making of appropriate programmatic and instructional decisions.

Labeling

The 1970s have seen a plethora of data on the issue of labeling, with particular focus on the handicapped pre-adolescent student, ages 5 to 11 years. Forner (1974) decried the use of labels, and suggested that educators use descriptive language that facilitates instruction rather than categorical phrases that primarily condition educators to expect lower achievement. Goldstein, Arkell, Ashcroft, Hurley and Lilly (1975) questioned the value of labeling within the educationally handicapped milieu. The authors noted that the interface between labels and instruction is minimal and that, in fact, labels make possible educational practices that are unproductive and frequently unjust. Foster, Schmidt, and Sabatino (1976) studied the effects of the label "learning disabilities" on teachers. Using two groups of teachers, the investigators showed that the group told a particular child was learning disabled reduced the teachers' expectation of that child's learning ability. Building on the Foster et al. study, Gullung and Rucker (1977) sought to determine by similar conditions whether populations of regular, urban, suburban, and special educators would differ in their expectations of children labeled handicapped. The study found that all populations of teachers expressed reduced learning expectations for the children. Algozzine, Mercer, and Counterline (1977) further found that teacher's expectations of behavior were influenced by the type of label associated with students. Conversely, Wyatt, Reardon, and Bass (1977) found that adolescents labeled educable retarded were rated better in adjustment to new settings than were unlabeled students. These findings could affect the entire intake and assessment process as it relates to teachers' perceptions of and programs for the adolescent handicapped. Schloss and Miller (1982) reported that school personnel will make placement decisions on the labels 'institutionalized' vs. 'noninstitutionalized' irrespective of the learning and behavior characteristics of the student.

Research and program goals. With the exception of the Wyatt et al. (1977) and Schloss and Miller (1982) studies, labeling research has addressed preadolescent children only. This highlights the need for research on the labeling of handicapped adolescents and teacher expectation. The dearth significantly limits educator's capacity to reach informed decisions on student's ability to perform on varying tasks and in a variety of milieus. Further, there still remains unanswered questions. "Are students in the schools and in community settings served based on the label attached to them or based on observational data collected during the performance of a task?" There remains no clear body of knowledge that suggests how labels affect placement and services. Until the data are available decision making will be based on intuition and faith.

Memory and Information Retrieval

One continuing educational dilemma is memory

and its importance to the learning process. The importance of memory as a component to learning is either directly or tacitly addressed in most learning theory (Erickson, 1968; Inhelder & Piaget, 1958; Skinner, 1969). Holden (1974), in a study of the memory ability to retarded and normal groups, found that handicapped adolescents had a greater problem in veridical enumeration of stimulus events when presented quickly. He further observed that handicapped adolescents had greater difficulty when presentation of a particular task was alternated among two to three modalities. Landau and Hagen (1974), in a study comparing handicapped and nonhandicapped preadolescent and adolescent populations, found that the preadolescents had difficulty with retention as a result of a mediation deficiency. The adolescent did not exhibit major mediation difficulties, but appeared to be impaired because of deficiencies in the ability to correctly verbalize responses following the presentation of cues.

Smiley, Oakley, Worthen, Compione, and Brown (1977), in a study of middle-school students, one group with reading problems and the other group within the normal range, found that when the poor-reading group was compared with the normal group, (a) the poor group had retention difficulties associated with reading comprehension and (b) this comprehension problem was associated with processing deficits. Paralleling the Smiley et al. (1977) study, Tarver, Hallahan, Cohen, and Kaufman (1977) conducted a study of adolescent boys identified as mildly handicapped. The study reported that the subjects' learning and retention development was inhibited by selective attention deficits, and that these deficits represented a developmental lag as opposed to a permanent learning deficit. Brown and Barclay (1976), using retarded students ranging in age from 7-2 years to 13-9 years, sought to determine the ability of the individuals to improve their own memory. The study found that the younger group lacked the ability to develop conscious strategies to retain information and benefited little from training to facilitate retention. Those in the older group, however, while initially lacking memory skills, were able to learn strategies and techniques, and found that differing problems tended to shape the types of strategies they used.

Research and program goals. The majority of studies reviewed indicated that linguistic and conceptual skills cues affect students' memory and retrieval efficiency. The research suggests that material designed for educationally handicapped youth must take into account their general linguistic and conceptual deficiencies additionally. In addition, the studies indicate that further research needs to be pursued in the area of long-term retention of learned materials. Youths need training in using linguistic cuing and selecting appropriate stimuli to memorize and retrieve information. Replication and elaboration must also be conducted in verifying the Tarver et al. (1977) study with mildly handicapped adolescent boys, which found that learning and retention were solely the result of developmental lags. Their cuing techniques, the types of follow-up questions, the multiplicity of stimuli, and the variety and frequency of modalities hold signi-

ficant implications for instructional strategy and materials.

Morality Interaction

Inhelder and Piaget (1958) and Erickson (1968) have studied moral development and its importance in human growth. More recently, Cox (1974) studied the behavior of black 13-year-old students to identify factors that affected their moral development. The findings indicated that prior interactions shaped moral-judgment feelings and conduct, suggesting that peers and others more profoundly affect adolescents' behavior than do preconceived values. Beech and Schoeppe (1974) found that neither males nor females used religious authority as the locus of moral behavior. They also found that girls tended to use social recognition as their barometer of social behavior, while boys tended to resist external moral control. Both male and female adolescents were apt to measure themselves against measures of achievement, accomplishment, self-respect, and 'wisdom.' In two separate efforts (Handel, 1975; Turiel, 1977) it was concluded that cognitive behavior more than socioeconomic background tends to regulate attitudinal development. Turiel further echoed Erickson (1968) and Inhelder and Piaget (1958) in concluding that moral behavior evolves through various developmental stages, and cognitive processes of equilibrium and disequilibrium regulate this attitudinal formation development. In a study addressing the behaviors of delinquent and nondelinquent boys, Freedman, Donohue, Rosenthal, Schlundt, and McFall (1978) found that delinquent youths (a) lacked the skills to deal with everyday problems and (b) tended to become increasingly embroiled in illegal behavior as their post moral decision-making skills led to further antisocial interaction. The investigators noted, however, that in seeking to measure various aspects of human behavior, no single variable emerged as a salient predictor. Jurkovic and Prentice (1977) found that neurotic and subculture delinquents approximated the same level of moral and cognitive development as did nondelinquent youths, but that their sociocognitive development did not parallel that of the general population. However, irrespective of socioeconomic status and cognitive level, research has demonstrated that complex vocational, social, and learning skills can be taught handicapped students (Brown, Branston, Hamre-Nietupski, Pumpian, Certo, & Gruenwald, 1979; Cuvo, Leaf, & Borakove, 1978; and Williams and Ewing, 1981).

Research and program goals. The data indicates that several variables influence moral development, including sex, social experiences, cognitive development and maturation, and the types and frequency of experiences. While the studies suggest familial influences as a variable influencing moral judgment and social interaction, the formal-operational cognitive behavior can effectively mediate conflict values. The issues raised are whether specific formal-operational and moral-social training and experiences within the schools can modify the moral judgments, feelings, and conduct of educationally handicapped youths, who are frequently measured by their decision-making skills. Further, if the education milieu

can influence moral behavior, what realms of moral training may the school legitimately pursue? The preliminary research suggests that some behavioral changes are possible. The question and research are: "What level of change can be promoted and can the behavior change be maintained and generalized?"

Generalization

The educator must train for generalization irrespective of whether the process, task, and/or content relates to moral development, vocational skills, or social interaction. Pancsofar (1982) noted that a significant amount of instruction is based on the principles of 'train,' 'pray,' and 'hope.' Recently, there has been an increase in interest and research into the area of maintenance and generalization (Egel, 1982; Horner & Bellamy, 1978; Kazdin, 1980; Langone & Westling, 1979; Lovaas, 1981; Stainback & Stainback, 1978). Among the various studies, Baer (1981) indicated that delay reinforcement procedures were an efficacious strategy to promote desired social behavior under training-void conditions. Hundert (1981) reported that multiple-stimulus training took a longer time but resulted in generalization across settings, trainers, and stimuli. Lancioni (1982) found that generalization occurred most frequently when a peer was involved in training, as opposed to when the student was uninvolved in the training process. Walker and Buckley (1972) conducted a study in which they found that the training of peers to provide appropriate reinforcement enabled students to generalize their behavior in differing environments. Kazdin (1980) and Wildman and Wildman (1975) reported that delay reinforcement may promote the occurrence of behavior in settings that have not been targeted. Fowler and Baer (1981) reported that nontargeted behavior did occur in settings that had not been targeted during an intervening period, during which the behavior was under the control of the reinforcement and feedback.

