6-1992

The Extent to Which the Career Guidance and Counseling Component is Addressed in the Administration of Tech Prep Programs

Linda Joan Kwasny
Western Michigan University

Follow this and additional works at: https://scholarworks.wmich.edu/dissertations

Part of the Educational Assessment, Evaluation, and Research Commons, and the Vocational Education Commons

Recommended Citation
Kwasny, Linda Joan, "The Extent to Which the Career Guidance and Counseling Component is Addressed in the Administration of Tech Prep Programs" (1992). Dissertations. 1921.
https://scholarworks.wmich.edu/dissertations/1921

This Dissertation-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Dissertations by an authorized administrator of ScholarWorks at WMU. For more information, please contact maira.bundza@wmich.edu.
THE EXTENT TO WHICH THE CAREER GUIDANCE AND COUNSELING COMPONENT IS ADDRESSED IN THE ADMINISTRATION OF TECH PREP PROGRAMS

Linda Joan Kwasny, Ed.D.
Western Michigan University, 1992

This study examined the career guidance and counseling component of tech prep projects that were being planned and implemented in Michigan during the 1990-91 school year. A survey was conducted of all eleven consortia operating funded tech prep projects to determine the involvement of secondary and postsecondary guidance professionals in tech prep planning, the extent of articulation of guidance services for regular and special populations tech prep students, and the nature and extent of the career guidance and counseling programs that were being planned for regular and special populations students.

The findings from this study indicate that for secondary and postsecondary guidance professionals, there is greater involvement at the secondary level in the planning of tech prep programs. The issue of articulation of guidance services for tech prep students was examined, with results indicating that the proportion of grant consortia providing for articulation of guidance services was over .50, although no one articulation method appears to take precedence. The proportion of consortia that provide
articulation of special populations guidance services was only .30. The lack of common identification standards, and the wide variety of individuals assigned to monitor the progress of special populations students would appear to be responsible for this low articulation level.

The investigation of the extent to which various career guidance elements were present for tech prep students showed that recommended career guidance elements were present for both regular and special populations students.
INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI
University Microfilms International
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
313/761-4700 800/521-0600

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
The extent to which the career guidance and counseling component is addressed in the administration of tech prep programs

Kwasny, Linda Joan, Ed.D.
Western Michigan University, 1992
ACKNOWLEDGMENTS

I needed very special people to help me accomplish my goal, and I had the best. Many thanks to Dr. Thelma Urbick and Dr. Patrick Jenlink for being there as committee members with help and encouragement. A special debt of gratitude to Dr. David Cowden as committee chairperson, and listener extraordinaire. You all helped make the project bearable, and gave me belief in myself.

To my husband Michael, the best friend a woman could ever have, you made it possible for me to succeed with your love and support.

To my children Kyle and Kate, I want you to know that I love you very much, and thanks for keeping down the noise, and staying out of the den while I worked!

Linda Joan Kwasny
TABLE OF CONTENTS

ACKNOWLEDGMENTS ................................................................. ii

LIST OF TABLES ................................................................. vi

OVERVIEW ................................................................. 1

The Problem ................................................................. 1

Definitions ................................................................. 2

Purpose of the Study ...................................................... 5

Importance of the Study .................................................. 6

REVIEW OF RELATED LITERATURE ................................. 9

Changes in Nature and Structure of Work ..................... 10

Changing Demographics ................................................. 12

History of Federal Vocational Legislation ....................... 14

Carl D. Perkins Vocational and Applied Technology Act of 1990 . 15

The Framework of Tech Prep Programs ......................... 17

Importance of Comprehensive Career Guidance and Counseling Programs ........................................ 19

Research Into Current State of Career Guidance and Counseling Programs ........................................ 20

Career Guidance and Counseling Needs of Special Populations .................................................. 22

Guidance Components in Tech Prep Programs ................ 25
Table of Contents--Continued

METHODOLOGY ................................................................. 30
  The Hypotheses ......................................................... 30
  The Population ....................................................... 32
  Instrumentation ....................................................... 33
  Mailing Procedure .................................................. 36
  Data Analysis .......................................................... 37

RESULTS OF THE STUDY .................................................. 39
  Instrument Return and Followup ............................. 39
  Demographic Identification of Respondents ............. 40
  Hypothesis One Testing .......................................... 41
  Hypothesis Two Testing .......................................... 43
  Hypothesis Three Testing ....................................... 46
  Hypothesis Four Testing .......................................... 51

DISCUSSION AND CONCLUSIONS .................................. 54
  Review of the Problem and Procedures .................. 54
  Conclusions and Implications ............................... 57
  Recommendations for Further Research .................. 61

APPENDICES ................................................................. 63
  A. Tech Prep Planning Survey ................................. 63
  B. National Center for Research in Vocational Education Input Letter .......................... 69
Table of Contents--Continued

C. HSIRB Exempt Form ......................................................... 71
D. Survey Letter ................................................................. 73
E. Follow Up Survey Letter .................................................... 75

BIBLIOGRAPHY ................................................................. 77
LIST OF TABLES

1. 1990-1991 Michigan Tech Prep Grant Recipients ................. 34
2. Position and Type of Agency of Respondents ..................... 40
3. Proportion of Secondary and Postsecondary Guidance Professionals Involved in Tech Prep Planning ............................................. 42
4. Percent of Individuals Indicating Use of Various Methods to Involve Guidance Professionals .................................................... 43
5. Tech Prep Articulation Services ........................................... 44
6. Comparison of Individuals With the Counseling Responsibility for Tech Prep Students at Secondary and Postsecondary Levels ............................................................ 45
7. Special Populations Tech Prep Articulation Information Sharing Processes ............................................................ 47
8. Proportion of Secondary and Postsecondary Agencies With Process for Identifying Special Populations Students .......................... 48
9. Proportion Using Various Special Populations Student Identification Processes ............................................................ 49
10. Individuals With Responsibility for Monitoring Special Populations Tech Prep Student Progress ................................................... 50
11. A Comparison of Emphasis Being Given to Different Career Guidance Efforts for Regular and Special Populations Tech Prep Students .................................................. 53
OVERVIEW

The Problem

In 1983 the release of the report entitled *A Nation At Risk* by the National Commission on Excellence in Education galvanized educational reform with loud cries for the improvement of the quality of education to achieve excellence. Since that time, numerous reports have bemoaned the skill level of American graduates as compared to those of other Western countries. In response, the Carl D. Perkins Vocational and Applied Technology Education Act of 1990, recently passed by Congress, sets some new directions for vocational education. An integral part of this legislation is the implementation of tech prep programs. Tech prep is an attempt to better train the workforce of tomorrow in the increasingly technological work environment. Tech prep is a continuous program of study which starts in the high school with a concentration in a vocational education program and continues through two years of study in a community college. It is designed to provide high school graduates with a technically oriented background for greater success in continuing education or the workplace. In its optimal state, tech prep is a technical/academic program which begins in the public school years and culminates in a postsecondary technical degree.
Although the needs of a technologically advanced society call for programs such as tech prep, vocational education is also concerned with the needs of special populations, more commonly known as the "at-risk" population. Vocational education has had a great deal of success in training such individuals for careers that did not require a technology background or academic expertise. Although it is imperative that vocational education programs continue to increase in quality and more fully integrate the academics into their programming, of grave concern is the impact of this trend upon special populations. It is commonly accepted that special populations students need comprehensive support services in order to be able to succeed within the traditional educational environment. Indeed, the Carl Perkins Act mandates such comprehensive career guidance and counseling services for special populations students. However, as schools try to be responsive to the needs of industry and move to create new programs such as tech prep, it is feared that little emphasis has been given to the importance of including guidance professionals and guidance programming in this program planning and implementation.

Definitions

An examination of this issue is dependent upon a common vocabulary. Three terms that are used in this study, tech prep, special populations, and career guidance and counseling must be defined for the purpose of this study
by using the definitions given to them by the Carl Perkins Vocational and Applied Technology Education Act of 1990.

Tech prep can be defined as a combined secondary and postsecondary program that: leads to an associate degree or two year certificate; provides preparation in at least one field of engineering technology, applied science, mechanical, industrial, or practical art or trade, or agriculture, health, or business; uses a sequential course of study to build student competence in mathematics, science and communications; and leads to placement in employment (Kober, 1990).

Section 521(31) of the Carl Perkins Vocational and Applied Technology Act defines the term "special populations" to include individuals who are handicapped, educationally and economically disadvantaged, limited in their English proficiency, incarcerated, or participating in programs to overcome sex bias. The state of Michigan has further specified this definition by category. Handicapped individuals are special education students, or any other individual with any disability as defined in section 3(2) of the Americans With Disabilities Act of 1990.

The term disadvantaged means individuals (other than individuals with handicaps) who have economic or academic disadvantages and who require special services and assistance in order to enable such individuals to succeed in vocational education programs. Such term includes individuals who are members of economically disadvantaged families, migrants, individuals of
limited English proficiency and individuals who are dropouts from, or who are identified as potential dropouts from, secondary school.

Individuals participating in programs to overcome sex bias refers to students who are enrolled in programs considered nontraditional for their gender, such as a female student enrolled in auto mechanics.

From the above, it is obvious that special populations under the Carl Perkins Law is a broad and comprehensive category. For the purposes of this study, the exact criteria for determining special populations eligibility is not the issue. This is the same difficulty faced by anyone attempting to accurately define the "at-risk" population. When one reads the specific definitions given in the law, it is apparent that the special population student being referred to is that population more commonly called the "at-risk" student. The importance of the definition for this study is to identify the type of student who is commonly referred to as belonging to a special population, and to understand that this mirrors the segment of society that continues to be identified as being "at-risk" when one studies the changing demographics of American society.

