DOCUMENT RESUME

ED 139 178 EC 100 753

AUTHOR Cook, Paul F.
TITLE Research and Development Recommendations Related to Vocational Training and Placement of the Severely Handicapped and Mainstreaming Handicapped Students Into Vocational Training Programs.
PUB DATE Apr 77
NOTE 16p.; Paper presented at the Annual International Convention, The Council for Exceptional Children (55th, Atlanta, Georgia, April 11-15, 1977)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Exceptional Child Research; *Handicapped; *Job Placement; *Needs Assessment; *Regular Class Placement; *Severely Handicapped; Vocational Development; *Vocational Education

ABSTRACT

Summarized are some research and development recommendations for opening new jobs for severely handicapped persons and improving the broader aspect of personal satisfaction and life-quality related to both severely handicapped and less handicapped individuals. (Author/IM)

RESEARCH AND DEVELOPMENT RECOMMENDATIONS RELATED TO VOCATIONAL TRAINING AND PLACEMENT OF THE SEVERELY HANDICAPPED AND MAINSTREAMING HANDICAPPED STUDENTS INTO VOCATIONAL TRAINING PROGRAMS

Paul F. Cook

The purpose of this paper is to discuss the research and development needs identified from two AIR projects which were described in Dr. Dahl's paper. These two USOE funded projects are the Vocational Training and Placement of the Severely Handicapped project (VOTAP) and Overcoming Barriers to Mainstreaming project. I will first describe the major data sources for the recommendations; next I will describe the research and development recommendations for vocational training and placement of the severely handicapped individuals; and finally, I will describe research and development recommendations for mainstreaming handicapped persons into vocational training programs.

Major data sources for the recommendations which follow were literature reviews, a national survey of 300 programs serving the severely handicapped, and the conclusions of two national advisory panels to the projects. The VOTAP project developed an annotated bibliography of approximately 250 documents dated from 1965 to 1977 related to vocational training and placement for severely handicapped people. The material was drawn from a computerized search of resources in Education, Current Index to Journals in Education, Exceptional Child Education, American Psychological Association Abstracts, and abstracts of Instructional and Research materials. Needs and recommendations culled from this literature search as well as from documents which became available after the search was completed were identified. In the VOTAP survey AIR asked 1,043 directors and experts in universities, federal agencies, regional educational laboratories, research and development laboratories, and state departments of rehabilitation to nominate training programs and placement services which were considered to be particularly effective or innovative. The criteria for effectiveness or innovativeness were left largely to the choice of the nominator. From

these nominations, programs were selected on the basis of their geographical region, the type of training or placement service provided, public or private institutional status, number of clients served, rural or urban setting, and the type of severely handicapped person served. A total of 300 programs were surveyed and 55 percent of them responded. Survey information served two major purposes. First, program descriptions were written from the survey data and are included in the second VOTAP handbook, Vocational Training Programs and Placement Services for the Severely Handicapped. Second, the survey information was used to identify research and development needs. Questions on these forms directed toward research and development needs included: 1) in what training or job areas do you see potential for innovations in training the severely handicapped?; 2) what new or innovative techniques do you feel will broaden the range of skills in which the severely handicapped can be trained?; 3) what do you consider to be the most innovative or successful aspects of your training program?; 4) please identify two or three aspects of your placement activities that you feel to be particularly effective or innovative? In addition a needs section in the form asked respondents to rate 26 areas in which they felt improvement was most needed for the programs to function effectively. A variety of needs was covered in these sections.

In the Mainstreaming Project AIR conducted a survey of 60 vocational administrators, teachers, counselors, and placement specialists to determine their view of the practical barriers to mainstreaming handicapped persons into vocational training programs.

The final data source for the recommendations in this paper came from two panels AIR convened to advise on the AIR projects. The 12-member VOTAP panel met in San Francisco in August of 1976 to specifically identify research and development needs related to the vocational training and placement of the severely handicapped. The six-member Mainstreaming panel met in October 1976 in Palo Alto. One of the purposes of that panel meeting was to consider research and development recommendations related to mainstreaming handicapped students into vocational training programs. Our conclusions regarding these recommendations will be found in the VOTAP monograph entitled Research and Development Activities for the Occupational Development of the Severely Handicapped and in the Mainstreaming book being produced in Dr. Dahl's project entitled Mainstreaming

Handicapped Students: A Practical Guide for Vocational Educators. The VOTAP Monograph will be delivered to BEH at the end of June. Final dissemination of this monograph has not yet been determined. We are in the process of soliciting publisher interest and involvement. The mainstreaming book is being drafted with the expectation that it will be published and available approximately December of this year. The recommendations which follow are a summary of those contained in these two books. Research and development recommendations include basic and applied research, product development, services, development, evaluation, and dissemination.

