Problems encountered in vocational education mainstreaming and recommended improvements are presented in this paper. A brief history introduces the concept followed by specific definitions of "training," "education," and "mainstreaming," as applied to vocational schooling. Three general operational models are described and graphically presented. Model guidelines developed for the instructional system, the instructional team, and supportive services are listed and include the following: development of prescription teaching, the student-instructional study team, competency based evaluation, and open entry and exit (instructional system); the role of vocational teachers, special education teachers, remedial teachers, vocational students, and vocational resource persons (instructional team); and the role of the administration, community agencies, and parents (supportive services). Conclusions present a rationale for providing a vocational resource person for mainstreaming programs, and lists the required qualifications. Twelve recommendations for active steps to be taken at the local, state, and national levels are presented and include university development to orient special education teachers to the concept of vocational education, and education of the public about their responsibility for special needs students and the responsibilities of vocational education. (BL)
Recommendation

to the

State Advisory Council

for the

Bureau of Vocational Education

A POSITION PAPER ON

MAINSTREAMING SPECIAL NEEDS STUDENTS INTO REGULAR VOCATIONAL CLASSROOMS

by the

Staff of the Vocational/Special Education Project

at the

UNIVERSITY OF PITTSBURGH

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND THE ERIC SYSTEM CONTRACTORS"
The new look in vocational education for the handicapped and disadvantaged is integration of these special needs students into the regular vocational classroom. This new look is called mainstreaming and is a direct result of the Vocational Education Act of 1963 and the 1968 and 1976 Amendments. The 1963 Act had called for vocational education "of persons who have academic, socio-economic, or other handicaps which prevent them from succeeding in the regular programs of vocational education." The Amendments of 1968 reinforced this concept by earmarking a percentage of the funds to be used for "special needs" students. In addition, it was implicit in these Amendments that a shift in priorities must be made from vocational programs with pre-determined course structures to programs designed to "meet the needs of individual students."

The Amendments of 1976 further strengthen the concept of mainstreaming special needs students by reaffirming the purposes of the 1963 and 1968 Act and Amendments. New programs are to be developed which are suited to the individual's need and ability to benefit from vocational education; existing programs are to begin to mainstream special needs students if they have not already done so. The 1976 Amendments set aside ten percent (10%) of the basic state grant to implement programs for the handicapped and twenty percent (20%) for programs for the disadvantaged.

The term "special needs" students refers to individuals within the following classifications: mental retardation, speech impaired, hearing impaired, physically handicapped, emotionally disturbed and socially maladjusted, socio-economically disadvantaged, educationally disadvantaged, culturally disadvantaged, and gifted. This paper will focus primarily on the mentally retarded since they comprise the largest segment of special needs students presently being mainstreamed into the regular vocational classroom.
Education versus Training

Central to the issue of mainstreaming is the distinction between "training" and "education" as it applies to vocational schooling. The authors of this paper have adopted the following definitions of training and education in order to clarify the issues involved in mainstreaming.

Training - activities used in vocational classrooms and shops to produce the same behaviors in each student. These behaviors are identified by a comprehensive task analysis of the vocational content and are common to all persons pursuing the occupation. These behaviors are prescribed and reinforced by the teacher and are, therefore, externally controlled. Training represents only one aspect of vocational education.

Education - activities used in vocational classrooms and shops to produce self-directed behavior and acceptance of one's own unique characteristics in relation to an occupation. Implied in the above is the ability of the student to consider alternatives and the consequences of various actions and to make conscious decisions about his or her behavior as opposed to internalizing the attitude and values learned in vocational training.

It is not enough to simply learn occupational skills through training; one must learn to consider wisely the ends to which these skills will ultimately be used. The purpose of vocational schooling must be to educate.

Mainstreaming

Mainstreaming is based on the conviction that each individual should be educated in the least restrictive environment in which his or her educational and related needs can be satisfactorily provided. This concept recognizes that exceptional individuals have a wide range of educational needs, varying greatly
in intensity and duration; that there is a recognized continuum of educational settings which may, at given times, be appropriate for an individual's needs; that to the maximum extent appropriate exceptional individuals should be educated with non-exceptional individuals. Separation should occur only when the intensity of the individual's educational and related needs are such that they cannot be satisfied in an environment including non-exceptional individuals, even with the addition of supplementary aids and services.

Mainstreaming is an educational programming option for special needs students which provides support to the student and the teacher while the student pursues a majority of his or her education within a regular school program with regular students.

Mainstreaming is an educational process whereby teachers broaden and adapt instructional procedures and content so that all individuals are incorporated into regular programs at levels manageable for each student and for the teacher.

Mainstreaming is looking for and creating alternatives that will help vocational educators serve students with learning and/or adjustment problems in the regular vocational classroom setting.

Mainstreaming is looking at the educational need of a student instead of a label such as mentally handicapped, learning disabled, gifted.

Mainstreaming is the uniting of the skills of vocational education and special education so that all students may have equal educational opportunity.