Career guidance and counseling has been defined by the Carl Perkins Vocational and Applied Technology Act of 1990 in Section 521(5) as meaning programs which pertain to the body of subject matter and related techniques and methods organized for the development in individuals of career awareness, career planning, career decisionmaking, placement skills, and knowledge and understanding of local, state, and national
occupational, educational, and labor market needs, trends, and opportunities; and which assist such individuals in making and implementing informed educational and occupational choices.

The term articulation also needs to be defined as it relates to its use in this study. Articulation is being defined as coordination between educational levels.

**Purpose of the Study**

This study is designed to examine the career guidance and counseling component of the tech prep programs being planned during the 1990-91 school year in Michigan. The following questions will be addressed:

1. Are there differences in the involvement of guidance professionals at the secondary and postsecondary level in the planning of tech prep programs?

2. Are the career guidance and counseling services for tech prep students articulated between the secondary and postsecondary locations?

3. Are the career guidance and counseling services for special populations tech prep students articulated between the secondary and postsecondary locations?

4. Is the nature and extent of the career guidance and counseling program that is being planned for regular tech prep students different from the nature and extent of the career guidance and counseling program that is being planned for special populations tech prep students?
Importance of the Study

There are numerous reasons to examine tech prep programming that is currently being implemented in Michigan. The most important one is also the most obvious -- the benefit to students. It is vital that programs be developed to increasingly serve the "neglected majority" that continues to inhabit our schools. Dale Parnell envisioned tech prep as challenging the "neglected majority" or general education track students who see no aim or purpose to their education (Parnell, 1985). General education can no longer be tolerated as a viable road to a future. As the Michigan Tech Prep Task Force (1988) stated, "if we fail to focus our attention on how we can work together to improve vocational/occupational education, we'll fail to realize the potential of our already neglected majority" (p. III). It is necessary to examine tech prep efforts to ensure that they are meeting the needs of all segments of the student population, including special populations students.

Tech prep programming has been mandated in Michigan, which directs another reason for studying this issue. Although the federal Carl Perkins legislation makes grant funding available for the development of tech prep programs, Michigan is using tech prep as a required component of vocational education programming statewide. Tech prep appears in the state plan, and must be addressed by all agencies accepting vocational funds. This highlights the importance this has been given in Michigan, and the necessity of ensuring
that it is being implemented in the most effective manner. Michigan has
allocated funds through tech prep planning grants which were awarded in
May of 1991 to consortia of secondary and postsecondary institutions in the
state. There were 42 grants awarded, representing all 29 community colleges
in the state, 56 intermediate school districts, and approximately 480 local
educational agencies (Folkening, 1991). Inherent in this legislation is the
mandating of career and guidance counseling services. It is important to
ensure that these mandated components are being implemented, and being
implemented in a way shown to be effective in serving students.

A third reason to examine tech prep programming is the interrela-
tionship of tech prep programming with its career guidance and counseling
component and Public Act 25 in Michigan. As interpreted in Michigan, tech
prep must occur in alignment with other supportive reform efforts such as
Public Act 25. The very essence of tech prep necessitates systemic change
across educational levels, with greater cooperation among parties. The State
Board of Education in Michigan on October 15, 1991, approved nine areas of
core curriculum outcomes. These are broad student outcomes in curricular
areas, which are given equal emphasis. One is career and employability skills
(Phillip, 1991). Tech prep programming addresses this core competency, and
thus has importance to the wider circle of education in Michigan.

Finally, because tech prep is a relatively new concept, there is little
research to date on exemplary implementation practices.
Ideally, the "success" of tech prep programs is determined by conducting longitudinal evaluations and collecting information on multiple outcome measures. Unfortunately, most of the current efforts rely on a limited number of outcome measures, such as enrollment figures, and the number of articulated courses. The result of this limited data collection is that the items measure quantity, not quality, aim for parsimony, not complexity, tend to reflect those things that can be easily measured; and, unless there is reasonable agreement on what the educational goals should be, may shape the curriculum (Dornsife, 1991, p. 65).

There is extensive agreement on the components of tech prep, but there is always diversity in the way these components are implemented, and this diversity provides information for developing programs that will suit the needs of different schools and different populations. Within the larger context, by focusing on the practices being currently adopted at the institutional level, it may provide a better conceptualization of exemplary practices, and help develop a sound foundation from which improvement can spring.
REVIEW OF RELATED LITERATURE

"Tech prep. Remember the term, because you're going to hear a lot about it in the coming months and years. Tech prep, or technical preparation, will change the way we educate our children in public schools." The front page of the Wisconsin State Journal for October 27, 1991 highlighted an educational program which appears likely to have far reaching consequences (Gribble, 1991). The problems associated with implementing tech prep have a direct connection to current research priorities in vocational education. The Journal for Vocational Special Needs Education, in an article entitled "Research Priorities in Vocational Special Needs Education" (Rojewski & Meers, 1991) looked at the need for future research efforts in the vocational special needs arena. The highest perceived area of need was inquiry into the effects of both a changing workforce and changing demographics in society on the vocational outcomes of students with special needs. Also identified was the need for an examination of the possible discrepancies which might exist between required program and service needs of students exiting high school and the current capacities of adult service providers to meet them.

The National Assessment of Vocational Education (NAVE) completed a series of studies through which they set two goals: (1) increasing the access of special populations to high-quality vocational education and (2) improving
the overall quality of programs (NAVE, 1989). There is general agreement with these goals. However, little has been done to examine how these practices have been translated into reality as agencies program for special populations.

Before one can examine the career guidance and counseling component in current tech prep programs, it is necessary to understand the issue in its greater context. One needs to investigate the historical events, resultant federal legislation and societal changes that have led to the development of tech prep programs. Additionally, one needs to understand the general framework of tech prep programs and the specific guidance components that are required. This needs to be succeeded by an examination of what past practice has shown to be the most effective components of career guidance and counseling programs, both for all students and for special populations specifically. Only then will it be appropriate to examine whether the current tech prep programming is adequately addressing the guidance needs of special populations and other students.

Changes in Nature and Structure of Work

The American workplace has undergone, and will continue to undergo, great changes which impact upon education. Today, between 15% and 20% of the labor force works in businesses that have been created within the last five years (Vaughan, 1991). Certainly the educational reform movement of
the 1980s was influenced by a concern over the increase in foreign competition and a growing belief that the American educational system was not as effective as that of other industrialized nations such as Japan (Bailey, 1991; Vaughan, 1991; Warnat, 1991). In the last decade an increasing number of industrial jobs have been lost as other nations have developed their industrial capacity. Concurrently, U.S. based firms have moved production to other countries to take advantage of lower wage structures (Bailey, 1991; Budke, 1988; Coates, Jarratt, & Mahaffie, 1991). Skilled labor, according to Budke, is the only dimension of production where the U.S. can retain an advantage over developing nations. This attitude continues to pervade U.S. policy making at the highest level. In President Bush's America 2000 Education Strategy, the goal is set for the year 2000 that every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship. What the best students can achieve now, according to these goals, the average student must be able to achieve by the turn of the century (America 2000, 1991).

As the workplace changes, new critical skills are emerging for the worker. Budke (1988) writes that the workplace will see an increase in mass communications and advanced information technologies. There will be increased use of participative styles in organizations. With the increasing automation of repetitive tasks, workers at all levels will need to be increas-
ingly competent in cognitive, psychomotor and affective skills. In the next five years, four out of five people in the industrial world will be doing jobs differently from the way they have been done in the last 50 years. By the year 2000, 75% of all employees will need to be retrained in new jobs or taught fresh skills for their old ones (Coates et al., 1991; Kolde, 1991). The *Wall Street Journal* of February 9, 1990 reports that according to Labor Department and other estimates, within the next five years, 75% of job classifications will require postsecondary training for entry-level jobs ("Education," 1990).

**Changing Demographics**

Although there is an increasing need for a technologically trained workforce, the demographic reality is that the U.S. is facing a youth population which is increasingly poor, minority, and unprepared for the world of work (William T. Grant Foundation Commission on Work, Family and Citizenship, 1988). At a time when the U.S. work force as a whole is becoming better educated than ever, and one in four U.S. workers is a college graduate (Coates et al., 1991), corporations are troubled by deficiencies in basic skills among entry-level workers. The *Workforce 2000* study came to the following conclusion: "Of all the new jobs that will be created over the 1984-2000 period, more than half will require some education beyond high school" (Johnston & Packer, 1987, p. 97). The reality is that about half of American
students do not attend college. Particularly in major urban centers, young people are dropping out of high schools at catastrophic rates. The dropout rate is almost 50% in many inner cities (Commission on the Skills of the American Workforce, 1990; William T. Grant Commission on Work, Family and Citizenship, 1988). In Michigan, the Michigan State Advisory Council for Vocational Education in 1987 indicated a 27% drop-out rate.

The American student is changing. Schools are currently being faced with problems new to educators. In many urban areas, "minority majorities" increasingly occupy the classrooms. Budke (1988) points out that the schools must deal with the duty of serving the needs of an increasingly culturally diverse student body, along with coping with a worsening dropout rate. At the same time that standards of academic excellence and achievement are increasing, so are the numbers of black, Hispanic, and other minority youth who traditionally have not done well in academic learning. By the year 2000, non-whites, immigrants and women will constitute about 80% of the new entrants into the work force, contrasted to about 50% today. Traditionally, people from these groups are often the most disadvantaged with lower skills (Norris, 1991). In Michigan, 42% of school children are minority (Tech Prep Task Force, 1988). The William T. Grant Commission on Work, Family and Citizenship (1988) stated that unless workforce basic skills are raised substantially, there will be more joblessness among the least skilled, joined by a lasting shortage of workers with advanced skills.
However, this is not an entirely bleak picture. As the William T. Grant Commission on Work, Family and Citizenship so eloquently stated, "America's truly disadvantaged young adults are, at once, too many to ignore and few enough so that, with the concerted help of a determined society, their life chances can be vastly improved" (1988, p.120).