The first set of research and development recommendations is related to vocational training, placement, and maintenance of the severely handicapped individuals. The essential objective of these recommendations is to open more of the job market for the severely/profoundly handicapped. Three main threads can be seen to draw together the main research priority areas that should be addressed by researchers interested in this field. The first thread is the need to make impact on the controllers of the job market. The second thread concerns the development of the technical resources to enable the severely/profoundly handicapped to train for and to do work. And the third major thread is the need to demonstrate effective practices and to disseminate information about these practices as widely as possible.

Regarding impact on the controllers of the job market, there are three problem areas that need immediate attention. The first is changing public attitudes toward the severely handicapped. Public attitudes are now stereotypic and discriminatory. A second immediate concern is the involvement of business, labor, and industrial personnel in programming for the severely handicapped. This is seen as key not only to the establishment of relevant training but as the main vehicle by which handicapped personnel can be placed on the job in competitive employment. The third need is for coordination of community resources. Programs serving the severely and profoundly handicapped are not working as effectively as they could if they were coordinated into interagency systems with delineated roles supportive of that system.

Regarding the second thread of technical feasibility, there is a need for a breakthrough of a technical nature to prepare severely handicapped persons for

the job market. Within this thread there are two basic areas of concern. First continued research needs to be directed toward the development of improved instructional techniques; more powerful and efficient instructional methods need to be devised to prepare the handicapped for work. Second, attention needs to be given to the adaptation of jobs in competitive employment to meet the needs of the severely handicapped. Job redesign, environmental redesign, and keeping up with technology of aids and devices is a high priority concern.

The last major thread is demonstration and dissemination of effective methods and techniques. There is a pressing need for effective programming prctices to be developed, identified, and evaluated for effectiveness. Once procedures have passed rigorous evaluation criteria they need to be attractively packaged and disseminated utilizing the most modern, efficient methods available.

The following more specific recommendations are only a sample of the ones developed in the VOTAP project. Time does not permit detailing them all. These recommendations are taken from topical heading: Educational Programming, Occupational Independence, Social-Emotional Adjustment, and Physical Accommodation. We are defining programming here as any planned sequence of activities formalized in the community that are designed to enhance vocational training, occupational placement, and occupational maintenance of handicapped persons in the working world. It refers to a community system of services and opportunities for handicapped persons as well as to the specific activities undertaken by a single institution.

First, better information systems are required that assure that all handicapped persons are identified and are aware of services that are available. These systems should provide information to handicapped persons or guardians, provide training if required in locating services, provide counseling to help the handicapped person explore potential resources in the community, and provide advocacy for the handicapped person in making contact with the resources that are available. Such services should include the development of an ombudsman or advocate service to allow the individual to use all resources information in the system that may be available. The role of such an advocate should be investigated. At what point in the education of a handicapped person should the advocate be active?

Who are the most likely persons to be effective advocates? Under what circumstances is advocacy beneficial? And under what circumstances is it a non-productive role?

Consideration should be given to the development of a national information exchange system or clearinghouse that collects, catalogues, and retrieves information about services for handicapped persons. In addition to processing information the system should be capable of interacting with the user to tailor the information directly for his needs. Computerized career information systems that relate career opportunities with individual interests, attitudes, personal preferences, and in turn with program services, advocates, and so forth may be an appropriate pattern for such a new system to emulate.

There is a need to develop model systems that organize the total resources with a community, both present and potential, in order to coordinate appropriate services. Such collaboration should evaluate the extent to which it is desirable for programs that are now duplicating services to delineate and to separate their roles so they are working in a cooperative mode. The extent to which roles for business, labor, and industry as well as the various helping agencies and voluntary agencies which can be delineated in this system should be investigated. Effective practices should be identified and disseminated.