Only slightly more than 1/3 of all special needs students are receiving any special service or consideration of their problems. The majority of these students are placed in a segregated setting with other students of like impairment. This method of segregating special needs students from the educational mainstream often contributes to poor social adjustment, feelings of shame, and low self-esteem. The fact exists that special needs students are more like regular
students than they are different. However, the act of placing the special student in a conventional classroom without providing for appropriate and meaningful learning experiences can contribute to the same problems which are caused by segregation.

The special needs students require individualized learning experiences, which they can pursue by alternative delivery systems. They need precise instruction which cannot be provided without knowledge of the factors that affect learning for that student.

Vocational education for special needs students is normally handled by teachers with a background in special education. These teachers are unfamiliar with vocational training facilities and potential educational experiences in the vocational classroom. However, vocational teachers have not been taught about the educational characteristics and capabilities of the special needs student so that appropriate vocational educational experiences are not provided; unrealistic expectations are proposed for the student and as a result the student suffers from the lack of meaningful educational experiences. By providing vocational teachers with a background in special education and help in adapting curriculum materials and instructional procedures, vocational teachers can begin to mainstream special needs students into regular vocational programs.

Society benefits from mainstreaming special needs students into regular vocational classrooms. These students can master vocational skills through which they can become part of the specialized production team which is necessary in a complex, mechanized society. With a skill the special needs student becomes a self-sufficient and productive member of society. In addition, the skill that the special person masters often supplements the skill of the professional, freeing the professional for more intricate and complex work situations.
An Integrated Approach

There are numerous operational models for implementation of mainstreaming programs in vocational education. Three general models for mainstreaming are as follows:

Model 1 - Unit Model

This model represents the mainstreaming of a special needs student into an instructional program consisting of one vocational content area. The needed support services for this student are represented by the three inner circles and the outer circle. The three inner circles represent the instructional team. The outer circle represents the school system resources, community resources and the cooperative work experience program that may be utilized by the instructional team. An example of such a program might be a building maintenance shop with arithmetic skills being developed by a remedial math teacher using vocational content and teaching this content in the vocational classroom.

Model 2 - Cluster Model

This model represents the second concept in vocational mainstreaming. This model is basically the same as model #1 with the exception that the instructional program is a cluster of vocational content areas with the same basic skills. Within this model the instructional team has additional flexibility in allowing the special needs students the opportunity to select one or all of the vocational content shops in the cluster. An example of such a program might be home-health management where the student can learn additional specialized skills in health occupations or home economics occupations as the student's potential is identified.
Model 3 - General Shop Model

This model provides a general content shop as a base for the special needs students' instructional program. The general content shop will be utilized by the instructional team as a special resource. Within this model, the instructional team and the special needs student have the opportunity to utilize appropriate vocational content shops. This model has the greatest degree of flexibility for meeting the vocational education needs of special students. An example of such a program would be a general vocational shop containing basic components of the six vocational service areas. Within this shop would be many components of the health occupations programs which would introduce the student to this area. From this shop the student could move to the regular health program or get other basic components.

All models are based on an integrated approach developed by an instructional team and supported by vocational administrators, ancillary staff, community agencies and parents. For these models to function successfully the following guidelines have been developed.

The Instructional System

Any vocational school which plans to mainstream special needs students into the vocational classroom should consider the following recommendations for modifying the instructional system.

A. Development of Prescription Teaching

Prescription teaching is based on the concept of individualized instruction and involves assessment of the student's background and abilities. A learning prescription spells out the skills needed to develop various basic competencies for entry level jobs or spin-off levels which are suitable to the student and which the student can accomplish. Prescriptions are advantageous for each student and are essential for special needs students.
Prescriptions can include skills from several areas which student-instructional study team feels the student can master. The prescription should also include recommendations for evaluation, remediation and cooperative work experiences.

Prescription teaching builds learning experiences to fit the student, it does not force the student into inappropriate learning experiences.

B. The Student-Instructional Study Team

The purpose of the student-instructional study team is to write the learning prescription. The team should be composed of the appropriate vocational teacher, the vocational guidance counselor, the special education teacher, the vocational resource person and, when appropriate, remedial teachers, the school nurse, and the school psychologist.

The student-instructional study team should also design pre-vocational assessment objectives for the students and develop a contract with the student and his or her parents.

The student-instructional study team determines vocational areas or clusters where the student can succeed and identifies minimum competencies necessary for exit into cooperative work experiences or different vocational areas.

C. Competency Based Evaluation

The development of performance objectives and a competency check list of skills which can be used to evaluate and measure the student's progress and terminal performance must be a part of the instructional system. The use of competency based evaluation will facilitate transfer for the student from one vocational content area to a related area, and facilitate articulation from one program level to another. In addition, a competency based evaluation will aid in determining liability of instructional programs and vocational schools.
D. Open Entry and Exit

Flexibility in classroom scheduling will facilitate in the development of open entry-open exit coordination of classroom instruction and cooperative work experiences. Using competency based evaluation as a guideline, students can remain in one vocational classroom until they master one or more skills or be moved to another vocational classroom to develop additional skills in another content area which will provide that student with more flexibility in job placement. Research indicates that successful employment of the special needs student depends on the cooperative work experience and the direct transferability of single skills from the classroom to the work experience.

