Mounting concern over the seemingly high drop-out rate among the nation's teenagers, coupled with the inability of many high school students to select satisfying careers upon graduation, have prompted a restructuring of the curriculum around the developmental needs of students. A comprehensive educational program having seven basic operational characteristics, career education begins with the entry of the child into a formal school program and continues into the adult years. Job-related information is integrated into the existing curriculum on all grade levels. The lack of a clear-cut definition of career education other than the operationally adopted one has motivated the initiation of an implementation model for use with the program. To be developed by the Center for Vocational and Technical Education at Ohio State University in conjunction with six school districts, the model when completed will consist of components, systems, and packages field-tested in the cooperating school districts. Implications for technical education within a career education context are: (1) The student entering a post-secondary technical program will be a better prepared, more goal-oriented student; (2) Career choices will have been made from better data and will be based on personal needs, aspirations, and abilities; and (3) Because entering students are better prepared, there should be fewer dropouts, transfers, and failures.

(Author/SN)
A ROLE FOR TECHNICAL EDUCATION IN A CAREER EDUCATION CONTEXT

by Aaron J. Miller*

A continuing concern that we have about our educational system is its seeming lack of relevance for the majority of students. In the view of many students, teachers, and parents the educational system does not reflect social realities. Largely because of this incongruity between the career development needs of students and their school experiences, a significant portion of students drop out before completing high school. Furthermore, many of those who do complete high school have little basis for selecting a satisfying career consistent with their individual needs and interests.

Most school systems in this country do not adequately acquaint the student with a knowledge of the broad range of career opportunities open to him or with the requirements necessary for adequate career preparation. There has been a minimal acceptance by our school systems for the responsibility of placing every student in a "next step" after leaving school, whether it be in a job or on the next educational rung of some career ladder.

Because of these inadequacies, a need has arisen to develop an educational program which restructures the curriculum around the career development needs of the individual. Such a system must insure that every student completes an educational program that integrates academic skills with occupational skills. Regardless of the exiting point in the system, the student's options must be open for either entering the labor market in a productive career or for pursuing the post-high school educational path, consistent with his or her career development goals and aspirations.

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Definition of Career Education

Career Education is not a radically new idea on the American educational scene. Rather, it is an evolutionary concept with many historical antecedents whose basis can easily be traced back to the 1800's. However, Career Education is not a mere repackaging of existing educational programs under a new title. It is a synthesis of the best of existing educational practices within a new educational context which encompasses career development.

While there are many characteristics of Career Education that have been identified by researchers and practitioners, there is no uniform definition of Career Education, just as there is no uniform definition of education.

Career Education is an extremely complex grouping of educational ideas. However, for an operational definition, the following characteristics of Career Education are identified:

1. Career Education is a comprehensive educational program focused on careers. It begins with the entry of the child into a formal school program and continues into the adult years.

2. Career Education involves all students regardless of their post-secondary plans.

3. Career Education involves the entire school program and unites the schools, communities and employers in a cooperative educational venture.

4. Career Education infuses the school program, rather than provides a program of discrete Career Education curriculum "blocks."

5. Career Education provides the student with information and experiences representing the entire world of work.

6. Career Education supports the student from initial career awareness, to career exploration, careers direction setting, career preparation,
and career placement; and provides for placement and follow up including re-education if desired.

7. Career Education is not a synonym for vocational education; but vocational education is an integral and important part of the total Career Education system.

With these broad tenets defining Career Education, a school district or institution which wished to implement a Career Education program can operationalize its own Career Education program within these general boundaries.

The Comprehensive Career Education Model

In June of 1971, the U. S. Office of Education signed a contract with The Center for Vocational and Technical Education at The Ohio State University to serve as prime contractor for the development of a Comprehensive Career Education Model. This Career Education model was to be developed in conjunction with six school districts across the United States. The outcome of the project is to be components, systems, and packages which make up a Career Education model which has been field tested in the cooperating school districts. Upon its completion, it should be available for replication either in parts or in whole, in other interested school districts and institutions throughout the United States.