There is a need to develop improved evaluation devices that are more fair and less discriminatory to handicapped persons, particularly when these devices are used for selection into training programs or job placement. Many instruments in use are not convincing measures of severely handicapped persons' skills. There is a need to develop more sophisticated instruments to predict the success of handicapped persons in potential careers. One area of investigation may be the extent to which evaluation instruments can predict success of a handicapped person once the essential barriers to better performance caused by the handicapping condition have been removed. For example, if a person is faced with a communication barrier because of blindness, poor speech, deafness, or a combination of these disabilities, what performance would be expected given that these barriers were managed by the use of appropriate communication devices, an alteration in the work environment, or a modification of the job requirements. These devices should do more than match workers to jobs. They should suggest possible options when the handicapped person is augmented with an appropriate aid or the job is reengineered.

Practitioners express the need for assessment devices that evaluate all relevant training areas, that is, self-care, psychological status, medical status, socio/emotional adjustment, and cultural factors as well as vocational development. Particular stress has been placed on the development of instruments to assess independent living and prevocational skills.

There is a need to develop program evaluation models to measure program impact and to identify specific practices which can be disseminated to other program settings. Evaluation models are needed which deal with the global and diverse nature of programs serving the severely handicapped and which are adaptable to the real world flexibility which must be maintained in these programs. In addition, to be truly practical, such models should be easily implemented by relatively unsophisticated staff members and be as economical in the consumption of personal and financial resources as possible. A central collection of research data regarding the characteristics of successful programs would be useful to practitioners once effectiveness has been demonstrated and established. It would be useful to disseminate these practices as widely as possible.

Research would be desirable which clarified the goals and aspirations of severely handicapped persons. It should be determined what they need and want to improve their life quality and sense of personal fulfillment. These needs and wants should be translated into training programs where actual competencies are addressed relevant to the goals of handicapped students and to the job market. If obtaining competitive employment is the major goal of a handicapped person, programming which utilizes task analysis of potential jobs needs to be improved. If sheltered work is the goal for the person, there is a need to develop services which increase the variety and work available in the sheltered workshops.

Developing appropriate curricula and increasing the power and efficiency of instructional methods in programming continues to be an important research and development need. Basic research and instructional techniques which show promise are particularly required for handicapped persons who find learning difficult. Examples of effective research toward this need have been the precision task analysis and behavior modification techniques used by Gold and Bellamy. Other

techniques which need development are using nonverbal media for persons with communication disorders, the adaptation of mastery learning concepts applied to programming for severely handicapped persons, the use of automated instructional devices, or procedures, the use of peer tutors, and the use of systems approaches to curriculum goal setting, strategy development, and evaluation of progress toward expected student outcomes.

More information is needed about the effectiveness of the vocational education practice of clustering vocational training so that systems of gaining information and generalizing skills are taught that can be transferred into a variety of potential job situations. More information is required to identify effective practices that utilize business, labor, and industry in the instructional programming process. Effectiveness should be determined by rigorous evaluation procedures and information about effective programs or practices should be widely disseminated.

Many practitioners believe that the transferability of vocational training into the working world would be improved by increasing the extent to which business, labor, and industry is involved in instructing the severely handicapped. There are a number of models already available which need to be evaluated for effectiveness and then disseminated.

Parents are often not involved in providing services for their children, or parental participation is less effective than it should be. To what extent is family involvement in the intervention process desirable? Where it is desirable, models for maximizing parent and family involvement should be developed and disseminated.

To what extent can career education concepts be infused into program curricula for severely handicapped persons? Such concepts include career awareness, self-exploration, career exploration, decision making, problem solving related to choosing an occupation, and the development of consumer and survival skills.

Career guidance models which utilize methodology developed in career guidance programs for nonhandicapped need greater development. Such models should concentrate on helping the handicapped person gain access to as many occupational options as possible.