History of Federal Vocational Legislation

The interest of the government in the problems of training the workforce are certainly not new. National grants for education have been in existence since the early part of the nineteenth century. These early grants were given to the states for no specific purpose, without restrictions. They were not used for education that was vocational in nature, for the essence of schooling did not include vocational training. The first type of education that could be termed genuinely vocational in nature was introduced in the manual training movement of the 1880s. At that time, the purpose was not to train students specifically for jobs, but to train them generally in the uses of tools, and to round out their education (Grubb, Davis, & Lum, 1991). However, the federal government, as it started to place restrictions and safeguards on the expenditures given to support public education, moved to support activities that were vocational in nature. A trend towards using national money for vocational education purposes can be found beginning with the Morrill Act of 1862, the second Morrill Act, the Nelson amendment, the Hatch Act, the
Adams Act, the Smith-Lever Act, and the Vocational Education Act (National Center for Research in Vocational Education [NCRVE], 1990b).

The year 1917 marked the first bill that specifically earmarked monies solely for vocational education. This has been followed more recently by the 1963 Vocational Education Act and the 1968 Amendments. Revisions of federal law, most notably in 1963, 1976, and 1984, increased the availability and diversity of vocational programs and focused more attention on the needs of special groups of students. In 1984, the Carl Perkins Vocational Act. P.L. 98-524, was enacted, reauthorized in 1988, and most recently has been replaced by the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (NCRVE, 1990b).

Carl D. Perkins Vocational and Applied Technology Act of 1990

As the new law states:

It is the purpose of this Act to make the United States more competitive in the world economy by developing more fully the academic and occupational skills of all segments of the population. The purpose will principally be achieved through concentrating resources on improving educational programs leading to academic and occupational skill competencies needed to work in a technologically advanced society. (Carl D. Perkins Vocational and Applied Technology Act of 1990, Sec. 2).

The most important change in this legislation over preceding bills is that it merged the two federal goals of program improvement and expansion of the access of special populations to quality programs into one program. Thus was created the combined goal of improving the quality of vocational
instruction and support services in the schools where the needs for improvement are the greatest. The funds are to be used to improve and expand vocational education programs, including programs for special populations of students. In the past, these goals had been separate and the funds for accomplishing them were given to largely different entities through different mechanisms (NCRVE, April, 1990). This law was in direct response to the changes in the nature and structure of work and the changing demographics of American society.

The new law attempts to improve the access of special populations to quality vocational programs in several ways including: (a) new requirements that make equitable participation of special populations a condition for receipt of any federal vocational funds, and (b) the requirement of supplementary services; guidance, counseling, and career development; and school-to-work transition services for special populations.

The federal law also authorizes several so-called special programs, contained in Title III (Section 344) of the new law. One of the new and truly important initiatives in the legislation is the program of grants to be awarded to encourage the development of tech prep programs by consortia of secondary and postsecondary institutions. The new Perkins Act authorizes the federal government to spend up to $125 million to fund tech prep programs. Also contained in Title II (Section 235) of the legislation in the section on basic state funds and the uses of funds is the provision allowing states to use
their funds for the implementation of tech prep efforts.

The Framework of Tech Prep Programs

Although the federal money for tech prep programs is a new federal initiative, tech prep programs have been funded in Michigan for several years. In the 1970s, Michigan supported various articulation agreements between secondary and postsecondary institutions. The formal tech prep education initiative began in 1987 when the State Board of Education appointed a Tech Prep Task Force. This task force developed models for tech prep including academic competencies, guidance components, and recommended delivery system. By spring of 1991, 32 projects had been supported through seed grants for the purpose of establishing tech prep programs (Michigan Career Education and Vocational Education Resource Center, 1991).

Michigan, in 1988, taking a national lead in the development of tech prep programs, specified the definition of tech prep by stating:

The Technical Preparation Program is a partnership between the two institutional levels that addresses the counseling and curriculum cooperation necessary to produce master technicians. With a strong counseling component in the 8th and 9th grades, the intent of Tech Prep is to encourage technology education for all students. In particular, the program seeks to challenge the "general education track" student, whom Parnell says "see no connectedness, no aim, no purpose to their education, often seeing no point in continuing in school" (Tech Prep Task Force, 1988, p.IV).

Tech prep in Michigan is envisioned on the premise of a smooth transition from high school to the community college. A key to tech prep is
the development of a structured curriculum between high schools and community colleges.

Dornsife (1991), in a review of current tech prep programming, found four general components that are the basis of all tech prep programs: (1) information campaigns, (2) curriculum development, (3) career guidance, and (4) program improvement.

At the heart of tech prep programs is the development of articulated curriculum between secondary and postsecondary institutions. This addresses directly a criticism of vocational education that has suggested inadequate collaboration between secondary and postsecondary education (Wardlow, Swanson, Caskey, & Migler, 1991). While most schools follow the same steps for articulating tech prep curriculum the result is not always the development of similar programs. However, common elements are cooperation and the benefits to students (Dornsife, 1991). An examination done by Dornsife of current tech prep programs shows that the development of tech prep programs is driven by the common components of coordination of educational systems and the development of curriculum that prevents duplication of coursework and offers secondary students advanced placement or advanced skill competence.

The current federal legislation has indicated that tech prep programs must include the following elements: (a) a common curriculum that leads to proficiency in math, science, communications, and technology and to an
associate degree or certificate; (b) inservice training for the teachers of all the consortium participants; (c) training for counselors; (d) equal access to special populations; and (e) preparatory services for all participants (Kober, 1990).

Importance of Comprehensive Career Guidance and Counseling Programs

Tech prep is not alone in recognizing the importance of providing comprehensive career guidance and counseling. "Undergirding virtually every approach to employability for youth is a comprehensive program of career counseling and guidance offered in schools . . . career counseling and guidance are seen by many observers as pivotal 'switching mechanisms' to bring individuals and opportunities together" (Herr & Long, 1983, p. iii). However, historically, high school guidance counselors have spent much of their time on pre-college counseling. One study shows that the income and education levels of the students' community, instead of the abilities and interests of students, determines the kind of counseling offered to students (William T. Grant Foundation, 1988). Regardless of students' interests or backgrounds, students with identifiable educational goals seem consistently to be better prepared for college than students who have no such reason for being in college (Herr, 1983).

In 34 studies of the effects of career guidance on career and educational planning skills, 27 studies found a positive effect. The most often mentioned types of interventions were experience-based career education and
career counseling (Campbell et al., 1983). Career guidance programs seem to help students become better decision makers, select high school courses, and make high school plans that are more aligned with their abilities than those students not exposed to these programs (Herr, 1983). A follow-up study of graduating seniors who had received special aptitude and interest assessment and counseling often referred to this as a significant event in establishing their confidence and in helping them commit to pursue a more rigorous program of vocational and academic study (Bottoms & Presson, 1989).

In the McKinney et al. (1988) study of 280 secondary and postsecondary sites, "student services" were regarded as highly important by about 90% of secondary and postsecondary schools, and approximately 10% rated them of medium importance.

Indeed, as reported in "Strengthening Work-Related Education & Training through Improved Guidance Programs in the 1990's", guidance personnel leaders believe that only through comprehensive guidance and counseling programs will youth be able to decide realistically about their work future (Drier & Gysbers, 1988).

Research Into Current State of Career Guidance and Counseling Programs

Unfortunately, studies have shown that the career guidance and counseling efforts in schools are not always effective. In Lost in the Shuffle: Our Youth Need Career/Vocational Guidance and Counseling Now (Michi-
gan State Advisory Council for Vocational Education, 1987a) it was reported that counselors have little preparation or inservice in the area of career/vocational guidance. A 1986 study conducted in Michigan showed that 54% of counselors surveyed reported weakness in the program area "placement into the world of work." The study concluded that "practitioners and administrators agree that guidance and counseling programs are not helping those students who want to move into the labor market and those who may be less successful in school and academic tasks" (Michigan State Advisory Council, 1987a, p. 4).

Chapman and Katz state:

Career information is too frequently viewed as a passive ingredient that is simply available and seldom an integral part of the career/vocational counseling session. The counselor, in either one-to-one or small group sessions, perhaps fails to convey the vitality and necessity of career information. Counselors, as well as teachers, need to realize that career information serves a number of purposes, both for society and for the individual (1983, p. 22).

The Southern Regional Education Board conducted a study which revealed the following inadequacies in the present system of counseling for students in general and vocational curriculum: half the students indicated that they had not received help from their counselors in developing a four-year plan; most students indicated that they had not been encouraged to take higher level academic courses that complement their vocational intent; and only 15% of students reported that they and their parents met together with school personnel in developing a four-year educational plan (Bottoms &
Presson, 1989). Prediger, Roth, and Noeth in a 1973 national study of career development, found that half of the eleventh grade students studied had received little or no assistance with career planning, even though it was the guidance service checked as needed most frequently by the students (Herr & Long, 1983).

Career Guidance and Counseling Needs of Special Populations

Research has shown guidance and counseling services to be of benefit to special populations students. The review of evaluation studies by Campbell, Connell, Boyle, and Bhaerman (1983) reported that counseling had the following effects on student retention and attendance:

1. Counseling combined with supportive instruction has been successful in motivating truant, low-income boys to attend school regularly.

2. Potential dropouts who received individual and group counseling experienced a significant decrease in the dropout rate.

3. Using vocational counseling to help students select vocational programs was a significant factor in completion rates for selected vocational programs.

The Technical Assistance for Special Populations Program (TASPP) project of the National Center for Research in Vocational Education researchers developed a framework for describing the components of exemplary vocational education programs serving students with special needs. The
components are grouped into five clusters, one of which relates to guidance and counseling. It is stated as comprehensive support services consisting of (a) an assessment of individual’s vocational interests and abilities, (b) instructional support services such as aides and resources, and (c) ongoing career guidance and counseling (National Center for Research in Vocational Education, 1989a). This framework is useful for examining programmatic issues associated with effective vocational education programs, such as tech prep.