After the signing of this Career Education project contract, one of the first problems confronting The Center for Vocational and Technical Education and its six cooperating school districts was to operationally define what a Career Education system should achieve. For the purposes of this project, six educational goals were identified that should be achieved in a grades K-12 Career Education system. These are as follows: Each student exiting school will -

1. know, appreciate, and respect his or her capabilities
2. have made a viable career decision with respect to education and employment
3. possess saleable skills which are basic and functional
4. relate positively with others and to responsibilities
5. understand economic considerations inherent in career decisions, and
6. relate career development to personal development

After identifying these goals of a Career Education system, the next process was to devise a method for operationally defining how these goals could be achieved.

Elements of Career Education

Working with the participating school districts, eight areas of educational experience were identified which constitute one set of elements basic to Career Education. These elements are: self awareness, career awareness, appreciations and attitudes, economic awareness, skill awareness and beginning competence, decision making skills, employability skills, and educational awareness.

These elements are not mutually exclusive and may contain certain overlaps. Furthermore, there may be other sets of elements which also adequately define Career Education. However, these have been accepted as the elements which, in our judgment, operationally define a program of a School-Based Comprehensive Career Education Model.

These elements can lead to certain outcomes that will adequately deliver Career Education to a student. This transformation of the student must take place through experiences either in the school, in the home, or through community life.

For the purposes of the Comprehensive Career Education Model project, a program Matrix was developed. These eight elements of Career Education were
arrayed along one axis of a matrix with the grades kindergarten through twelve along the other axis. This gives a matrix with 104 cells. In these cells, specific goals and behavioral objectives for achieving the goals related to that Career Education element can be stated by grade level. Such a matrix was constructed by the project team. The project staff then identified and developed curriculum units and other educational activities which could deliver on the goals of that element by each grade level. The delivery of these goals was achieved by the development of curriculum units of not more than 20 hours in length, which could be infused into the existing curriculum. These units cover all of the traditional areas of the school system, such as math, language arts, social science, industrial arts, vocational education, etc. In addition, other school activities such as guidance and placement services are infused with activities which will deliver on Career Education goals.

A Keystone Model

The flow of a student through a Career Education program can be characterized as follows;

In the elementary grades (K-6), the student; in addition to learning the essential educational skills, is exposed to a program which will develop career awareness in that youngster. These experiences are infused into the existing curriculum. Upon transition from elementary school to the junior high school or middle school, intensified guidance services are available which will help the youngster relate his own personal needs and aspirations to further career exploration activities in the junior high school.

In the junior high school years, a student is allowed to further explore career interests through a variety of means, both in the community and through vicarious experiences in school. These experiences prepare him to
make further career direction setting decisions upon entering high school, intensified guidance services are available which further provide data to the students which will allow him to understand himself, his abilities, and the career alternatives available to him.

In senior high school, the student is prepared to make further direction setting decisions which allow him to select not only the educational program to prepare him for his various life role needs, but also the specific career preparation components that will prepare him for an entry level job and/or placement into the next educational program consistent with his career goals and aspirations.

The project presently undertaken by The Center for Vocational and Technical Education at The Ohio State University and the six participating school districts is restricted to the kindergarten through the twelfth grade. However, this does not mean that the post-secondary, adult and continuing education system is not a meaningful part of Career Education. On the contrary, it is a most important part of a total Career Education model. However, funding has not been available during the past 18 months to work in an area beyond the twelfth grade. It is hoped that during the next fiscal year, a vigorous program of work can begin at the post-secondary level.

**Implications for Technical Education**

There are a number of very important implications for technical education within a Career Education context. First of all, if a student goes through a Career Education system in secondary school and enters a technical program at the post-secondary level, he should be a different kind of student. He should be better prepared in that he has been able to make career direction setting decisions in high school and has taken a program of study that has prepared him for the technical education program of his choice. That selection
has been made, based upon an understanding of his own needs and desires, and based upon his competencies. The selection should be more realistic than some of the choices made by students who do not come through a Career Education system.