Research and program goals. The process of generalization is a critical factor in the efficacy of any instructional or training program. Clear strategies need to be devised and implemented that enable individuals to utilize skills in a variety of settings, curriculum areas, and temporal variations. Research, in recent years, suggests that technology is emerging that will enable educators to prepare individuals to generalize their mastered skills. The research is unclear as to contingencies and ratios that should be employed in promoting the generalization of behavior across settings during an extended interval. Further, the literature has not clearly addressed the variations in contingencies and ratios based on the severity and type of handicap. More systematic procedures need to be developed which will enable the practitioner in the classroom to employ generalization technology without having to resort to the use of an entire professional library.

Conclusions

The need to develop a data base on secondary handicapped students is clear. The majority of the data generated until the late 1970s addressed the needs of preschool and elementary-level children. The court decisions of the 1950s, 60s, and 70s, and the passage of Public Law 94-142 and

other companion legislation, made it clear that the schools and the states must provide appropriate educational services to handicapped youth, 13-21 years.

The court decisions of the 1950s, 60s, and 70s, and the passage of Public Law 94-142 and other companion legislation, made it clear that the schools and the states must provide appropriate educational services to handicapped youth, 13-21 years.

The difficulties the school had in the 1960s and 70s persist into the 1980s. There is little data that directs their educational efforts: when it comes to serving the secondary handicapped student. Research conducted prior to civil rights efforts for the handicapped was almost exclusively focused on the preadolescent population. Since the late 1970s, increased research efforts have been initiated that have provided the secondary special educator some data base upon which to build policy, program, and services.

Such data are minimal, and have largely addressed the issues of vocation and work policy, behavior management, labeling, and reading instruction. These data are beginning to influence the course of programs and services. Further, the Office of Special Education appears to be supporting research, training, and direct service models which can advance the state of the art. Clearly, there are a number of issues that must be addressed in the research and questions that must be answered before efficaciousness of programs and services can be clearly demonstrated.

The effort to serve secondary-school-aged handicapped students must be built on a data-based foundation. The close scrutiny of the field by federal and state governments, and independent researchers, illustrates the necessity of demonstrating the viability of various instructional and program models. The 'train and hope' model must be succeeded by validated models. Unless appropriate services are developed and validated, students will continue to drop out of school and leave the nation with a vast number of individuals untrained and unprepared to serve themselves and their community.

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Vocational/Special Education Certification: Past, Present and Future

By James Greenan

Preparing personnel to work effectively with special needs learners continues to be an important activity in vocational/special teacher education. Needs assessments and competency studies have identified the knowledge, skills, and attitudes persons should possess to teach students in regular vocational classes and laboratories (Albright, Nichols & Pinchok, 1975; Greenwood & Morley, 1978; Kingsbury, 1976; Phelps, Evans, Abbas & Frison, 1976; Sheppard, 1975; Yung, Smith, Jennings & Haynie, 1978). Undergraduate, graduate and inservice programs have become more prevalent in local education agencies, state education agencies, and universities/colleges (Brock, 1979; Greenan, 1980, 1981, 1982). There has been, however, a general void of systematic vocational/special education certification policies and practices in the state (Beason, 1982; Brock, 1979; Greenan & Larkin, 1983). In part, this situation can be explained by the fact that the existing legislation suggests little regarding state certification. In addition, there seems to be a lack of agreement regarding the necessary competencies in teacher education programs. Further, universities/colleges (and other program providers) and state education agencies (SEA) which provide for and grant certification have not coordinated (within or between) their needs or activities (Brock, 1979; Miller, Sabatino & Larsen, 1980).

The purpose of this article is to provide an examination and perspective of the past, present, and future of vocational/special education certification. The expectation is that the information will provide some insights useful in future vocational/special education certification and personnel preparation initiatives and activities.

Past

Public Laws 93-112 (The Rehabilitation Act of 1973-Sections 503 and 504), 94-142 (The Education for All Handicapped Children Act of 1975), and 94-482 (The Education Amendments of 1976-Title II: Vocational Education) appeared to have had an immediate impact on vocational and special education personnel preparation programs (Sitlington, Malouf, Taymons & Bowen, 1982). For example, Brock (1979) notes that more states have required special education coursework for vocational education personnel. An increased number of vocational/special education teacher training programs have been developed, and have produced a greater number of enrollees and graduates of these programs. Special information, however, with respect to vocational education requirements for special educators was generally

unavailable. Brock offered several observations regarding vocational/special education certification practices:

Vocational/special education program development is 'viable' but growing slowly.

University/college training program personnel and state certification personnel need to communicate, coordinate their activities, and articulate programs/requirements.

University/college training programs and other programs providers need to expand and improve dissemination activities regarding their programs to relevant target audiences (e.g., SEAS, LEAS, professional associations, and others).

A course or courses which focus on needed teacher competencies or 'mainstreaming competencies' (e.g., vocational assessments, teaching strategies, instructional materials and equipment modification) better meet the mandated special education coursework requirement than the 'general' survey course (e.g., Psychology of the Exceptional Child).

In summary, Brock's investigation leads to the conclusion that vocational/special education certification policy and practices have appeared to be slow, nonsystematic, and almost nonexistent among the states.

Beason (1982) and Allright, Hasozi, Phelps, & Hull (1981) cited several areas through which changes and progress in vocational/special education certification practices may occur in the states. They include: (a) interagency collaboration, (b) professional organization involvement, and (c) professional attitude change.

The end result of interagency collaboration and agreements should be the delivery of comprehensive services to special needs learners. Personnel should define the necessary competencies and their professional roles and responsibilities. Agencies activities should also be coordinated while reducing or eliminating duplication of services.

Several federal initiatives have encouraged but not mandated interagency collaboration (Commissioner's Joint Memorandum, 1978; Federal Register, 1977; Federal Register, 1978). Implementation of these initiatives and entrance into interagency cooperation and agreements could eventually lead to improved and expanded personnel preparation efforts, and systematic, consistent vocational special education certification policies and practices. Several necessary changes, therefore, need to occur at the SEA and LEA levels prior to realizing effective certification policies and practices.

Beason also cited the role professional

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associations may play in providing the thrust toward the organization of vocational/special education certification policies. National, state, regional, and local professional associations with memberships from allied fields (i.e., vocational education, special education, and rehabilitation) can impact on certification through research, dissemination, service, and conference activities. The American Vocational Association/Special Needs Division/National Association of Vocational Education Special Needs Personnel, Council for Exceptional Children/Division on Career Development, National Rehabilitation Association, their state and local associations, and other professional groups continue to impact on problems relating to certification/personnel preparation.

Professional attitude changes also need to occur to effect progress in vocational/special education certification. The related fields of vocational education, special education, and rehabilitation must define and coordinate their professional roles and responsibilities and 'expertise' for serving special needs learners. Effective certification policies will require a breakdown of 'possessiveness' and 'turfism' among and/or between agencies. The ultimate goal should be good working relationships and efficient, comprehensive service delivery to special needs learners.

In a directed telephone interview of 32 of the 1980-81 Office of Special Education/Division of Personnel Preparation, Vocational/Career Education project directors, Sitlington, Malouf, Taymans, and Bowen (1982) determined the certifications or endorsements granted by the programs. Sixteen (50%) of the programs granted a special education certification only and one (3%) program granted a vocational education certification only. Three (9%) programs granted certification in either special education or vocational education, which was contingent upon the student's program emphasis. In addition, four (13%) programs provided a vocational special needs certification. For three programs, the vocational special needs certification was the only certification, and one program granted it with a special education certification. Further, eight (25%) of the programs were competency focused but offered no certification. The reason for the emphasis on special education certification rather than vocational/special education was because most programs were associated with departments of special education.

Present

In a recent study, Greenan and Larkin (1983) determined the existing vocational/special education certification policies and practices in the fifty states, District of Columbia, and trust territories (Puerto Rico, Samoa, Trust Territories of the Pacific Islands, and Virgin Islands). Certification policies and practices in the following areas were investigated: certification options and alternatives, coursework, and occupational work experience requirements.

The findings and conclusions of the study revealed that most states do not have comprehensive vocational/special education certification with respect to either policies or practices. Fourteen of the states grant one or more vocational/special education certification

for vocational education personnel, while special education coursework and occupational work experience were the most frequent requirements. Those states which indicated progress toward or granting one or more certificates or endorsements for vocational education personnel in vocational/special education include: Colorado, Delaware, Idaho, Maine, Massachusetts, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Puerto Rico, Virgin Islands, and Wyoming.