Lennon (1979) reports that guidance professionals need to take action in the following areas in order to adequately address the counseling needs of special populations: familiarization with relevant legislation, special program design, use of community resources, professional training for counselors, and job placement and follow-up. The Southern Regional Education Board, after an extensive study, recommended that local school districts be required to identify underachieving students upon their entrance into high school. This process should include a comprehensive educational and interest assessment and should lead to students being enrolled in a challenging program of vocational and academic study (Bottoms & Presson, 1989).

The problem of providing appropriate guidance services to special populations is especially important prior to such a student ever enrolling in vocational education. McNett in 1984 noted that the better the vocational program was, the less likely that disadvantaged students will have access to it.
(Wardlow et al., 1991). If the competition for access into upgraded vocational programming such as tech prep is going to be steep, guidance programs aimed at assessing each student's needs, and offering appropriate programming to meet those needs become more important.

**Making Vocational Education More Effective For At-Risk Youth** (Bishop, 1988) makes five recommendations based upon research for changes in vocational education to become more effective for special needs students. The number one recommendation is counseling before entry into occupationally specific programs.

To complicate the matter of determining appropriate programming for special populations, it is very difficult to ascertain research information on this broad "at-risk" group. Johnson (1991) notes that there is a general trend towards serving increased number of at-risk students in postsecondary vocational education. He reports that in 1980-1981, handicapped, disadvantaged, and limited English proficient populations comprised nearly 20% of all students enrolled in vocational education. Approximately 30% of this enrollment was in postsecondary programs. The increased numbers highlight the importance of developing appropriate programs and services for these individuals. Wermuth, Crain, and Kane addressed this issue by reviewing data from longitudinal studies and evaluations of exemplary programs. They found a paucity of data on enrollment, completion, and postprogram placement for special populations. Data were difficult to locate which described accurately
the special students enrolled, the services provided, and the extent to which students acquired basic and employability skills. Without such information, it is difficult to determine what kinds of special services have worked in specific instances in the past (National Center for Research in Vocational Education, 1989a).

Guidance Components in Tech Prep Programs

It is clear from the listing of essential elements of tech prep programs that guidance and counseling is viewed as imperative in the federal Carl Perkins Law, and it is important that the guidance component be appropriate. One of the benefits listed by such an effort by the Michigan Tech Prep Task Force (1988) is that students will benefit from better career counseling for academic success and future employment. The importance of career guidance and counseling has been consistently recognized in the literature. Robertson-Smith (1990) identified factors influencing the success of tech prep efforts. Included in the factors affecting students was counseling (Lankard, 1991). A study done by McKinney, Fields, Kurth, and Kelly (1988) identified factors responsible for success of articulation programs between secondary and postsecondary institutions. One of the factors thus identified was the program being promoted through students, teachers, and counselors. This study also noted that strong commitment must be evidenced by many stakeholders, including counselors. Counselors must not only be in favor of guidance
efforts, which is obvious, but they must also support the tech prep concept in order for it to be successful. In the newly published Tech Prep Associate Degree: A Win/Win Experience (1991), Hull and Parnell highlight the importance of having counselors who are willing to change. If counselors do not see the value of tech prep, they will steer students in other directions. The Michigan Tech Prep Task Force (1988) lists seven key elements of tech prep programs, based upon literature and institutional visits. One of the key elements is guidance and counseling.

The guidance and counseling component is further specified as being comprised of the following elements:

1. Each Technical Preparation Program shall include
   a. Student selection into Tech Prep
   b. Career awareness, exploration and self-awareness
   c. Career planning
   d. Student assessment and placement
   e. Education/Employability Development Plan

2. Develop computerized Educational Development Plans (EDP) for each student and update annually.

3. Involve parents in the guidance process.

4. Provide special guidance programs to adults enrolled in adult education high school completion programs.

5. Use business/industry for input into guidance plan.
Dornsife (1991) has recognized that tech prep programming has the benefit of the encouragement of student career development through improved programming. The William T. Grant Foundation (1988) notes that research has identified essential programmatic components necessary to retain youth in employment training programs such as tech prep. These key factors include careful assessment of student abilities in order to identify and respond to individual needs and individual counseling and life planning.

Although all tech prep laws and regulations have recognized the importance of the career and guidance component in tech prep programming, there have not been detailed examples of developing or developed guidance programs devoted to tech prep (Dornsife, 1991). However, the specific guidance activities "that can be included in any program are identified by Drier and Bebris (1989:5) . . . as guidance infusion in classroom, guidance curriculum/counselor instruction, mentoring and tutoring, field based experience, planning and decision making, recruitment, placement, testing, career information systems, program evaluation, and inservice training" (Dornsife, 1991, p. 52).

Hull and Parnell (1991) have taken these activities and expressed them as outcomes for tech prep guidance programming: students need to be aware of their own interests and abilities; students need to be aware of career options that match their interests and abilities; students need to have opportunities to explore various career options; the educational system, parents, and
the general public must be aware of and place value on the various career options; and courses of study that allow students to prepare for various career options need to be clearly defined and understood (p.235).

Hull and Parnell (1991) have taken the guidance elements for tech prep and grouped them into a recommended format they have divided as formative and summative advising. Formative advising--helping students determine the course of their high school education--should begin in high school. Student and counselor guidebooks which are essential for tech prep help in this process. To be effective, guidance must also be summative--this means helping students near the end of high school to focus on what they have done and where they are going. A recommendation is that each student leave high school with a portfolio and an application, in the case of tech prep to a postsecondary institution.

Although the determination of the guidance activities and content of the program is important, of equal importance is the method of implementation of guidance programs for tech prep. Hull and Parnell (1991) have developed a list of recommendations that need to be considered in effectively implementing the guidance component of tech prep programs which includes the following: counselors must realize that tech prep courses are as rigorous as college-prep courses; secondary counselors must be actually involved in tech prep advisory committees, whose membership should include a mix of community college staff, employers, and secondary teachers and counselors;
counselors must understand the differences between cooperative programs, advanced placement, and programs such as tech prep; more models are needed so that school districts can examine exemplary program materials to help develop materials to meet local needs; tech prep workshops should be held which include secondary and postsecondary counselors; and secondary counselors need more education experiences to help them understand the tech prep curriculum, associate degree offerings, student learning styles, etc. (1991, pp. 333-334).
METHODOLOGY

This study examined the current state of tech prep implementation efforts with regard to comprehensive career guidance and counseling. The population to be examined consisted of the tech prep implementation grants that were awarded by the state of Michigan during the 1990-91 school year. A study was made of hypotheses related to the implementation of several tech prep elements. Additionally, a descriptive study was undertaken to describe the nature of the activities which constitute the tech prep guidance effort. Results of this examination can be used to make recommendations concerning the needed directions for guidance programming in the tech prep implementation efforts. This information will be useful to local consortia that are implementing tech prep under the current mandated legislation, as well as to technical assistance efforts from the Michigan Department of Education as they try to meet the inservice needs of practitioners.

The Hypotheses

Based upon the review of literature, research hypotheses were established for the investigation of this issue. Each of these research hypotheses is related to the following questions first posed on page 5 and addressed in the purpose of the study.
1. Are there differences in the involvement of guidance professionals at the secondary and postsecondary level in the planning of tech prep programs?

2. Are the career guidance and counseling services for tech prep students articulated between the secondary and postsecondary locations?

3. Are the career guidance and counseling services for special populations tech prep students articulated between the secondary and postsecondary locations?

4. Is the nature and extent of the career guidance and counseling program that is being planned for regular tech prep students different from the nature and extent of the career guidance and counseling program that is being planned for special populations tech prep students?

The corresponding research hypotheses are given below:

1. There is no difference in the extent to which guidance professionals are involved at the secondary and postsecondary level in the planning of tech prep programs.

2. There is an articulation relationship between the career guidance and counseling services provided at the secondary level and the career guidance and counseling services provided at the postsecondary level for tech prep students.

3. There is an articulation relationship between the career guidance and counseling services provided for special populations tech prep
students at the secondary level and the career guidance and counseling services provided for special populations tech prep students at the post-secondary level.

4. For tech prep students, there is no difference in the nature and extent of the career guidance and counseling program that is being planned for regular and special populations students.

The Population

During the 1990-91 school year, the state of Michigan awarded 11 tech prep grants as outlined in Table 1. This study examined all 11 tech prep projects operated under these grants in the 1990-91 school year. Using the Michigan Department of Education grant applications and reports, contacts were made with agencies participating in each of the tech prep projects.

The researcher examined the grant applications for the tech prep consortia operating during 1990-91. From the personnel listed on these applications, and followup calls to participating agencies, the listing was developed of appropriate individuals to receive a mail questionnaire. The questionnaire was targeted to individuals within each agency who were identified on the application as grant participants and who belonged to any of the following groups: secondary and postsecondary vocational/technical administrators, secondary and postsecondary counselors, and secondary and postsecondary special populations coordinators. If a grant application did not
list a special populations coordinator as a participant, the researcher called the participating agencies to identify any such individuals for inclusion in the study. The inclusion of this group was necessary as the study was examining specifically the services to special populations groups. There were 78 individuals identified to be contacted.

Instrumentation

The instrumentation of this study consisted of a questionnaire administered through the mail. A questionnaire was developed by the researcher to be mailed to each of the appropriate individuals who were identified by name with the assistance of the tech prep reports on file with the Michigan Department of Education and the grant application contact persons. The questionnaire appears in Appendix A. This questionnaire was developed after a review of the literature, and an examination of the tech prep program elements which are required by the new Carl Perkins law.