While most program directors gave strong endorsement to their staff, a few expressed disappointment with the performance. The main problem appears to be that staff do not possess a sufficient mix of vocational education and special education backgrounds and training. Additionally there is pointed up the need for personnel with industrial, business, engineering, and management experience. Universities need to give additional attention to training personnel to work in programs serving the severely handicapped. The variety of skills required by a good severely /profoundly handicapped program is broad, indeed. Instructional preservice programs should include applicable concepts from vocational education, special education, rehabilitation, and business management. Students of these programs need to acquire a variety of skills, including knowing how to recognize and deal with students with special learning needs, how to conduct evaluation of handicapped persons, how to select and adjust instructional materials and training environments to meet the special needs of the handicapped persons, how to provide career education and occupational guidance, how to provide appropriate vocational skill development, how to perform job and task analysis, how to design curricula including infusing career education concepts into the curricula, how to carry out program evaluation, how to undertake appropriate job and market surveys to determine occupations that are available for severely handicapped persons, how to run a business, and how to work with the community. Students in these programs should become fairly well acquainted with the research literature to enable them to integrate the findings of research into programming methods and to bridge the undesirably large gap between research knowledge and the application of research knowledge to programming practice.

Programming models need to be identified which emphasize multidisciplinary team approaches to vocational training and placement of handicapped persons. Such models may emphasize the use of rehabilitation counselors, social workers, vocational instructors, and support personnel coupled with an available mix of employers. Such models should focus on how these various specialists can best work together, share expertise with one another, and how conflict between treatment philosophies can be resolved.

Sufficient attention should be given to practitioners already in the field who lack appropriate skills or whose skills could be improved by inservice training. Better and more effective methods of inservice training need to be

devised which maximize the benefits of traditional preservice and inservice programs and minimize their problems. Preservice programs are often theoretical and far removed from the actual working conditions that the student is likely to encounter. Training models are required that allow the practitioner to be involved in the solution of real programming problems and at the same time provide the resources required to supply information, ideas, and make creative solutions to these problems.

Handicapped persons are often unable to move directly into a working environment from a training environment. Transitional programs or services are needed to smooth this transfer. While most programs serving the handicapped provide some type of training program, the variety and quality of such experiences vary a great deal. Many practitioners believe that any transitional link between the training facility or agency program in the community is beneficial. Model programs that demonstrate how such services can be organized and the methods used to deliver services should be identified. Examples of techniques that need more investigation are on-the-job training, industrializing the training institution to create an environment of work, establishing classrooms within selected industries, investigation of the effects of payment or nonpayment for work performed during training or apprenticeship, and varying the variety and expertise of support staff required to establish such programs.

An ultimate model for investigation would be to encourage business or industry to take full responsibility for developing a program of services for handicapped persons. Is it feasible within the American free enterprise system, given business, industry, and labor expectations, to assume that private industry should undertake the development of the programs for handicapped persons, and what incentives would be adequate or effective in getting them to do this?

The next recomendations relate to occupational independence. What can be done to alter public attitudes toward greater acceptance of the handicapped in the work place? The most effective procedures for altering public attitudes toward the handicapped need to be identified, and how-to packages describing these procedures needs to be disseminated. The representation of handicapped people as full participants in society needs to be encouraged in textbooks and other classroom materials. The types of information need to be determined that

are most effective in influencing those who control the labor market to open opportunities to the severely handicapped. The specific types of attitudes need to be identified that work against employment of the handicapped and the pervasiveness and seriousness of these attitudes need to be determined. Strategies keyed to each type of attitude needs to be developed. The effect of various types of contacts between handicapped and nonhandicapped needs to be determined. These results need to be used to develop models for successful integration of the handicapped into the school and work force.

Any job is composed of a variety of tasks of varying degrees of difficulty. An individual may be unable to secure or to succeed once the job is secured because of an inability to perform a few of the many tasks required. Handicapped persons may face similar or different difficulties in this regard than do non-handicapped workers. Task analysis is a well developed technique for identifying what must be done on the job. Research could be undertaken to determine ways in which basic task analysis procedures can best be elaborated to identify aspects of the job or work environment likely to prove troublesome to handicapped people. Such research may include the specification of aspects of the job or work environment that may cause particular trouble for persons with various handicapping conditions; procedures to carry out and determine that such problems exist in a particular setting; and procedures for determining what various problems are with a view toward recommending jobs or work-site modifications that will eliminate the problem or reduce it to within tolerable limits.