Eight of the states provided vocational/special education certification to special education personnel with cross-training and vocational special needs coursework being the most common requirements. Those states which indicated progress toward or issuing one or more certificates or endorsements for special education personnel in vocational/special education include: Illinois, Kansas, Maine, Minnesota, Nebraska, North Carolina, North Dakota, and Puerto Rico.

Two noteworthy vocational/special education certification programs are located in Kansas and Nebraska. The Nebraska certification program has a vocational education orientation and has been linked to the personnel preparation activities of the University of Nebraska-Lincoln under the direction of Dr. Gary Meers. Another program is located at Fort Hays State University in Hays, Kansas, and has a special education orientation. Dr. Elaine Beason has provided leadership in that program.

Some states without vocational/special education certification options have begun to formulate recommendations and/or procedures for vocational/special education policies and standards. These activities have generally been initiated by state departments of vocational education and universities/colleges.

With regard to extended certification(s), about two-thirds of the states allow preservice coursework to satisfy requirements. Approximately 75% of the states permit preservice and graduate (and inservice) coursework to be used together to meet the requirements for extended certification.

Future

The available evidence from the past and present suggests that, overall, comprehensive and consistent vocational/special education certification policies and practices do not exist in the states. There are, however, some states which have begun to develop and implement certification policies and practices.

Several on-going vocational/special education programs in universities/colleges require differing levels of coursework, occupational work experience, practica, and other activities deemed necessary for working successfully with special needs learners in vocational/special education programs. The focus, however, does not seem as strong for developing and implementing state standards for certification. The limited focus seems to be related to a lack of interagency collaboration between service providers, universities/colleges, and SEAs. Personnel preparation and certification policies and practices need to be coordinated and concurrently planned, implemented, and evaluated among state leadership personnel. As vocational education and special education legislation is further implemented, the need for effective certification standards and practices is likely to become even

more important.

The states need to evaluate their current vocational/special education certification and personnel preparation policies and standards for adequacy, quality, and effect. Those states which do not presently have certification options should first identify and coordinate their personnel preparation activities. In addition, key state leadership personnel should be identified from vocational education, special education, rehabilitation and other related agencies to plan and develop certification policies and practices. University/college, professional association, LEA, and SEA personnel should be represented in the group. Interagency activities which involve defining agency roles and responsibilities, identifying expertise and determining efficient procedures for service delivery are very important.

Several aspects of general special education certification in the states were also examined. For example, many states (37) grant K-12 certification in special education. Approximately one-half of the states provide for K-6 only and/or 7-12 only special education certification. As might be expected, post-secondary/adult special education certification was uncommon and identified in only 3 states. The minimal emphasis on post-secondary/adult vocational/special education certification is probably due, in large part, to the legislative and personnel preparation emphasis at the secondary level. In addition, traditional categorical special education certification appears to remain in a greater portion (75%) of the states.

In almost all states, occupational work experience requirements are not waived, for example, coursework in lieu of work experience for vocational certification. Some states, however, may waive occupational work experience if certification is temporary or provisional. Further, 20% of the states require one or more 'add-on' special education courses before vocational certification is granted.

Although competency-based teacher education/certification is having an impact, and nearly one-half of the states claim their policies lack consistency and were too liberal, only nine states report they have certification proposals or policies under legislative or state department review.

Another significant finding of the Greenan and Larking study is that most SEA personnel express the need for conferences and other interagency activities designed to develop collaboratively vocational/special education policies and procedures in their states. In addition, state leadership personnel do not have sufficient practical, useful resources (e.g., policy papers, guidelines, model practices) to plan, develop, implement, and evaluate vocational/special education certification policies and practices. The emphasis in vocational/special education, in large measure, focuses on personnel preparation rather than certification issues and activities. Personnel preparation and certification, however, are inseparable in policy formulation and should be dealt with concurrently by all necessary personnel.

Specific vocational/special education certification policy areas may include but are not

limited to: levels of certification (e.g., 7-12, post-secondary/adult), occupational work experience, coursework, categorical/non-categorical certification, essential competencies, and standardization of vocational education and special education certification language, definitions, and terms. It is also apparent that in order to develop effective certification policies and practices, national, regional, state, and/or local initiatives need to be undertaken. For example, conference-type training and exchange is needed. Such conferences should include all special needs service providers. Conference/workshops should be 'action oriented' producing tangible results regarding policies and procedures for granting vocational/special education certification. Resources need to be produced useful in planning, developing, implementing, and evaluating policies. Existing research, development, and dissemination networks should consider integrating vocational/special education certification activities in their programs of work. Universities/colleges, research coordinating units, national/regional research centers, and other similar organizations could be instrumental in initiating these activities.

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Vocational Assessment in Schools

By Michael Peterson

In recent years, increasing efforts have been made to provide vocational training for handicapped students as part of the secondary school curriculum. As these efforts have progressed, however, educators have increasingly realized that the assessment information they have about students is both inadequate and inappropriate. Consequently, needs for vocational assessment have been recognized. In a recent survey (Peterson, 1981) of state department personnel in Mississippi, 76% of the respondents were planning to increase the availability of vocational assessment for special needs students.

Many questions exist concerning how to implement vocational assessment in public schools.

However, many questions exist concerning how to implement vocational assessment in public schools. This article attempts to identify the issues involved and to present a summary model.

Issues in Vocational Assessment

Goals/Outcome

The first issue has to do with what information about students is needed. Should vocational assessment be narrow or broad? Should it attempt to answer only questions related to specific employment of vocational training or should a total assessment of the student's functional life skills or career education skills be included? Brolin (1978) and Clark (1977) have both advocated assessment that would include a broad functional assessment of student life skills.

To what degree should vocational assessment and occupational exploration be combined? Dunn (1975) has pointed out differences in vocational evaluation programs that emphasize 'testing' as opposed to those that see evaluation as a guidance process in which the student gains information about himself and the world of work. Menz (1978) has recommended that vocational assessment and occupational exploration be combined in a class that would last one or two semesters in secondary schools. Should this be done? If so, how?

Personnel

A critical question is who will do vocational assessment? The answer, of course, depends partially upon the administrative model outlines. Teachers and others may provide observations that are vocationally relevant as part of vocational assessment. However, several authors concur that a person trained in vocational evaluation should

both coordinate and implement this process. Hohenshil (1980) has advocated additional training for school psychologists to take this role as a 'vocational school psychologist.' Similarly, some states have developed support service teams for handicapped students in vocational education that include Vocational Evaluation Specialists and attempts have been made to allow special certification for such persons in several states (Peterson, 1981). The establishment of a national professional certification for Vocational Evaluation Specialist through the Commission of Certification of Work Adjustment and Vocational Evaluation Specialists (CCWAVES) is expected to result in additional efforts along these lines. It is clear that a distinction should be made between specialists in vocational assessment and nonspecialists like teachers, coaches, etc., who are part of an assessment team.

Some important questions related to the employment of vocational evaluators in public schools exist. Many vocational evaluators with graduate training in vocational evaluation do not possess teaching certificates. One study (Ellsworth & Nell, 1978) has indicated that evaluators in school perform much the same tasks as evaluators in rehabilitation agencies. Must vocational evaluators have teaching certificates for employment as evaluators in schools? Should separate state certification be established for vocational evaluators? If so, what should the requirements be?

Another important issue relates to the supply of trained personnel. Certainly, the existing graduate programs in vocational evaluation cannot supply the total demand for competent professionals. How can vocational evaluators be provided adequate training in sufficient numbers?

The existing graduate programs in vocational evaluation cannot supply the total demand for competent professionals.

What steps can universities, federal agencies, and state agencies take to increase the availability and quality of training?

To date, the model most used has been the vocational evaluation center. However, some authors (Clark, 1977; Sitlington, 1979) contend that assessment should be integrated into the curriculum and should be interactive with instruction. McCray (1982) in a recent publication outlines the evaluation center model as applied in a school setting. Peterson (1982) outlined a procedure that allowed both an 'integrated' and center approach depending upon student needs. An important issue is the degree of interagency cooperation between rehabilitation and education.

Vocational rehabilitation has many vocational evaluation centers. To what degree can these be

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used to assist in making recommendations for younger student's vocational training as well as those graduating from public schools? Which of the models mentioned above is most useful and under what conditions? If a vocational evaluation center is used, who should fund and administer it? Rehabilitation facilities might provide services to schools; several schools might form a cooperatively funded and operated assessment center; a system of regional assessment centers might be initiated in a state.