After an initial questionnaire was developed, it was distributed to vocational administrators and counselors for their reaction. They were asked to react to the content of the questions, as well as to the clarity and ease of responding to the individual questions. Their recommendations were incorporated into a revised questionnaire.

At this point, the researcher contacted the National Center for Research in Vocational Education for technical assistance in assuring that the
Table 1
1990-1991 Michigan Tech Prep Grant Recipients

<table>
<thead>
<tr>
<th>Fiscal Agency/Partnership Agency</th>
<th>Program Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Rapids Junior College/ Grand Rapids Public Schools</td>
<td>Ottawa Hills Tech Prep: Manufacturing &amp; Creston Tech Prep: Manufacturing</td>
</tr>
<tr>
<td>Woodhaven School District/ Wayne County Community College</td>
<td>Woodhaven Schools Tech Prep (Phase II)</td>
</tr>
<tr>
<td>Wayne-Westland Community School District/Schoolcraft College</td>
<td>Wayne-Westland Technology Preparation Program</td>
</tr>
<tr>
<td>Delta College/Saginaw Intermediate School District</td>
<td>Machine Tool Prep</td>
</tr>
<tr>
<td>Grand Blanc Community Schools/Mott Community College</td>
<td>Workforce Readiness (Technical)</td>
</tr>
<tr>
<td>Kellogg Community College Branch Area Career Center</td>
<td>Technology Partnership Program in Electronics Technology</td>
</tr>
<tr>
<td>Schoolcraft College Garden City Public Schools</td>
<td>Allied Health Tech Prep</td>
</tr>
<tr>
<td>Henry Ford Community College/Dearborn Public Schools</td>
<td>4 + 2 Technical Partnership Curriculum Linkages for Academic and Skill Preparation</td>
</tr>
<tr>
<td>Lakeville Millington Community Schools/Mott Community Schools</td>
<td>Computer Aided Drafting/Design</td>
</tr>
<tr>
<td>Jackson County Intermediate School District/Jackson Community College</td>
<td>Manufacturing Technology</td>
</tr>
</tbody>
</table>
document had content validity. Carolyn Maddy-Bernstein, the director of the Technical Assistance for Special Populations Project at the University of Illinois reviewed the instrument with respect to the appropriateness of the questions for the issue being examined. Additionally, a researcher with experience in the area of tech prep for the National Center for Research in Vocational Education, Debra Bragg, reviewed its content. This contact is documented in Appendix B. After this process was completed, it was felt that the questionnaire was an appropriate means of gathering the data necessary to address the research questions.

The questionnaire items were developed in direct relationship to each research question. Items 1, 2, 3, 4, and 6 gathered demographic information concerning the respondent's work setting and professional position held, as well as the type of vocational education offered in the secondary institutions in the consortium.

The first research question deals with the extent to which guidance professionals are involved at the secondary and postsecondary levels in the planning of tech prep programs. This is addressed by questionnaire items 5 and 9.

The second research question concerns the relationship between the career guidance and counseling services provided at the secondary level and the career guidance and counseling services provided at the postsecondary level for tech prep students. Questionnaire items 7, 8, 14, and 16 deal with
The third research question involves the relationship between the career guidance and counseling services provided for special populations tech prep students at the secondary versus postsecondary level. Questionnaire items 10, 11, 12, 15, and 17 were developed to obtain this information.

The fourth research question deals with the nature and extent of the career guidance and counseling programs being planned for regular versus special populations students. The types of counseling services reflected in the questionnaire were included after an examination of the tech prep guidance applications. All applicants were required to specify the types of guidance services being offered. These specified services, coupled with those recommended in the review of the literature, became the services listed on the questionnaire in item 13.

Mailing Procedure

On March 2, 1992, cover letters (Appendix D) and the survey were sent to the identified individuals. A personal letter was sent to each individual, along with a stamped pre-addressed return envelope. Each respondent was asked to complete the instrument and return it by March 16, 1992. A followup letter was sent on March 17, 1992 (Appendix E) to those individuals who had not yet responded.

A master list of the individuals surveyed allowed a system for checking
responses. Each survey contained a five digit code number in the bottom right hand corner. The first digit identified the individual as belonging to one of the following groups: secondary counselor, secondary administrator, postsecondary counselor, postsecondary administrator, secondary special populations coordinator, and postsecondary special populations coordinator. The second and third digits identified the consortium, and the fourth and fifth digits identified the individual.

Data Analysis

The research hypotheses were operationalized as follows:

1. There is a difference in the proportion of guidance professionals involved in the planning of tech prep programs at the secondary and postsecondary levels. The corresponding null hypothesis, that the proportion of guidance professionals involved in the planning of tech prep programs at the secondary and postsecondary levels is equal, was tested by use of the $\chi^2$ test of homogeneity.

2. The proportion of tech prep participants that provide for articulation of guidance services for tech prep students is <.50. The corresponding null hypothesis is that the proportion of tech prep participants that provide for articulation of guidance services for tech prep students is = .50. This null hypothesis was tested by determining the overall proportion of participants that provide for articulation of guidance services for tech prep students.
3. The proportion of tech prep participants that provide for articulation of guidance services for special populations tech prep students < .50. The corresponding null hypothesis is that the proportion of tech prep participants that provide for articulation of guidance services for special populations tech prep students = .50. This null hypothesis was tested by determining the overall proportion of participants that provide for articulation of guidance services for special populations tech prep students.

4. There is no difference in the mean scores for career guidance elements for regular versus special populations tech prep students. This null hypothesis was tested by use of the t-test for dependent means.

All data analysis was accomplished using the Statistical Package for the Social Sciences (SPSS) through the Western Michigan University Vax computer system (SPSS, 1988). Additionally, the grant applications from the eleven participating consortia were examined for trends specific to each of the hypotheses.
RESULTS OF THE STUDY

This chapter presents descriptive information related to the respondents and the results of hypotheses testing.

Instrument Return and Followup

The tech prep survey instrument was sent to 78 individuals representing 40 institutions and all 11 of the participating tech prep consortia. This reflects the scope of agencies participating in the eleven pilot tech prep projects funded by the Michigan Department of Education in the 1990-91 school year. After the first mailing, the researcher learned that two of the surveyed individuals were no longer employed at the same institution, reducing the population to 76. At the end of the March 16 requested return date, a total of 45 surveys had been returned, representing an initial 59% return rate. After the followup letter was sent, an additional 12 surveys were returned, for a total of 57. This represented a return rate of 75%.

Four of the 57 surveys were returned with no responses to any of the questions. All indicated in writing on the survey that they had no personal involvement in the tech prep process, and could not answer the questions posed. Two were postsecondary counselors, and two were postsecondary special populations coordinators. The four individuals represented two
postsecondary institutions.

Demographic Identification of Respondents

The returned surveys indicated that all eleven of the consortia were represented. Additionally, the programming options for vocational education in the respondent agencies included all categories of secondary institutions listed in question 2: area vocational centers, comprehensive high schools offering all vocational programming on-site, shared time vocational programming among area schools, and many with combinations of the above.

The returned surveys were analyzed to determine the breakdown of individuals into categories. This demographic information is contained in Table 2.

<table>
<thead>
<tr>
<th>Type of Position</th>
<th>Secondary Institution</th>
<th>Postsecondary Institution</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselor</td>
<td>11 (19%)</td>
<td>6 (11%)</td>
<td>17 (30%)</td>
</tr>
<tr>
<td>Administrator</td>
<td>20 (35%)</td>
<td>8 (14%)</td>
<td>28 (49%)</td>
</tr>
<tr>
<td>Special Populations Coordinator</td>
<td>5 (9%)</td>
<td>7 (12%)</td>
<td>12 (21%)</td>
</tr>
<tr>
<td>TOTALS</td>
<td>36 (63%)</td>
<td>21 (37%)</td>
<td>57 (100%)</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Additional information was also obtained about the overall tech prep planning structure through questions four and six. Question four asked about the existence of a tech prep planning committee. One hundred percent of the respondents indicated that one existed, which made the inclusion of data examining the participation of guidance professionals on such committees feasible. Question six examined the number of tech prep planning meetings held during the 1990-91 school year, and it was determined that 62% of individuals indicated that more than three meetings were held.

Hypothesis One Testing

The first hypothesis stated that there was a difference in the proportion of guidance professionals involved in the planning of tech prep programs at the secondary and postsecondary levels. The null hypothesis, that the proportion of guidance professionals involved in the planning of tech prep programs at the secondary and postsecondary levels is equal was tested by the $\chi^2$ test of homogeneity, using an alpha level of .05. Question five addressed this issue, and as shown in Table 3, the exact probability of the differences in proportions between the secondary and postsecondary levels occurring by chance is .00433. Therefore, the null hypothesis was rejected, as it appears that there is a difference in the proportion of guidance professionals involved at the secondary and postsecondary levels in the planning of tech prep programs. The proportions would indicate greater involvement by guidance
professionals at the secondary level.

Table 3

<table>
<thead>
<tr>
<th>Position</th>
<th>Proportion</th>
<th>Degrees of Freedom</th>
<th>Exact Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Counselor</td>
<td>.604</td>
<td>1</td>
<td>.004</td>
</tr>
<tr>
<td>Postsecondary Counselor</td>
<td>.377</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further support for these findings was reached when analyzing other items related to this hypothesis. An analysis was made of each of the 11 successful grant applications submitted to the Michigan Department of Education to determine the types of individuals listed as grant participants. The researcher was trying to determine if each of the 11 grant consortia listed secondary and postsecondary guidance personnel as individuals who would be working on the grant. All 11 (100%) of the consortia listed secondary and postsecondary administrators. However, this was not the case when examining grant applications for guidance personnel. Only seven (63%) of the consortia listed guidance personnel at both the secondary and postsecondary level. There were three (27%) consortia that listed no guidance personnel at the secondary level. These same three consortia, with one additional consortium, for a total of four (36%), did not list any guidance professionals
at the postsecondary level.