One strategy for overcoming problems resulting from the presence of very difficult job tasks is to revise the job so that the tasks are eliminated. Research could be undertaken to determine how industrial engineering techniques can be applied to increase opportunities for handicapped workers. This is not as simple as it might appear at first blush and needs considerable investigation. In some cases, it is not practical to eliminate tasks, but it may be possible to alter the activities required to complete each task by modifying the work environment. Practical guides for eliminating various environmental hindrances so that handicapped people can perform their tasks more efficiently might be developed. Such guides can include such topics as physical plant modification, special tools for use by the handicapped, tool redesign, methods for eliminating distraction, tricks for training supervisors, and so on.

Severely handicapping conditions raise a variety of problems and barriers not experienced by the nonhandicapped person in making a satisfactory social and emotional adjustment to the world of training and work. One of the most critical of these is developing self-acceptance, accurate self-appraisal, and realistic aspirations. Low self-esteem on the part of a worker is believed to be a major cause of poor performance in training and on the job. Low self-esteem is thought to cause lower career aspirations and an inability to perform accurate self-appraisal. More information is required to identify the antecedents of self-esteem for the handicapped worker and the extent to which these differ from nonhandicapped workers. What effect do severely handicapping conditions have upon the development of self-esteem, accurate self-appraisal, and level of aspiration of the individual? What interventions can prevent the development of low self-esteem? To what extent does poor self-esteem result from such variables as over-protection, rejection by others, repeated failure, lack of encouragement and support, neglect, low expectations, lack of knowledge about handicapping conditions, and so on? To what extent can poor self-esteem be prevented by such variables as early programming, raising the expectations of the handicapped person and those working with the person, such as parents, teachers, trainers, rehabilitation personnel and employers?

Improved self-esteem can be justified in its own right as a requirement for personal satisfaction and happiness. If it is a significant barrier to employment then additional knowledge is required about where, when and how it is a barrier, and what can be done, by whom and in what situations to overcome the barrier?

Accurate self-appraisal is related to self-concept and is an important determinant of occupational choice. A basic assumption underlying the importance of accurate self-appraisal is that the individual is the key decision maker in individual occupational planning. In order to be an effective planner the individual must have reliable information sources about the working world and skill in using pertinent information. Preparation for succeeding in an occupation requires the development of the meaning of work in one's life. For those severely handicapped persons capable of self-appraisal and decision making, guidance models need to be adapted or developed. In addition, long-term research needs to be conducted into the antecedents of accurate self-appraisal for severely handicapped persons which takes into account the impact of such physical or communication barriers on self-appraisal.

Vocational and career aspirations, very important to career choice, are determined by intelligence, socio/economic status of the family, patterns of parenting, value systems of different social classes, and so on. For the severely handicapped person, the handicapping condition undoubtedly affects the level of aspiration. A poorly developed self-concept or inaccurate self-appraisal of skills leads to the development of inappropriate levels of vocational and career aspirations. Longitudinal studies are required to better understand the developmental process of career aspirations of the handicapped and how and what should be done to prevent faulty development. Emphasis should be placed on early identification and intervention because of the long-term developmental nature of levels of aspiration.

Physical barriers are a problem for a specific group of severely handicapped persons--those with orthopedic and communication disabilities. However, they can also be a problem to other groups such as those with severe mental retardation. There are problems related to self-care, obtaining aids and devices that lessen the effects of certain disabling conditions, having access to and being able to utilize prosthetic maintenance facilities, the personal use of physical facilities, and so on. I will address only one of these needs here--that of increasing the availability of special aids and devices.

A wide variety of specialized aids and devices exist that make it possible for the severely handicapped to do otherwise impossible tasks or to do more easily tasks that would otherwise present extreme difficulties. Devices run the gamut from braille calculators, machines that convert ink print to other modalities and tools with braille markings for those with blindness as one of their handicaps, to advanced prostheses and sophisticated switching systems using everything from puffing and sucking on a tube to muscular electrical potential to give control of many otherwise impossible items to those with severe impairments. If the best use is to be made of aids and devices, information about their capabilities, availability, and methods for using them must be widely disseminated and procedures must be established to assure that the individual is provided with the most appropriate item for the job to be performed. The possibility should be explored of maintaining a centralized data base containing frequently updated information about all types of aids and their availability, cost, and uses.