Methods

Are adequate assessment instruments available? Vocational special needs personnel want hard information that can effectively recommend entrance into various vocational programs and provide vocational teachers with information concerning teaching techniques, needed curriculum modifications, special education support services, and student learning characteristics. Can present work samples and other instruments meet this need, or do additional tools need to be developed? Work samples and other performance oriented techniques have been found to be more valid than traditional pencil and paper tests. How can these methods be used?

Target Populations

Should the target populations for comprehensive vocational assessment be selective or broad? Should all special needs students be provided comprehensive vocational assessment? Should 'regular' students receive assessment? Should vocational assessment be used with severely and profoundly handicapped students? And, as that age should assessment begin? In one survey in Texas, the majority of educators surveyed felt that vocational assessment for handicapped students should begin in grade 7-8 (Peterson, 1980).

Administrative Structure

Vocational assessment may be developed in schools through the following means: (1) a vocational evaluation center; (2) as a combined vocational assessment/exploration class; (3) in the special education classroom; (4) integrated into the total curriculum where special education teachers, counselors, vocational education teachers, etc., all contribute assessment data on an on-going basis. In such a model, a vocational evaluator would coordinate the total continuing assessment effort (Sitlington, 1979; Posey, 1982); and (5) a combination of the above.

Vocational Assessment Model

Starting in 1979, a committee within the National Association of Vocational Education Special Needs Personnel (NAVESNP) has worked to develop a concept paper on vocational assessment in schools. A summary of this paper is presented below. It attempts to address the major issues outlined above and provide a framework for vocational assessment in schools. Basically, the model outlines a two-fold approach: (1) an integrated, team approach where informal classroom observations, existing testing information, and psychometric vocational tests are used; and (2) a formal vocational evaluation center staffed by specialists. The ideas of this paper were based on a survey of NAVESNP members, a study in Texas

(Peterson, 1980), and input by the NAVESNP committee and membership. A full copy of this paper may be obtained by contacting the author: PO Drawer GE, Mississippi State, MS 39762. Vocational assessment concept paper.

Vocational assessment is a crucial service for students with special needs and should be incorporated into the service delivery system of secondary and post-secondary schools. Its major purposes for vocational educators are to commend placement of special needs students in realistic and appropriate vocational education programs, provide information to vocational education programs and to provide information to vocational instructors and support staff that will assist them in working with students. Vocational assessment is an important support service for vocational instruction, however, and is not an end in itself.

A basic vocational assessment should be available to all students that would utilize existing assessment data, such as information techniques of vocational assessment such as teacher and counselor observations; parent and student interviews; and vocational testing including interest, aptitude, and awareness tests. Basic vocational assessment should monitor development of work related student characteristics from elementary school through adulthood.

Comprehensive vocational assessment, or Vocational evaluation, should be available to all students with special needs at times when critical vocational decisions must be made--especially prior to entrance into vocational education programs and prior to completion of a school curriculum. Vocational evaluation is an intensive vocational assessment and counseling process that incorporates assessment methods used in basic vocational assessment and additionally focuses on using experience-based or 'hands on' methods of vocational assessment such as work samples, performance samples, vocational classroom tryouts, and job tryouts.

Vocational assessment should be based on a clear understanding of the requirements for success in vocational education programs and on jobs.

Vocational assessment should be individualized based on the needs of a student. For handicapped students, plans for vocational assessment, whether 'basic' or 'comprehensive,' should be included in the students yearly Individualized Education Plan. Vocational assessment should be based on a clear understanding of the requirements for success in vocational education programs and on jobs.

Vocational assessment should be part of a larger, on-going 'career assessment.' Career assessment is composed of psychological/educational assessment which assesses general, personal, social and academic skills; functional living skill assessment which includes assessment of skills required to function at home and in the community; and vocational assessment which assesses vocational interest, awareness, aptitudes, skills, work behaviors, and other characteristics required in vocational training and on the job.

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Innovative local and state administrative practices are needed to facilitate effective vocational assessment. Cooperative interagency funding of Comprehensive Vocational Assessment should be pursued which could include regional Vocational Evaluation Centers. Local administrators should systematically plan vocational assessment with input from persons trained in vocational assessment. State departments of vocational education, special education, rehabilitation, and manpower should establish joint policies relating to vocational assessment. Special education should be responsible for basic vocational assessment of younger students while vocational education alone or in cooperation with other agencies may be responsible for Comprehensive Vocational Assessment. Such policies should encourage joint local funding and should provide for in-service training related to vocational assessment.

Vocational assessment information should be gained, both formally and informally, from a variety of persons including: students, parents, counselors, teachers, etc. These same persons should also be able to use vocational assessment information to help teach students vocational skills and aid them in making vocational decisions. A report should summarize, in practical terms, both basic and comprehensive vocational assessment information and be available to all who work with a student.

Specialists trained in Vocational Evaluation techniques should coordinate the basic vocational assessment process and coordinate and implement Comprehensive Vocational Assessment or Vocational Evaluation. Such specialists could be drawn from a variety of backgrounds; vocational counselors, vocational special needs teachers, secondary special educators, vocational evaluators in rehabilitation or manpower agencies, etc. Of key importance, however, is that such persons have training in the skills needed to implement vocational assessment of special needs students effectively. A special certification for such Vocational Evaluation Specialists should be developed by State Departments of Vocational Education and should be based only upon possession of skills related to Vocational Evaluation. Prior teacher certification should not be required. One method of helping to insure adequate skills is to require national professional certification as a Vocational Evaluation Specialist through the Commission on Certification of Work Adjustment and Vocational Evaluation Specialists (CCWAVES).

In-service training for team members in vocational assessment and specialists should be sponsored by state departments agencies. Interdisciplinary degree programs at universities should provide both in-service and pre-service training.

Effective vocational guidance, placement in appropriate vocational education programs, and provision of useful student information--these are all necessary if special needs students are to be successful in vocational education and become competent workers. Vocational assessment properly implemented can fulfill these needs and, consequently, should become an integral part of a vocational education service delivery system for special needs students in secondary and post-secondary schools.

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Design of a State System for Evaluating Vocational Special Needs Project

By Leonard Albright

The federal role in providing resources for increasing the enrollment of disadvantaged and handicapped youth in vocational education has been present for nearly 20 years. During this period, and in recognition of the federal thrust, state education agencies (SEA's) have worked with local and regional school districts in expanding vocational programs and services for special needs students. Yet, many states have devoted limited attention to evaluating the results of these programmatic efforts (Beuke et al., 1980; Wentling & Barnard, 1982; Frasier, 1983). To illustrate, in their survey of state evaluation practices, Wentling and Barnard (1982) found that by spring of 1981, 29 states had not fully implemented systems for evaluating programs and services for special needs populations. To further compound this situation, several reviewers of the professional literature have noted the virtual absence of reporting on program evaluation activity in the vocational special needs arena (Phelps, 1980; Albright, 1981; Frasier, 1983).

The intent of this article is to share the experience of developing a vocational special needs evaluation system in one state, the State of Vermont. The primary considerations and major procedures employed in designing the system will be highlighted, along with some discussion of the evaluation system itself. However, for a more thorough description of the procedures and content of the program evaluation, see Albright and Frasier (1982).

Contextual Considerations

As of Spring, 1981, Vermont, like many other states, did not have a vocational special needs evaluation system in place, but wanted to move in this direction. Therefore, in July, 1981, the Vermont Division of Adult and Vocational-Technical Education awarded a grant to the vocational education department at the University of Vermont to begin development of an evaluation system.

Since most of Vermont's federal vocational special needs funds were channeled into projects at the 16 regional vocational centers which provided support services to special needs students in mainstream or regular vocational education programs, the evaluation system had to be sensitive to this 'services in the mainstream' thrust. Therefore, the evaluation effort included input from both vocational special needs and regular vocational education personnel.

A second consideration had to do with the major purpose of the State's evaluation system.

Should it be used primarily for meeting the information needs of the State? Or, should the major focus of the evaluation be on assisting local districts in program improvement matters? After several discussions between the State consultant for vocational special needs and the evaluation project team, it was decided that these two purposes need not be mutually exclusive and that the evaluation system should reflect both. This dual focus is stated in the introduction to the evaluation procedures manual for local education agencies (Albright & Frasier, 1982):

...the Vermont Division of Vocational-Technical Education has been able to assist local education agencies in establishing a wide variety of special services projects for disadvantaged and handicapped students. Without question, each special project has developed localized approaches for helping students with special needs in vocational education programs. The evaluation system in this manual is intended to be responsive to the unique features and operational qualities of individual projects at the local level, while also fulfilling the information needs of the State Division.