Only two (18%) of the consortia listed secondary special populations coordinators, and none (0%) of the consortia listed individuals with the responsibility for postsecondary special populations students.

The researcher was interested in analyzing the planning efforts further to determine the types of methods which were being used to involve guidance professionals in tech prep planning. This information, obtained through question nine, is presented graphically in Table 4.

Table 4

Percent of Individuals Indicating Use of Various Methods to Involve Guidance Professionals

<table>
<thead>
<tr>
<th>Involvement Method</th>
<th>Type of Institutional Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Secondary</td>
</tr>
<tr>
<td>Newsletter or written update</td>
<td>40%</td>
</tr>
<tr>
<td>Tech prep agenda item at staff meeting</td>
<td>40%</td>
</tr>
<tr>
<td>Informational meeting on tech prep</td>
<td>57%</td>
</tr>
<tr>
<td>Tech prep informational brochure</td>
<td>40%</td>
</tr>
</tbody>
</table>

The most prevalent method of involving guidance professionals was the use of informational meetings on tech prep.

Hypothesis Two Testing

The second hypothesis stated that the proportion of tech prep partici-
pants that provide for articulation of guidance services for tech prep students is \(< .50 (H_o: P < .50)\). The null hypothesis, that the proportion of tech prep participants that provide for articulation of guidance services for tech prep students equals .50 \((H_o: P = .50)\) was tested. This was calculated by using the crosstabs procedure of the SPSS to determine proportions of each grant consortia that indicated that information regarding secondary tech prep students would be shared by secondary and postsecondary personnel.

The actual proportion of participants who provide for articulation of guidance services for tech prep students, as obtained through question 16, was .566. This was the total of those who use either written notification, instructor meetings, or counselors sharing information. The null hypothesis was rejected, as the proportion was \(>.50\), and the results went in an opposite direction from that anticipated. The results are shown graphically in Table 5.

Table 5

<table>
<thead>
<tr>
<th>Articulation Process</th>
<th>Subgroup Proportions</th>
<th>Total Proportions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Notification</td>
<td>.113</td>
<td></td>
</tr>
<tr>
<td>Instructors Meet</td>
<td>.264</td>
<td></td>
</tr>
<tr>
<td>Counselors Share</td>
<td>.189</td>
<td></td>
</tr>
<tr>
<td><strong>Total Articulating</strong></td>
<td><strong>.566</strong></td>
<td></td>
</tr>
<tr>
<td>No Articulation</td>
<td>.358</td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td>.076</td>
<td></td>
</tr>
</tbody>
</table>
When one examines the results, it is seen that only .189 reported that information regarding secondary tech prep students is shared by secondary and postsecondary guidance personnel. It would appear that articulation between guidance staffs at the secondary and postsecondary levels is not prevalent in Michigan. Over one-third of all respondents reported that there was no articulation of services. For those agencies using some process, no one method appears to have precedence.

To further complicate the issue of articulation of guidance services, there is not agreement concerning what type of guidance professional holds the counseling responsibility for tech prep students. Question 14 obtained this information, and Table 6 shows a comparison of these findings at the secondary and postsecondary levels.

Table 6
Comparison of Individuals With the Counseling Responsibility for Tech Prep Students at Secondary and Postsecondary Levels

<table>
<thead>
<tr>
<th>Individuals Providing Guidance</th>
<th>Secondary</th>
<th>Postsecondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Counselor</td>
<td>.34</td>
<td>.14</td>
</tr>
<tr>
<td>Regular Counselor</td>
<td>.57</td>
<td>.36</td>
</tr>
<tr>
<td>Special Populations Coordinator</td>
<td>.00</td>
<td>.14</td>
</tr>
<tr>
<td>None Assigned</td>
<td>.09</td>
<td>.36</td>
</tr>
<tr>
<td>Totals</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The results show that .34 of the secondary respondents and .14 of the
postsecondary respondents stated that the responsibility was held by a vocational counselor. At the postsecondary level, .36 of tech prep students were not assigned to any specific counselor for guidance services.

Question seven asked how many opportunities there were for the secondary counselors to meet formally with the postsecondary counselors in their consortium during the past school year. The mean and mode responses to this question were both computed as two. Question eight asked how many meetings were held in the last year regarding tech prep with secondary and postsecondary counselors. The responses for this question were the same as question seven, with the mean and mode again being that two meetings were held during the year.

Hypothesis Three Testing

The third hypothesis stated that the proportion of tech prep grant participants who had a formal articulation process for guidance services to special populations tech prep students was $< .50$ ($H_a: P < .50$). The null hypothesis, that the proportion of tech prep grant participants who had a formal articulation process for guidance services to special populations tech prep students equals $.50$ ($H_0: P = .50$) was tested. This was calculated by using the crosstabs procedure of the SPSS to determine the proportion of individuals who indicated a formal articulation process for special populations tech prep students. The null hypothesis was rejected, as the actual propor-
tion who indicated a formal articulation process for special populations tech
prep students, as obtained through question 17, was .302, well below .50. The
actual proportion is in the direction of the alternate hypothesis.

The computed proportion is the total who indicated the use of written
notification, special populations coordinators sharing the information, or
counselors sharing the information. This is shown in Table 7.

Table 7

<table>
<thead>
<tr>
<th>Articulation Process</th>
<th>Subgroup Proportion</th>
<th>Total Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Notification</td>
<td>.056</td>
<td></td>
</tr>
<tr>
<td>Special Populations Coordinators Share</td>
<td>.189</td>
<td></td>
</tr>
<tr>
<td>Counselors Share</td>
<td>.057</td>
<td></td>
</tr>
<tr>
<td>Total Reporting Articulation</td>
<td>.302</td>
<td></td>
</tr>
<tr>
<td>No Articulation</td>
<td>.415</td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td>.283</td>
<td></td>
</tr>
</tbody>
</table>

The rejection of the null hypothesis gives only an incomplete answer to
the question that the researcher was attempting to answer. Perhaps most
revealing is the .283 who didn’t know. This highlights the lack of emphasis
that this issue is being given in the planning phase. The proportion of those
who don’t know (.283), coupled with the proportion who indicate no articu-
lation (.415), totals a disturbing .679 of those individuals surveyed.

Obviously, in order to articulate services for special populations students, there must be identification made of this population. Question ten asked whether or not agencies had a formal process for the identification of special populations students. The response to this question is shown in Table 8.

Table 8

<table>
<thead>
<tr>
<th>Proportion of Secondary and Postsecondary Agencies</th>
<th>With Process for Identifying Special Populations Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Agencies</td>
<td>.77</td>
</tr>
<tr>
<td>Postsecondary Agencies</td>
<td>1.00</td>
</tr>
</tbody>
</table>

As can be seen by the differences in proportions between the secondary and postsecondary levels in those identifying special populations students, the use of identification is not uniform across levels, although it is a prevalent practice.

Another issue in the articulation of services to special populations students is the lack of uniformity in identification standards. This was addressed in the literature review in the discussion concerning the at-risk population. Table 9 shows a comparison of the processes used at the secondary and postsecondary levels to identify special populations students,
compiled from responses to question 11. There does not appear to be much
difference in processes between the secondary and postsecondary levels, with
the exception of attendance. This discrepancy can be explained by the
mandatory school attendance laws that affect secondary but not postsecondary
levels.

Table 9
Proportion Using Various Special Populations Student Identification Processes

<table>
<thead>
<tr>
<th>Process</th>
<th>Secondary</th>
<th>Postsecondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Point Average</td>
<td>.714</td>
<td>.778</td>
</tr>
<tr>
<td>Teacher Input</td>
<td>.486</td>
<td>.667</td>
</tr>
<tr>
<td>Attendance</td>
<td>.543</td>
<td>.278</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>.343</td>
<td>.444</td>
</tr>
<tr>
<td>Standardized Test Results</td>
<td>.629</td>
<td>.889</td>
</tr>
<tr>
<td>English Language Proficiency</td>
<td>.371</td>
<td>.556</td>
</tr>
<tr>
<td>Handicap</td>
<td>.629</td>
<td>.611</td>
</tr>
<tr>
<td>Other (Intake interview)</td>
<td>.200</td>
<td>.333</td>
</tr>
</tbody>
</table>

Once special populations students have been identified, there is little
agreement as to who holds the responsibility for monitoring their progress
through a tech prep sequence. Information was gained regarding the specific
counseling responsibilities for special populations tech prep students in
question fifteen. Respondents were asked to rank the responsibility each of
the following individuals have for monitoring special populations student
progress through a tech prep sequence: vocational teacher, regular counselor, vocational counselor, placement or cooperative education staff, or special populations staff. The results of this ranking are shown in Table 10, broken down by secondary and postsecondary locations. Each respondent was asked to rank the degree of responsibility held by each individual, on a Likert scale with the following categories: 1 denoting no responsibility, 2 denoting slight responsibility, 3 denoting moderate responsibility, and 4 denoting prime responsibility. There was a higher level of responsibility at the secondary level for vocational teachers, as well as for regular and vocational counselors. The special populations coordinators held more responsibility at the postsecondary level. It was not felt that any of these individuals had more than slight responsibility.

Table 10

<table>
<thead>
<tr>
<th>Individuals Responsible</th>
<th>Mean Score for Responsibility for Secondary Students</th>
<th>Mean Score for Responsibility for Postsecondary Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Teacher</td>
<td>2.37</td>
<td>1.61</td>
</tr>
<tr>
<td>Regular Counselor</td>
<td>2.08</td>
<td>1.66</td>
</tr>
<tr>
<td>Vocational Counselor</td>
<td>1.90</td>
<td>1.20</td>
</tr>
<tr>
<td>Placement Staff</td>
<td>1.34</td>
<td>1.11</td>
</tr>
<tr>
<td>Special Populations Coordinator</td>
<td>2.20</td>
<td>2.72</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Hypothesis Four Testing

The fourth hypothesis stated that there was no difference in the mean scores for career guidance elements for regular versus special populations tech prep students. This null hypothesis was tested by use of the t-test for dependent means, at $\alpha.05$. The results of this hypothesis testing are shown in Table 11.