The data in such a base could be accessed using a computer-based retrieval system such as those now in use with ERIC and other data bases thereby allowing the user to gain the most updated information quickly. Individuals or small agencies without terminals could submit requests for information through regional centers perhaps operated as part of the existing Regional Resource Center system which could retrieve relevant information. Information about such a service could easily be made available to rehabilitation agencies and advocacy groups through existing communication channels. These organizations could then alert their clients or members to the services.

If a user is to benefit fully from a prosthesis or other aid, two conditions must be met. The device must be effective in helping the user to deal with the environment and the individual must be trained to use the device to the best effect. These conditions imply a careful analysis of the user's capabilities and limitations, the task to be performed, and of the situations in which the task is to be performed. Alterations should be made in the device if the desired results are not achieved. If this ideal situation is to be realized, rehabilitation personnel must gain sophistication in conducting the analyses of the demands to be placed on devices by particular user and environment combinations, in training the user and in assessing the success of the user in mastering the environment using the device.

Another need related to aids and devices is that these aids and devices are frequently unaffordable by handicapped persons. The frequent emphasis on placing clients has led rehabilitation agencies to concentrate on those most likely to be able to find activity in addition to savings that result in the decreased welfare support. While predicting cost trends is difficult, it can possibly be assumed that the expense of evaluating the severely handicapped person and providing a suitable aid would increase as more people demand services and as the variety and sophistication of aids increase. Cost analyses would be useful to determine the financial implications of technological advances and probable service demands. Following this analysis, economical models for providing services should be investigated. Tax reductions for employers and handicapped persons as well as direct purchase by government agencies should be among the options explored. Models of service provision should be tried out on a limited basis and the most economical and effective procedures disseminated for wide-scale adoption.

Now I shall move briefly to a discussion of research and development recommendations related to mainstreaming handicapped persons. In this discussion we will be talking about the implications for both the severely and profoundly handicapped as well as those moderate handicapping conditions. Mainstreaming is being widely touted as a method which should be helpful for the handicapped to move towards normalization. Mainstreaming is seen also as a way to deinstitutionalize severely handicapped persons. It is hoped that mainstreaming will enable handicapped persons to have all the advantages and experiences of public education programs. However, mainstreaming is not a panacea. It is not known when it is an appropriate procedure for severely handicapped persons. Models need to be developed which overcome the many barriers to mainstreaming which have traditionally been placed in the way of severely handicapped persons and which do not require severe disruption to trational classroom situations. The advantages and the disadvantages of mainstreaming need to be fully identified. Does mainstreaming reinforce or eliminate negative attitudes? Does mainstreaming deny or guarantee needed services to the handicapped person? At what age and at which training situation is mainstreaming most effective? What schedule, curriculum, and equipment modifications are essential and probable classroom changes are required to accommodate severely handicapped persons? What supplemental educational services are required? And how are these best delivered? Longitudinal research should be undertaken to demonstrate the effectiveness of mainstreaming. Legislative action such as that contained in the Education for All Handicapped Children Act of 1975 has moved in advance of research knowledge regarding the many implications of mainstreaming practice. Documentation of the implementation of such practices should be extensive. The Education for All Handicapped Children Act of 1975 will offer the opportunity for monitoring the effects of such programs on an unprecidented scale.

Models need to be developed which demonstrate cooperative arrangements between the program undertaking mainstreaming and other agencies and organizations which provide support programs and services. Research should be directed toward identification of effective models and the dissemination of model programs or particularly effective components of model programs where effectiveness can be demonstrated.

In addition to mainstreaming additional alternatives to deinstitutionalization and normalization need to be investigated. A longitudinal study or

retrospective study would be useful to identify those programming methods which are associated with severely handicapped persons who have successfully achieved a high degree of normalization and deinstitutionalization. Such an empirical study would first identify successful severely handicapped persons and then ferret out those factors which can be convincingly established as being influencial in the achievement of success.

This paper has briefly summarized some of the research and development recommendations for opening new jobs for severely handicapped and improving the broader aspect of personal satisfaction and life-quality related to both the severely handicapped and the less handicapped individuals. These are, indeed, worthy goals, and it is hoped that these research and development ideas will stimulate additional thought and activity which may lead to the achievement of these goals.