Procedures

After coming to terms with the two basic system considerations (i.e., focus on mainstream services, purpose of evaluation), then came the developmental work. The major activities that followed are described in this section.

Activity 1: Review and Synthesis

From an extensive literature review and telephone discussions with consultants for vocational special needs from several states, the project staff soon recognized that few examples were readily available for possible adoption or adaptation. Perhaps, the most useful finding was that a three stage format for program evaluation was common among the systems reviewed (Frasier, 1983). That is, a local self-assessment process occurred first, followed with an external review by a team of individuals from outside the district, and, finally, the development of a local improvement plan based on the outcomes of the local and external reviews.

An important 'spin-off' of the review process was an indepth investigation of vocational special needs program evaluation strategies utilized in 14 rural states (Frasier, 1983). One finding from this study was that most states had established vocational special needs program evaluations as an independent activity, separate from the evaluation of regular vocational education programs.

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Activity 2: Submission of Systems Report to State Division

The review and synthesis process also pointed to a need for building a comprehensive evaluation system that accounts for all handicapped and disadvantaged (H&D) students enrolled in vocational education. While the focus of the project was on developing a system for evaluating state-funded vocational special needs projects, it was recognized that sole concentration on state-funded projects would result in an incomplete evaluation effort. Many H&D students were benefitting from special project services, but not all H&D students in vocational education were recipients of such services. Therefore, and in addition to the projects evaluation system development, the project staff prepared a report (Frasier & Albright, 1981) for the Division which offered a series of recommendations on how a special needs component could easily be incorporated into the existing Vermont vocational education evaluation system, titled the 'Quality Assessment System (QAS).' By including the special needs component in the QAS while also having a separate evaluation system for state-funded projects, a more complete, accurate and ongoing picture of the delivery of vocational education to H&D students in Vermont could be obtained by the State Division.

Activity 3: Initial Development of Evaluation System

The evaluation system was conceived as occurring in three major stages: 1) a self-assessment, done by a local steering committee, 2) an onsite evaluation, conducted by an external evaluator, and 3) the development of a local improvement plan, based on the findings for the self and external evaluations. These three stages, along with supporting instructions and materials, were organized in a manual for local education agency personnel and field-tested at one vocational center. Feedback on the evaluation system from personnel at the field-test site was quite positive and many helpful suggestions were offered for improving the system. As a result of this field-testing, the following changes were made:

- a. The faculty questionnaire was shortened in length and individual questionnaire items were written in clearer, more concise terms.
- b. A student questionnaire was added to the system
- c. An indepth review session between the external evaluator and the local evaluation steering committee was included as a major activity during the second day of the external evaluation.
- d. The procedures and timelines for conducting the evaluation were further specified; and the roles of the State Consultant, the external evaluator and the local evaluation steering committee were more clearly delineated.

Of the above changes, the one that later proved to be a significant addition to the evaluation effort was the indepth review session between the local committee and the external evaluator. This session enabled both parties to discuss their observations about project strengths and weaknesses and collectively examine some practical action steps for project improvement.

Shortly after the pilot testing, the procedures manual was revised and prepared for use in evaluating four vocational special needs projects.

Activity 4: Evaluation of Vocational Special Needs Projects at Four (4) Vocational Centers

The State consultant scheduled evaluations of special needs projects in four vocational centers and these evaluations were conducted during the months of March through June, 1982. External evaluator reports were forwarded to the State consultant and he subsequently worked with personnel from each vocational center on project improvement plans.

One important outcome of these evaluations was the organization of a standard reporting format for the external evaluator's report. The format includes information reported in the following sequence.

Cover page	Identifies the project evaluated by title, the person responsible for preparing the report (i.e., the external evaluator) and the date that the report was submitted to the State Division.
Purposes of evaluation	Presents the rationale for the evaluation and the dates of the external evaluation.
Evaluation methods and procedures	Summarizes the self-study procedures used, followed with a description of the procedures used during the external evaluation stage.
Description of the project	Provides an overall descriptive summary of the local project.
Summary of	Lists local project strengths and areas in need of strengthening, along with supporting data for each observation noted.
Recommendations	The evaluator provides specific recommendations for project improvement; based on his/her on-site observations, information reported in the local self-assessment materials, and information discussed during the indepth review session with the local steering committee.

Activity 5: Follow-up of LEA Personnel Who Participated in the Evaluation

In order to assess the impact of the evaluation on local education agency (LEA) personnel and to obtain additional suggestions on how the system could be improved, telephone interviews were conducted with the coordinators of three vocational special needs projects and a vocational director. These interviews took place in June, approximately a month following the evaluations.

A telephone interview guide was developed by the project staff and reviewed by the state consultant. Questions relative to the self-assessment stage, the external evaluation stage, the external evaluation report and the local project improvement planning process were asked.

Information from the respondents on the perceived usefulness of the evaluation effort was also sought, along with recommendations for improving the evaluation system.

The positive comments received about the self-study stage of the evaluation were concentrated around the theme of helping others in the district better understand the project goals and operational procedures. Two commenters did mention difficulty in obtaining the full participation of the persons selected to serve on the local evaluation steering committee. Conflicting schedules was the reason most often cited in explaining this difficulty.

The commenters were also positive about the quality of the external evaluation report. The format was easy to follow and the information was helpful to the committee in preparing the local improvement plan.

A few recommendations were offered for improving the evaluation system, but they required only minor editing changes. Perhaps a quote from one respondent best summarizes the overall reaction to the evaluation. This person stated:

I initially thought the evaluation was more BS, but it wasn't! I'm glad it happened--it caused all of us to learn from it and come up with a plan of attack.

Activity 6: Revision, Printing and Dissemination of Evaluation Procedures Manual for Local Education Agencies

The revised version of the evaluation procedures manual for LEA's was completed in early August (Albright & Frasier, 1982). Although the content and procedures essentially remained the same as in the prior evaluations of four projects, substantial work was done on refining the procedures; communicating the content in a clearer manner; and in organizing the flow of the document for reader ease and consumer use.

The final version of the manual was carefully reviewed by the project staff and the state consultant before it was sent to the printers. A limited number of copies remained with the project director, with most going to the State Division for use in subsequent project evaluations. Multiple copies were printed so that they would be available for future use by LEA personnel participating in project evaluations.

Subsequent Activity

The State's continuing commitment to the vocational special needs evaluation system effort was demonstrated by the Division's decision to fund the University of Vermont's evaluation project for an additional two years (Fiscal Years 83 & 84). During the second year of project operation (FY 83), the State consultant for vocational special needs and the project director collaborated in: 1) scheduling and coordinating the evaluations of 11 vocational special needs projects at six regional vocational centers, and 2) identifying and training a cadre of six persons to serve as external evaluators for the local evaluations. Another outcome of the second year project was the publication of a training manual for external evaluators (Albright, 1983b).

The third and final year of the project (FY 84) is essentially intended to accomplish three objectives. First, assist the State consultants

in scheduling and coordinating the evaluation of an additional six local vocational special need projects. Second, provide training for four individuals to serve as external evaluators thereby, providing the State with a pool of 10 trained and experienced external evaluators available for local evaluations in subsequent years. Third, initiate a review of evaluation system procedures, materials and outcomes by an independent, third-party evaluation specialist. This expert review should be helpful to the state consultant in judging the efficacy of the evaluation system and to the project director in determining specific areas in need of refinement.

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Handicapped Students in Home Economics: What is the Status?

By Catherine Batsche & Toni McCarty

The Education for All Handicapped Children Act (PL 94-142) was enacted in 1975 and posed a new challenge for educators in the United States. According to this law, all handicapped persons ages 3 to 21 were entitled to a free and appropriate public education. Home economics classes at the high school and post-secondary levels became especially desirable placements for handicapped learners because the content of these classes included exploration of the knowledge and skills necessary for independent living (Babich & Thompson, 1983). "Through the study of home economics, the learner...becomes increasingly independent in satisfying needs and wants through coping with the near environment" (Halchin, 1976). The opportunities afforded through home economics curricula are highly compatible with the "least restrictive environment" goal (commonly referred to as mainstreaming) of PL 94-142.

Teachers of home economics had served students with special needs long before PL 94-142 mandated such practice. Special populations had been a focus of the Vocational Education Amendments since 1968. Consequently, the home economics profession immediately responded to the increased emphasis given to special populations in 1975. The Home Economics Education Association published a monograph in 1975 entitled Home Economics for Students with Special Needs (Halchin, 1976). A second monograph followed in 1978 entitled The Handicapped: Our Mission (Redick & Lazzell, 1978). In 1980, The Illinois Teacher of Home Economics devoted an entire issue to "Visions and Decisions for the 80's: The education and rehabilitation of handicapped persons." Issues addressed by home economists included teacher inservice (Gibbons, 1980), curriculum adaptation (Redick, 1980), special curriculum (Blankenship, 1980), support services (Clements, 1980), and accessibility (Guthrie, 1980).