The null hypothesis was rejected for the career guidance elements of course selection, counseling for job problems, individual vocational guidance, aptitude testing, interest testing, and arrange for remedial services. In all of these cases, a greater mean score was derived for the special populations tech prep student group.

The null hypothesis was not rejected for the career guidance elements of career days, follow-up on graduates, provision of occupational information, group vocational guidance, and employability development plans. It can not be said that the provision of career guidance services is different between regular and special populations tech prep students for these elements.

Each of the career guidance elements was present for both regular and special populations tech prep students, with course selection having the heaviest emphasis in both groups. The nature of the career guidance and counseling program that was being planned for regular and special populations students was investigated by examining the tech prep grant applications from each consortium. Each consortium was required to write a
narrative section describing the proposed activities related to the career guidance and counseling component. The use of an Educational Development Plan (EDP) was common to all narratives. Two of the eleven stated that this EDP process would be articulated on to the postsecondary institution. The grant applications were very similar in the area of career guidance, and reflected the elements listed in question 12, and delineated in Table 11.
Table 11

A Comparison of Emphasis Being Given to Different Career Guidance Efforts for Regular and Special Populations Tech Prep Students

<table>
<thead>
<tr>
<th>Guidance Element</th>
<th>Regular Tech Prep Student</th>
<th>Special Populations Tech Prep Student</th>
<th>Exact Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Selection</td>
<td>3.22</td>
<td>3.42</td>
<td>.037 *</td>
</tr>
<tr>
<td>Career Days</td>
<td>2.60</td>
<td>2.55</td>
<td>.599</td>
</tr>
<tr>
<td>Follow-Up on Graduates</td>
<td>2.53</td>
<td>2.64</td>
<td>.256</td>
</tr>
<tr>
<td>Provision of Occupational Information</td>
<td>3.27</td>
<td>3.04</td>
<td>.133</td>
</tr>
<tr>
<td>Counseling for Job Problems</td>
<td>2.16</td>
<td>2.51</td>
<td>.001 *</td>
</tr>
<tr>
<td>Individual Vocational Guidance</td>
<td>3.02</td>
<td>3.29</td>
<td>.002 *</td>
</tr>
<tr>
<td>Group Vocational Guidance</td>
<td>2.50</td>
<td>2.67</td>
<td>.128</td>
</tr>
<tr>
<td>Aptitude Testing</td>
<td>2.98</td>
<td>3.24</td>
<td>.017 *</td>
</tr>
<tr>
<td>Employability Development Plans</td>
<td>3.09</td>
<td>3.21</td>
<td>.200</td>
</tr>
<tr>
<td>Interest Testing</td>
<td>2.84</td>
<td>3.07</td>
<td>.031 *</td>
</tr>
<tr>
<td>Arrange for Remedial Services</td>
<td>2.80</td>
<td>3.24</td>
<td>.002 *</td>
</tr>
</tbody>
</table>

* Null is rejected

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
DISCUSSION AND CONCLUSIONS

This chapter presents a discussion of the investigation and its findings. The reasons for examining this issue will be summarized, followed by the interpretation of the findings, the subsequent recommendations for further research, and the conclusions of the study.

Review of the Problem and Procedures

This investigation was undertaken in the context of the incompleteness of research into the planning and implementation of tech prep programs. The study was designed to specifically examine the guidance and counseling component of tech prep programs, for regular students as well as students who are members of special populations.

If the United States is to continue to compete in an increasingly technological global economy, "we must mobilize our most vital asset, the skills of our people--not just the skills of the 30 percent who will graduate with baccalaureate degrees from college" (Magaziner & Clinton, 1992, p.11). Although it is imperative that vocational education programs continue to increase in quality, of grave concern is the impact of this trend upon special populations. It is commonly accepted that special populations students need comprehensive support services in order to be able to succeed within the
traditional educational environment. Indeed, the Carl Perkins Act mandates such comprehensive career guidance and counseling services for special populations students. However, as schools try to be responsive to the needs of industry and move to create new programs such as tech prep, it is feared that little emphasis has been given to the importance of including guidance professionals and guidance programming in this program planning and implementation.

The review of the literature began by focusing on the historical and societal trends that led to the passage of the Carl D. Perkins Vocational and Applied Technology Act of 1990. This was followed by an examination of the guidance and counseling component of this legislation. In order to identify the component parts of a comprehensive career guidance and counseling program, a review was made of research into exemplary career guidance programming, both for regular and special populations students. Current research into the development of tech prep programs was examined to help determine the recommended components of successful tech prep implementation efforts.

This led to the development of four hypotheses related to guidance and counseling in the tech prep planning effort: (1) there is no difference in the extent to which guidance professionals are involved at the secondary and postsecondary level in the planning of tech prep programs, (2) there is an articulation relationship between the career guidance and counseling services
provided at the secondary level and the career guidance and counseling services provided at the postsecondary level for tech prep students, (3) there is an articulation relationship between the career guidance and counseling services provided for special populations tech prep students at the secondary level and the career guidance and counseling services provided for special populations tech prep students at the postsecondary level, and (4) for tech prep students, there is no difference in the nature and extent of the career guidance and counseling program that is being planned for regular and special populations students.

A questionnaire was developed to obtain information related to the four hypotheses based upon a review of the literature, and an examination of the tech prep program elements which are required by the Carl D. Perkins law.

Methods used to carry out the investigation were discussed in the chapter entitled Methodology. The population consisted of all eleven tech prep grants which were awarded in the state of Michigan during the 1990-91 school year. The questionnaire was distributed to tech prep participants within these agencies who were secondary or postsecondary counselors, secondary or postsecondary administrators, or secondary or postsecondary special populations coordinators.
Conclusions and Implications

When drawing conclusions about the results of the research, it is necessary to realize the preliminary nature of the tech prep effort. This study looked at tech prep pilot projects, which were beginning to define and structure the tech prep efforts for Michigan. The planners were not under the influence of the new Carl Perkins Law when these grants were started, and for many agencies it was the first year in any type of tech prep project. One respondent noted that the formal tech prep program/process was still in the developmental stage. There are no long range data available, nor are there any instruments available to measure effectiveness of efforts. The interpretation of the data depends to a great deal on a descriptive analysis of the survey results.

Although testing of the first hypothesis showed that there is somewhat greater involvement of guidance professionals at the secondary level as opposed to the postsecondary level, the fact that 27% of the consortia did not list any guidance professionals as formal participants on their grant applications highlights the lack of inclusion of this group in the overall planning of tech prep efforts. An examination of the methods used to involve guidance professionals in tech prep planning showed that the informational meeting was the only method used by more than half of the consortia at the secondary and postsecondary levels. If tech prep planners in Michigan are to gain the commitment of guidance professionals as recommended by Hull and Parnell
The use of more of the other methods such as newsletters, informational brochures, and updates at staff meetings are recommended for helping guidance professionals to become more involved in tech prep. The continued and increased involvement of guidance professionals as formal participants in the tech prep planning process is recommended.

Analysis of data related to the second hypothesis showed that although 57% of the respondents indicated that there was articulation of guidance services for tech prep students between the secondary and postsecondary levels, many different methods are used. Only 18.9% articulate services by coordination through guidance personnel at the secondary and postsecondary levels. However, tech prep appears to be responsible for opening a means of dialogue between guidance professionals at these two levels, as respondents reported an average of two joint secondary/postsecondary meetings for guidance personnel in the past year, both of which were regarding tech prep. As tech prep efforts move forward, more emphasis needs to be placed on the coordination of these two service providers. At this stage of tech prep planning, it appears that the instructors at the secondary and postsecondary level are responsible for the greatest level of articulation of information, as 26.4% reported that instructors take this role. At the postsecondary level, it was reported that 36% of tech prep students were not assigned to a specific counselor. The researcher found that counseling services by a specified counselor was more predominant at the secondary level. This may be
attributed to the feeling that postsecondary students are no longer in need of specific career guidance services.

The testing of hypothesis three highlighted the lack of articulation for guidance services for special populations tech prep students between the secondary and postsecondary levels. The Carl Perkins Law emphasizes services to special populations, yet early tech prep efforts in Michigan do not have a heavy emphasis on serving this group. A disturbing 68% of individuals either did not know or stated that there was no articulation of services for special populations students. Comprehensive support services such as ongoing career guidance and counseling have been shown to be a component of exemplary vocational education programming for special populations students (NCRVE, 1989). More attention needs to be given to the provision of guidance services for special populations students as tech prep projects are being planned and implemented. The research found that a majority of agencies at both the secondary and postsecondary levels identify this population, and appear to use similar criteria. Therefore, the foundation is present for needed articulation efforts. However, in the area of the monitoring of special populations students, there appears to be no one group with prime responsibility. It is important for all individuals who work with this population to take responsibility for student progress. Nonetheless, in the area of articulation, which by definition means coordination, more attention needs to be paid to the formal process which will result in information about
special populations students progressing with them from the secondary to the postsecondary level.

The testing of hypothesis four showed that recommended career guidance elements were present for both regular and special populations students. It appears as if the career guidance components of tech prep programming are being addressed in the tech prep planning efforts that are underway in Michigan. Certain career guidance elements were more heavily emphasized for the special populations group: course selection, counseling for job problems, individual vocational guidance, aptitude and interest testing, and arranging for remedial services. It is commonly accepted that these services are needed by special populations students, which would account for the greater mean in these elements.