The Instructional Team

The instructional system will function only if each member of the instructional team understands his or her role in the mainstreaming process. The instructional team is composed of the vocational teacher, remedial and special education teachers, the regular student and the vocational resource person.

The vocational teacher's role is to:

1. modify existing curriculums;
2. select and implement appropriate learning objectives;
3. select and implement appropriate instructional materials;
4. select and implement appropriate evaluation techniques;
5. develop appropriate teaching strategies for various handicapping conditions;
6. seek information which will aid in identification and development of educational equipment for individual handicapping conditions;
7. utilize various support services and resources.

The special education teacher's role is to:

1. teach daily living skills necessary for the student to function as a productive citizen;
2. teach appropriate work behaviors necessary for gainful employment;
3. work with vocational teacher to coordinate the curriculum in the shop and the support services in the home school;
4. establish and maintain communication with vocational administrators and vocational counselors.
The remedial teachers' (mathematics and reading) role is to:

1. adapt and modify existing remedial services to suit the educational needs of a specific vocational shop;
2. establish continuity between the teacher, student, curriculum, and remedial services.

The regular vocational student's role is to:

1. model appropriate work behaviors necessary for gainful employment;
2. provide leadership as she or he will in business and industry;
3. provide peer teaching when appropriate and profitable to himself and the special needs student.

The vocational resource person's role is to:

1. chair the instructional study team;
2. mediate and evaluate the teaching prescription;
3. provide pre-vocational experiences;
4. provide pre-vocational evaluation;
5. coordinate support services;
6. coordinate the special student's general education program and vocational education program;
7. follow-up employment of special needs students.

Supportive Services

School support services necessary for successful mainstreaming include the involvement of the administrative hierarchy in both the vocational school and the sending high school (or in the case of a comprehensive high school, the vocational director and the building principal).

The role of the administration is to:

1. facilitate flexible scheduling for special needs students;
2. facilitate flexible scheduling for teachers who are mainstreaming special needs students;
3. promote the concept of instructional study teams, prescription teaching and competency based evaluation;
4. provide for an instructional team leader or vocational resource person;
5. provide in-service training for teachers with special needs students;
6. provide opportunity for and encourage vocational and special education teachers to attend university courses;
7. provide adequate time for interaction of the vocational teacher and support personnel;
8. encourage special education teachers to provide life skill instruction appropriate to vocational education;
9. promote vocational career awareness for special education teachers and parents;
10. educate parents concerning vocational education and student rights and responsibilities.
Community support services, including community agencies and the parents, are also a necessary component of the mainstreaming effort.

The role of the community agencies is to:

1. support the transition of the special needs student from the educational setting to the world of work;
2. develop job opportunities for special needs students;
3. promote efforts to hire the handicapped through an awareness of their value to the community.

The parents' role is to:

1. reinforce what is taught and learned in the classroom or shop;
2. provide feedback to the educational system;
3. support the school and the student in the attempt to develop a self-sufficient, self-directed individual.

Conclusions

Because mainstreaming is such a complex process, it is necessary to provide a vocational resource person to coordinate people and services involved in educating the special needs student. The vocational resource person for special needs students is the instructional team leader, the liaison with community agencies and the parents, and the advocate for the special needs students. To function in this role, a resource person should possess the following qualifications.

1. knowledge of the characteristics and capabilities of students with all categories of special needs;
2. diagnostic skills for selecting and placing special needs students in the vocational classroom;
3. ability to develop prescriptive course of study for special needs students;
4. skill in helping vocational teachers individualize their course of study;
5. knowledge of resource agencies and materials for special needs students;
6. skill in writing proposals to obtain funding for projects involving special needs students.
Recommendations

Before mainstreaming into regular vocational shops can become a viable alternative for special needs students, action steps need to be taken at the local, state and national level. These action steps include:

* training of vocational resource people
* acceptance of vocational resource people as members of the instructional team
* provision for dual certification of vocational resource persons
* provision for dual certification for vocational teachers involved in mainstreaming
* university program development to orient vocational teachers to the needs of handicapped, disadvantaged and advantaged
* university program development to orient special education teachers to the concept of vocational education
* university workshops for administrators on the concept of mainstreaming and implementing the concept
* additional research, program development and assessment of mainstreaming at the university level
* education of the public about their responsibility for special needs students and the responsibilities of vocational education
* education of industry at the state and national level of its responsibility to the handicapped and disadvantaged
* development of liaison between vocational education and special interest groups
* development of a coordinated vocational/special education effort by Intermediate Units to include program development, in-service education, and seed money funding