The issue of support services was particularly important to home economics teachers. Handicapped students who were placed in regular classes were entitled to receive the support services necessary to increase their probability of successful participation. It was reported that support services had not previously been provided to help handicapped students enrolled in voca-

tional classes (Jensen & Schaefer, 1978; Taylor & Gill, 1979). As a result, teachers felt that regular class placement was often a disservice to handicapped learners, non-disabled learners, and to themselves as teachers.

The magnitude of the problem required each state to address the issue of special populations on a large scale basis. Most states redirected their funding to encourage the development of exemplary programs and special projects (Batsche, 1980; Lake, 1977). Thus far, much effort has been expended to maximize opportunities for handicapped individuals and it is now appropriate to determine the impact of these efforts. The purpose of this article is to examine the enrollment status of handicapped students in home economics programs and to determine if additional support services are being provided to these students.

Methodology

Subjects

The subjects were 1,211 teachers of home economics in the state of Illinois. Of the 1,211 teachers, 1,077 taught in high schools, 64 taught in area vocational centers, and 59 taught in community colleges. Eleven (11) teachers employed in state agencies (corrections and mental health) were excluded from the study.

Data Collection

Data were collected from 703 local education agencies in Illinois that participated in an on-site program evaluation conducted by the Illinois State Board of Education during the five year period FY 79 through FY 83. This time period corresponds to the five year period since the implementation date of PL 94-142 (September 1, 1978). All vocational home economics faculty were asked to complete a survey prior to the on-site evaluation of local vocational programs. The results of the survey were submitted to data analysis at the University of Illinois and were further analyzed by the authors at Illinois State University.

The survey included 29 questions, four of which were relevant to the present study:

1. Do you have students in your class who are handicapped?
2. Are additional services provided to handicapped students in your class?
3. Are handicapped students encouraged to enroll in vocational classes?
4. Are you involved in the development of the vocational component of the Individualized Education Program (IEP) for handicapped students?

The data were analyzed in three categories. First, the responses for each question were con-

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verted to percentages for each of the five years (Total). Second, the raw data were divided into categories dependent upon the size of the agency in which the teacher was employed (Size):

- small high school (up to 499 students)
- medium high school (500-1,999 students)
- large high school (over 2,000 students)

Third, the data were divided into categories dependent upon the type of agency in which the teacher was employed (Type):

- high school (unit or dual district)
- area vocational center
- community college

The responses to questions 1 and 2 were submitted to an analysis of variance to determine if there were significant differences in the number of teachers who reported that handicapped students were enrolled in their classes (H) and the number of teachers who reported that additional services were provided to handicapped students enrolled in classes (H SERVE).

Results

The majority of home economics teachers (72.7%) reported that handicapped students were enrolled in their classes. Conversely, 27.3% of the teachers reported that they did not have handicapped students in their classes. During the last three years of data collection, the category 'uncertain' was added to the responses. Twelve percent (12%) of the teachers indicated that they were uncertain if handicapped students were enrolled in home economics classes during this three year period.

Although the majority of home economics teachers (60.5%) reported that additional services were provided to handicapped students, 25.2% were uncertain if additional services were provided and 14.4% indicated that no additional services were provided.

No significant differences were found in the number of teachers who reported having handicapped students in their classes (H) and the number of teachers who reported that additional services were provided to handicapped students (H SERVE) at small and at large high schools. The analysis of variance for H and H SERVE approached significance for medium schools ($p < .10$) but did not reach statistical significance. When the data were subdivided by type of agency, no significant differences were found between H and H SERVE at the high school, area vocational center, or community college levels.

The question "Do you encourage enrollment of handicapped students in your classes?" was included on the survey for only two of the five years. Therefore, the data analysis was limited to the two reported years. Only 6.25% of the home economics teachers reported that they did not encourage enrollment of handicapped students; 93.75% responded affirmatively.

Beginning in FY 83, a question was added to the faculty survey regarding the involvement of vocational teachers in the development of the IEP. Relatively few home economics teachers reported that they were involved in the IEP process. Only 10.7% of the home economics teachers reported extensive involvement in the IEP process. Forty-one percent (41.0%) reported moderate involvement and 47.7% reported no involvement at all. When the data was analyzed by school size, it was found that 69.9% of the teachers at small schools, 46.9%

of the teachers at medium size schools, and 45.0% of the teachers at large schools had no involvement in the development of the vocational components of the IEP.

Discussion

The data suggest that the mainstreaming emphasis of PL 94-142 has to a large degree, been achieved in home economics programs. Handicapped students are reported to be enrolled in home economics classes by nearly three-quarters of the teachers in Illinois. However, the provision of additional services is reported by a lower percentage of teachers. The discrepancy in H and H SERVE is not dependent on the size of school district or the type of agency. However, the five year data indicate that approximately 40% of the teachers reported no additional support services were available or that they were not aware if additional services were being provided (see Table 1). This response is contrary to the intent of PL 94-142.

Table 1
Comparison of H and H SERVE by
Home Economics Teachers
Yes Response

Year	H		H SERVE	
	N	%	N	%
1982-83	162	72.3	149	66.2
1981-82	105	71.4	100	69.2
1980-81	199	70.6	178	64.3
1979-80	200	66.4	173	53.4
1978-79	189	73.5	154	55.4
	855	72.7	754	60.5

The situation is complicated by the fact that home economics teachers have largely been ignored in the IEP process. The IEP is designed to be the vehicle used to specify support services needed by handicapped students. It is therefore not surprising that home economics teachers report a support service discrepancy. The need for such services must be specified in the IEP and, unfortunately, the home economics teacher has typically not been included in this process. Although the law does not require the presence of all of the student's teachers at the IEP meeting itself, the goals, objectives, and support services must be communicated for all classes in which the student needs assistance.

Conclusions and Recommendations

The results of this study suggest that home economics teachers are to be commended for their affirmative response to the mainstreaming challenge. The data collected in this study, although limited to the state of Illinois, support the belief that home economics teachers have taken their mission to serve handicapped students seriously (Redick & Lazzell, 1978). However, the refinement and expansion of this practice to meet the full intent of the law has yet to be realized. Much of this responsibility cannot be placed solely with the home economics teacher. The education of handicapped students requires the cooperative efforts of special education teachers and administrators as well as home economics

teachers. A logical and necessary starting point for the expansion of support services must be with the involvement of home economics teachers in the IEP process. Home economics teachers should aggressively seek out the opportunity to participate in the IEP process. The teacher should be prepared to specify:

1. the long-range goals and short-term objectives for the handicapped student in the home economics class and
2. the additional services needed to support the handicapped student's participation in the class.

Although home economics teachers have established a base for serving handicapped students, the 'mission for the eighties' will be incomplete until all handicapped students are appropriately mainstreamed and provided adequate support services. This mission continues to be a challenge of the eighties.

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Training a Rural Community Service Staff in Individualizing Program Planning for Severely Handicapped Vocational Clients

By Robert Fox and Anthony F. Rotatori

In the last ten years, a number of alternatives (e.g., foster homes, group homes, half-way houses) to large public institutions have developed for providing services for severely handicapped individuals. This trend is partially the result of the normalization philosophy (Bank-Mikkelsen, 1976; Wolfensberger, 1972) and recent court decisions (Pennhurst, 1977) which favor the expedient release and moving of institutionalized handicapped individuals into the community. Frequently, these individuals have significant deficits in functional living and vocational skills which result in an early return to their former institutional residences. The latter may be prevented if communities develop service delivery systems which emphasize skill training in specific functional living and vocational areas required for successful transition and maintenance of these severely handicapped individuals in the community. Such a system must include training procedures such as individualized planning and behavior modification.

Currently, little research is available to guide the practitioner in developing and implementing training programs in behavior modification for the severely handicapped vocational client. Research has tended to examine the specific components of the teaching situation such as the differential effects of role playing, lectures (Garner, 1972), films, videotape feedback (Panyan & Patterson, 1973) and supervisors' feedback (Panyan, Boozer & Monis, 1970) on staff members' ability to acquire and apply the principles of learning. Also, many inservice programs include behavior modification (Panyan & Patterson, 1973). Integration of research within a staff training model, and the extension of such a model to a rural community setting has not been reported.