Because the students entering a technical education program from a secondary Career Education program have received better data upon which career choices were made, technical educators should expect more women and minorities in entering technician training programs. Career guidance and career choice will be based upon personal needs, aspirations, and abilities rather than traditional stereotypes of workers.

Because entering students are better prepared for a post-secondary program, there should be fewer dropouts, transfers, and failures.

If the program at a post-secondary technical level is to be consistent with the Career Education concept, it is possible to postulate educational goals appropriate for a post-secondary technical education program. These goals are as follows: Each student exiting the technical program will:

1. possess in depth technical skills for placement and advancement
2. understand future career options in light of personal career development
3. understand continuing and adult education options related to personal needs.

Goal number 1 relates to providing adequate technical skill delivery for the technician or technologist. This is presently being done in most technical education programs. In fact, it is the keystone of good technical education—preparing competent technicians and technologists for business and industry.

Goal number 2 relates to the student understanding future career options. Technical education programs must provide improved career guidance, either
infused into an existing curricula or provided as a special educational component that will provide information about future career options. Few people will remain in the same technical job over an extended period of time. They will either move up the ladder, being promoted into jobs of greater responsibility, or be shifted into some parallel and related job. Students must understand the nature of these career ladders if they are to be prepared for the world of work. A student should understand that there are only certain heights to which one can aspire in certain technical categories, and to progress to higher paying categories one must move into certain areas of management. Furthermore, he should understand the nature, demands, and qualifications for those management alternatives.

The third goal relates to understanding continuing and adult education options. It is clear that most every worker will change jobs a number of times during his active life of work. One must be prepared to change jobs because of potential opportunities or because of job obsolescence. In either event, this change generally requires additional training, or upgrading. A student needs to know what kinds of adult and continuing education options may be available to him and how one goes about seeking these educational opportunities. In addition, many people avail themselves of adult and continuing education opportunities to satisfy life role needs other than the job related role. That is, they wish to gain skills and knowledges that will better prepare them for leisure time activities. It is incumbent upon the educational system to familiarize students with these opportunities.

Implications for Programmatic Changes

There are several implications for programmatic changes in technical education.

Improved Career Guidance

Through an improved career guidance program either as a separate entity
or infused into other educational components of the curriculum, it should be possible to achieve the needs of the student in familiarizing him with future career and educational options consistent with his needs and aspirations.

**Increased Relevance of Non-technical Coursework.**

As in a K-12 Career Education program, a special effort must be made to improve the infusion of relevance into all educational program content. While specific technology courses tend to be highly relevant because of their almost perfect correlation to the future demands of the job, there sometimes exists a questionable relevance of some supporting general education requirements. The students demand for relevance is just as crucial in the post-secondary technical level as it is in the high school. If a student does not understand the utility of these related courses, either the courses are unnecessary or they are being presented in a highly inappropriate manner.

**Greater Articulation with Secondary Schools.**

There must be a greater articulation of post-secondary technical programs with high school level programs. Some students will elect to take pre-technical or vocational electives in high school and then continue their specific technical training at a post-secondary institution. These programs require special articulation. This articulation might take the following forms: joint faculty appointments; concurrent enrollment of high school students in post-secondary programs, joint advisory committees, articulated guidance programs, joint follow-up of students on a longitudinal basis, advance standing credit granted by performance testing, etc.

**Implications for the Future**

Although there are a number of critics of the Career Education concept who say that Career Education overemphasizes the "economic" needs of man,
Career Education appears to have high acceptance and has reached a point of no return in its historical development. In my judgment, and I hope yours, it supports the philosophical principals of education to which we as vocational and technical educators totally subscribe. That is, it provides an opportunity for a one-track educational system that is appropriate for all youngsters. A system that allows students to pick viable Career Education choices based upon their own needs, abilities and aptitudes, and pursue their career goals in a rational and effective manner.