The present paper describes an intensive 12-week inservice program in Individualized Program Planning with 36 staff members from five day-care (nonmedical) programs which provide services for approximately 160 developmentally disabled adults. Although a range of individuals were represented in these programs, the majority were moderately to severely retarded (AAMD Classification; Grossman, 1977); chronological ages were between eighteen and sixty. The living arrangements for these

individuals included their parents' homes, adult foster care, group and nursing homes. Services provided by the day-care programs varied according to the orientation of the individual program administrators and the population. However, content areas such as acquisition of work skills and on-the-job training, development of social and self-help skills, functional academics, community adjustment and leisure-time activity were represented in all of the programs. The five day care centers serve five counties, respectively, in northwestern Wisconsin. This is a rural region of 9,000 square miles and has a total population of approximately 100,000. Both administrative and contact staff were involved in this project. Attendance and participation in the inservice was requested by the regional Developmental Disabilities administrator and his Board of Directors. The training included teaching and on-site consultation.

Teaching

Three-hour class sessions were held each week on Friday mornings in the most centrally located program. Each participant received a copy of Whaley and Malott's book, Elementary principles of behavior. The content was divided into four areas: learning principles, functional analysis of behavior, teaching new behaviors and procedures for establishing Individualized Program Planning. Three weeks were devoted to each segment.

The first segment, learning principles, introduced the behavioral model which included defining behavior(s), identifying reinforcers, learning the basic behavioral procedures, i.e., positive reinforcement, negative reinforcement, punishment, extinction and time out from positive reinforcement. The second segment, functional analysis of behavior, covered measuring behavior, including various observational, recording and graphing methods and writing short/long-term behavioral objectives. The third segment, teaching new behavior, covered the following topics: shaping, forward/backward chaining, task analysis, modeling and instructional learning. The fourth segment, procedures for establishing individualized program planning, provided a framework which enabled staff to select content objectives and task-appropriate instructional tactics for a given individual. The Minnesota Developmental Programming System was also introduced at this time to: (a) assist the staff in determining behavioral objectives for a given individual's individualized program planning and (b) provide the basis for program-wide accountability. Briefly, the system provides a manual of 18

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behavioral scales each developmentally sequenced along a continuum of dependence to independence. These scales generate specific information about functional skills, ranging from simple eating skills to more complex community orientation skills for the severely handicapped population. The items on the behavioral scales were designed to be used as behavioral objectives for individual planning. The system was especially useful in that it quickly pinpointed a client's deficits, was easy to administer and functioned as a measure of individual progress over time.

A variety of teaching modalities were employed during the inservice. An attempt was made to incorporate relevant research. For example, Gardner (1972) found that a lecture format was superior to role playing for teaching behavior modification principles while role playing was more effective for teaching application of skills. Consequently, the first segment of the course primarily used lectures. During the last three, role playing and other modeling experiences were emphasized. The use of modeling was especially helpful in teaching techniques of behavioral measurement and for demonstrating various applications of the learning principles.

Consultation

Nine hours of on-site consultation time was provided by a leader each week. This time was divided into three-hour periods. Thus, each of the five programs received three hours of consultation every two weeks. The consultations functioned as the generalization component of the inservice.

Initially, each participant selected one client to work with throughout the 12-week program. During the first segment, homework assignments were given to provide relatively immediate application. For example, one early assignment required the participant to identify simple behaviors of their chosen client along with the learning principle(s) believed responsible for maintaining those behaviors. As the program progressed, each participant was required to design and implement an individualized program plan for their client. This plan involved: (a) an overall assessment of the client's skills using the Minnesota Developmental Programming System, (b) identifying one behavior that needed change or a skill which was needed, (c) measuring the designated behavior to obtain a baseline, (d) writing an instructional plan including short and long-term objectives, (e) implementing the plan and (f) charting progress. At the end, an evaluation of the results and reasons for success or failure were required. To insure a good first experience with the training materials, the leader approved programs prior to implementation. Simple behavioral change programs were favored over more elaborate ones. Typical programs developed by the participants included: reducing frequency of temper tantrum behavior, teaching number recognition and increasing 'time-on-task' behaviors, e.g., drill press operation, rug hooking. Time was allowed for participants to discuss their problems with the inservice materials. The individual IPPs and results of the class projects were presented by the participants during the last meeting.

Results

Cuff (1977) noted that although there was an

increased frequency of short-term instructional courses in behavior modification, few had been evaluated with respect to their effectiveness. Three evaluation measures were used during this inservice project. Weekly quizzes were given at the end of each class session to determine the amount of immediate learning and to identify concepts to be clarified. These quizzes were usually composed of 10 objective questions which were corrected and returned the following week for discussion. The scores obtained on the quizzes did not enter into the final grade but were designed to give the participants a measure of progress.

Two comprehensive criterion-referenced exams were used to assess the effectiveness of the training. An 80% criterion was established for successful completion of the program. These examinations, given at the end of segment 1 and 4, were objective in nature. The results of these two evaluations are summarized in Table 1.

Table 1
Percentage Scores of Criterion Referenced Exams

Measure	Total	Range	Mean	S.D.
Exam I	74	78-100	92.7	5.8
Exam II	83	77-100	90.8	7.8
M Accumulated Score	157	81-100	92.1	9.2

The third evaluative measure involved participants' presentations. The general consensus was that the projects had been a successful approach for helping the participants acquire practical experience with the classroom materials. Most participants indicated that their clients' behavior had changed in the desired direction, i.e., toward the objectives. These presentations generated discussion about problems associated with designing and implementing Individualized Program Plans for the severely handicapped and suggestions for remediation.

Follow-up

The regional developmental disabilities administrator assigned two Ph.D. psychologists to consultant to programs upon termination of the training. This consultation and monitoring of the system was conducted within each program on a monthly basis.

Sixteen months after initiation of the training, the regional administrator, the two consulting psychologists and four of the day-services administrators reviewed the status of the system and overall effects of the training upon functions.

The four administrators indicated that they were continuing to: (1) use the data collection method established during the training program to formulate and monitor individualized programs, (2) use the assessment tool to pinpoint skills which required training, and (3) educate new staff in individualized planning and the learning principles.

All four administrators felt that having the on-site consultation/training session coupled with

the presentations was an extremely important component in successful transfer of learned skills. A need for an intensive training package for new staff members was indicated.

Discussion

The inservice was well received by the participants. The on-site consultation sessions combined with the establishment of individual program plans and class projects appeared to be a crucial component of the inservice. These sessions provided an opportunity for the participants to challenge the learning materials and to experience with supervision, the plethora of problems involved in applying learning principles in the natural setting. Approving only simple class projects insured immediate success in applying the learning principles.

The MDPS provided an excellent format for developing a sound accountability system in programs previously lacking this quality. Other systems such as Developmental Pinpoints (Cohen, Gross & Haring, 1976), the TARC System (Sailor & Mix, 1975) and the AAMD Adaptive Behavior Scale (Nihira, Foster, Shellhaas & Leland, 1974) would also be useful for establishing IPPs for the severely handicapped vocational client. The duration of this inservice may be too long for many programs. However, the teaching model involving classroom, consultation and generalization experiences should be a useful strategy for staff training programs regardless of their intensity.

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Accommodating the Handicapped Student in Rural Industrial and Vocational Education Programs

By Kenneth Bruwelheide

Public Law 94-142, The Education for All Handicapped Children Act of 1975, represents the efforts of educators, parents, and legislators to solidify a comprehensive bill regarding the education of handicapped children. This landmark legislation, which involved a decade of extensive political maneuvering, assures by federal mandate that all handicapped children have available to them a 'free appropriate' public education. Specifically, PL 94-142 secured in federal law provisions that special needs children and their parents had been seeking: that handicapped children be educated with nonhandicapped children to the maximum extent possible and that an Individualized Education Program (IEP) be developed and implemented for each handicapped child. In total, the Education for All Handicapped Children Act is a very extensive law which provides numerous procedural guidelines designed to bring state education agencies into compliance with these new standards.

Today, handicapped students enroll in industrial and vocational education courses for the same reasons as nonhandicapped students, that is to prepare themselves for careers in our technological society.

The major component arising from this legislation has been the 'least-restrictive environment' concept, which is designed to assure the most appropriate educational placement of special-needs students. Today, handicapped students enroll in industrial and vocational education courses for the same reasons as nonhandicapped students, that is to prepare themselves for careers in our technological society. The educational objectives and expectations planned for these mainstreamed students should not be significantly different from those of the other students. The actual implementation needed to integrate mainstreaming, however, requires careful planning and skillful administration directed at each vocational program's objectives. Furthermore, the procedural guidelines of PL 94-142 are subject to different interpretations by the various state and local education agencies as well as by the federal government.

In other words, a school district may perceive itself to be in compliance with

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the law, but the Federal Office of Special Education and the states' Office of Public Instruction may determine a local school district to be deficient in compliance (Harrington, 1983).

It is an important concern, therefore, to determine the extent of understanding of the law at the local level in order to facilitate its implementation.

The rural school setting poses an entirely different set of planning and delivery considerations for educating the handicapped.

Rural School settings

The rural school setting poses an entirely different set of planning and delivery considerations for educating the handicapped. Rural districts attempting to accommodate the handicapped student, particularly in the industrial and vocational education setting must account for:

- a. Proportionately smaller handicapped student population than urban districts.
- b. Few district specialists.
- c. Limited budgets.
- d. Great distances to special services.

Research studies conducted across the country (Cameren, 1975; Fair, 1976; Hughes, 1978) address program planning, barrier identification and needs assessment procedures to assist in accommodating the handicapped student in industrial and vocational education programs. An accurate picture of current resources and services available to rural industrial and vocational education teachers is needed before appropriate plans for educating the handicapped student can be made.

In order to provide information for vocational special-needs planning for rural school districts, an educational survey was conducted in Montana. The sample was comprised of secondary industrial and vocational education teachers and administrators of those programs. It is felt that information concerning rural education in Montana will be pertinent to similar populations in other states.

The study represented 247 industrial and vocational education programs and 156 administrators of those programs. Program teachers and administrators of those programs were asked to respond to the same questionnaire. Information was then analyzed to determine if administrator and teacher perceptions concerning the accommodation of handicapped students were the same. This information was used by the State Office of Public Instruction and the primary industrial and voca-

tional education teacher training institution for future preservice and inservice program planning.

Rural Program Characteristics

Of the schools surveyed, it was shown that 6% of the industrial and vocational education program enrollment was identified as being handicapped. This statement contrasts with the observation of Allen Phelps that "nationally, the handicapped comprise less than 1.7% of student enrollment during the 1974-75 school year" (1978). It was also revealed that only 5% of the programs responding had a separate advisory committee established for vocational special-needs. The most common handicapping category was that of Learning Disabled (61.5%) which was also noted as being the easiest to accommodate in instructional programs.

It was noted that the smallest handicapping characteristic represented was multi-handicapped, less than 1%. This was the category that teachers and administrators felt would also be the most difficult to accommodate.

When asked about program characteristics, both teachers and administrators felt that programs could best be helped by increasing funds and decreasing enrollment. It was also indicated that handicapped student enrollment could be increased by 50% with minor equipment and program modifications. When asked to prioritize services needed to increase the accommodation of handicapped students, both teacher and administrator groups concurred. The top five needed services are:

1. Increased funding--primarily for program modification.
2. Additional preservice preparation at the college level.
3. Increased liaison support such as coordination between special education teachers, physical therapists, and vocational educators.
4. Modification of facilities and equipment.
5. Additional instructional assistance in the form of teacher aids (Harrington, 1983).

The Individualized Education Program (IEP) was viewed as a necessary evil but program students with IEP's varied from 19% to 30%. Between 11% and 33% of the individual students had teacher participation throughout the IEP process. An important fact is that 47.5% of the teachers had no involvement in the IEP process in any fashion.

The most noted resource available to administrators and teachers was the resource room special education teacher, followed by learning specialists. This may be an indication of the rural setting as often these personnel fulfill most special education professional responsibilities due to the lack of other technical staff.

Teacher Characteristics

It is important to note the level of professional teacher preparation of those working with the handicapped in rural settings. An average of 48% of the industrial and vocational education teachers surveyed had received limited professional coursework in Special Education. Of this group of teachers, 30% had completed undergraduate

coursework and 13% had participated in an inservice education program for special needs sponsored by either a university or college, school district or the State Office of Public Instruction.

An index closely related to inservice activities is previous contact or work experience with handicapped individuals. The data noted that 60% of the industrial education teachers and 52% of vocational teachers reported previous experience working with handicapped individuals. Forty-six percent (46%) of the industrial education teachers and 38% of the vocational teachers indicated that secondary education was the most prevalent organizational setting for this experience.

Summary

The rural school setting presents a host of specialized educational planning characteristics. Vocational education programs and in particular those programs attempting to accommodate the handicapped student share two major problem areas:

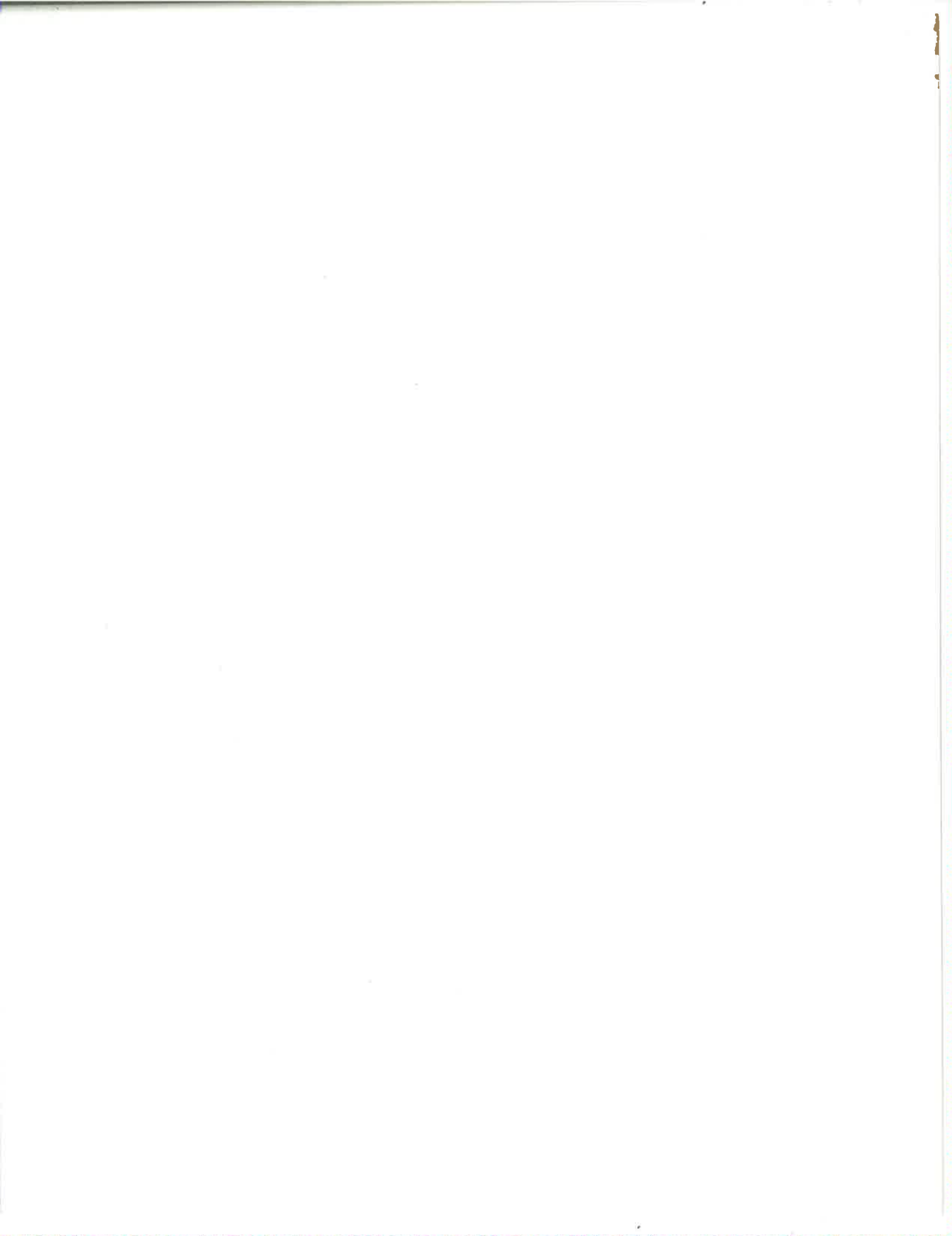
- a. The development of pertinent state-of-the-art vocational education programs in a locale that may be a great distance from resources and perhaps jobs.
- b. The accommodation of limited numbers of special students in a school system that may be lacking all of the special education staff and support services afforded a more urban setting.

Rural school accommodation of the special-needs students has come a long way in recent years. However, there is still a long way to go.

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