The nature of the career guidance and counseling efforts in Michigan tech prep programs mirrors the recommended elements outlined by Hull and Parnell (1991). All of the grant applications described student course selection, career awareness, career planning, assessment, and the use of an EDP. The researcher felt that the career guidance elements were being stressed in tech prep planning. However, only two consortia mentioned any carryover of coordinated services from the secondary to postsecondary levels through the use of the EDP process. None of the consortia mentioned any type of specific guidance services for special populations students, indicating that the special needs of these individuals are not being given special consid-
eration in the planning efforts. Special populations coordinators in Michigan, and all who work with the programming for special populations, need to be more proactive in ensuring that consideration is being given to this population as the tech prep effort moves forward.

Recommendations for Further Research

Tech prep is a relatively new concept, and the law is just beginning to be implemented. The researcher investigated the planning efforts of pilot tech prep projects in an effort to determine what elements need to be addressed more fully as all of the consortia in Michigan work to develop tech prep programs that comply with newly implemented tech prep legislation. Research is needed into exemplary guidance articulation models, for although comprehensive guidance elements are present at both the secondary and postsecondary levels in tech prep planning, there is little articulation between the two levels.

Research also needs to be conducted into ways of ensuring that the special populations students are not omitted in the planning process for tech prep. Further research into practices that enable special populations students to succeed within a tech prep setting is necessary.

The questionnaire administered in this study was an attempt to gain an understanding of what practices are being tried as programs are being planned. There are several obstacles involved in investigating tech prep
planning efforts. The concept is continually evolving as agencies struggle with the best ways to implement new programs and processes. The stakeholders in the program are varied, and often hard to categorize, as many individuals play a multitude of roles. The settings in which tech prep projects are being implemented are as varied as the communities in which they reside. Different challenges are faced by each consortium that struggles to start such an effort. However, in spite of the obstacles, research into the evolving concept of tech prep is essential to its continual improvement.
Appendix A

Tech Prep Planning Survey
This survey is designed to gain an understanding of the tech prep planning process your agency has used. Please answer these questions to the best of your ability. They are designed to measure your personal understanding and involvement in the tech prep process, and should be answered without input from others. Your responses will be summarized without reference to organizations or persons. Thank you very much for taking the time necessary to complete this questionnaire.

1. Please indicate your work setting:
   - Secondary comprehensive high school
   - Secondary area vocational center
   - Community college
   - Intermediate school district

2. What type of secondary vocational education is available in your area?
   - Area vocational center
   - Comprehensive high school offering all vocational programming on-site
   - Shared time vocational programming among area schools
   - Other, please explain __________________________
   - Don't know

3. Please check the item which most pertains to your professional position:
   - Secondary vocational administrator
   - Secondary guidance counselor
   - Community college guidance counselor
   - Community college administrator
   - Intermediate school district administrator
   - Special needs (populations) coordinator
   - Special needs (populations) coordinator and counselor
   - Other, please explain __________________________

4. Is there a tech prep planning committee on which your institution is represented?
   - Yes
   - No
   - Don't know
5. Please check all of the following groups that were formally represented on a tech prep planning committee in your participating agencies:
- Postsecondary faculty
- Postsecondary counselors
- Secondary faculty
- Secondary counselors
- Postsecondary special needs (populations) coordinators
- Secondary special needs (populations) coordinators
- Don’t know

6. How many tech prep planning meetings were held during the 1990-91 year?
- 0
- 1
- 2
- 3
- More than 3
- Don’t know

7. In the past year, how many opportunities have there been for the secondary counselors to meet formally with the postsecondary counselors in your area?
- 0
- 1
- 2
- 3
- More than 3
- Don’t know

8. In the past year, how many meetings have been held regarding tech prep with secondary and post secondary counselors invited?
- 0
- 1
- 2
- 3
- More than 3
- Don’t know
9. Which of the following have been used to inform the guidance counselors in your institution about the tech prep program option? (Check all that apply)

☐ Newsletter or written update
☐ Tech prep agenda item on department or staff meeting
☐ Informational meeting devoted to tech prep
☐ Tech prep informational brochure
☐ Other, please list: _________________________________________________

10. Does your agency have a formal process for identifying special needs (or at-risk) students?

☐ No
☐ Yes

11. If yes, check all of the following criteria which are currently used:

☐ Grade point average
☐ Teacher input
☐ Attendance
☐ Socioeconomic status
☐ Standardized test results
☐ English language proficiency
☐ Handicap
☐ Other, please list ________________________________

12. Please check all of the following that you believe are used to monitor progress of special needs (populations) students in the secondary and postsecondary agencies in your tech prep consortium:

☐ Formal identification is not made
☐ Students are identified in elementary or middle school, and listing is updated until high school graduation
☐ Students are identified upon entering high school and tracked and updated until high school graduation
☐ Students are identified upon entering vocational program, and tracked until high school graduation
☐ Students are identified upon entering vocational program, and tracked until leaving a postsecondary institution
☐ Students are identified upon entering a postsecondary institution
☐ Other, please list: ________________________________
13. The following are elements of a career guidance program that can be provided by counselors for tech prep students. Please rate the extent to which you feel each is provided at your institution for regular tech prep students. Then rate the extent to which you feel each is provided for special needs (populations) tech prep students.

<table>
<thead>
<tr>
<th>EXTENT TO WHICH ELEMENT IS PRESENT FOR REGULAR TECH PREP STUDENTS</th>
<th>EXTENT TO WHICH ELEMENT IS PRESENT FOR SPECIAL NEEDS TECH PREP STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE SELECTION</td>
<td>COURSE SELECTION</td>
</tr>
<tr>
<td>CAREER DAYS AND SPEAKERS</td>
<td>CAREER DAYS AND SPEAKERS</td>
</tr>
<tr>
<td>FOLLOW UP STUDIES ON GRADUATES</td>
<td>FOLLOW UP STUDIES ON GRADUATES</td>
</tr>
<tr>
<td>PROVISION OF OCCUPATIONAL INFORMATION</td>
<td>PROVISION OF OCCUPATIONAL INFORMATION</td>
</tr>
<tr>
<td>COUNSELING FOR ON THE JOB PROBLEMS</td>
<td>COUNSELING FOR ON THE JOB PROBLEMS</td>
</tr>
<tr>
<td>INDIVIDUAL VOCATIONAL GUIDANCE</td>
<td>INDIVIDUAL VOCATIONAL GUIDANCE</td>
</tr>
<tr>
<td>GROUP VOCATIONAL GUIDANCE</td>
<td>GROUP VOCATIONAL GUIDANCE</td>
</tr>
<tr>
<td>APTITUDE TESTING</td>
<td>APTITUDE TESTING</td>
</tr>
<tr>
<td>EMPLOYABILITY DEVELOPMENT PLANS</td>
<td>EMPLOYABILITY DEVELOPMENT PLANS</td>
</tr>
<tr>
<td>INTEREST TESTING</td>
<td>INTEREST TESTING</td>
</tr>
<tr>
<td>ARRANGING FOR ACADEMIC REMEDIAL SERVICES</td>
<td>ARRANGING FOR ACADEMIC REMEDIAL SERVICES</td>
</tr>
</tbody>
</table>

14. Who holds the counseling responsibility for students in tech prep?

- [ ] Student is assigned to a vocational counselor
- [ ] Student receives all services from regular school counselor
- [ ] No assigned counselor, but services available in counseling center
- [ ] Other, please list: ________________________________________________

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
15. Please indicate the responsibility each of the following individuals has for monitoring special needs (populations) student progress through a tech prep sequence:

<table>
<thead>
<tr>
<th>Role</th>
<th>NO RESPONSIBILITY</th>
<th>SLIGHT RESPONSIBILITY</th>
<th>MODERATE RESPONSIBILITY</th>
<th>PRIME RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational teacher</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Regular counselor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Vocational counselor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Placement or cooperative education staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Special needs (populations) coordinator</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Other, please name: ________________________________

16. Indicate the process by which names and information regarding secondary tech prep students will reach the postsecondary institution. (Please check all that apply):

- [ ] Instructors meet to share information
- [ ] Information is shared by secondary/postsecondary guidance personnel
- [ ] Written materials are forwarded to postsecondary faculty members or departments
- [ ] There is no formal process for sharing this information
- [ ] Other, please list: ___________________________________________________
- [ ] Don't know

17. Indicate the process by which names and information regarding secondary tech prep students who are also special needs (populations) students will reach the postsecondary institution:

- [ ] These students are not flagged as being special needs. The same process is used as is used for any tech prep student.
- [ ] The special needs (population) coordinators at the secondary/postsecondary level will share this information
- [ ] These students are flagged as being special needs (populations). Information is shared by secondary/postsecondary guidance personnel
- [ ] These students are flagged as being special needs (populations). Written materials are forwarded to postsecondary faculty members or departments
- [ ] Other, please list: ___________________________________________________
- [ ] Don't know
Appendix B

National Center for Research in Vocational Education Input Letter
January 9, 1992

Dr. Carolyn Maddy-Bernstein, Director
Technical Assistance for Special Populations Program of the National Center for Research in Vocational Education
University of Illinois
345 Education Building
1310 South Sixth Street
Champaign, IL 61820

Dear Carolyn,

Thank you so much for agreeing to give me input on my research survey instrument. I also appreciate your offer to share the document with Debra Bragg, who is doing so much national work in the area of tech prep.

I have enclosed a prospectus of the study that I am undertaking, as well as the actual survey instrument. I want to thank you again for all of the assistance I have received from your office, and especially for the personal advice and help you have offered thus far.

I look forward to receiving your reactions to my survey, and appreciate your taking time from your busy schedule to help my move towards completing my dissertation. If you should have any questions, my work number is (616) 388-9484.

Sincerely,

Linda Kwasny

enc.
Appendix C

HSIRB Exempt Form
Date: February 27, 1992
To: Linda Kwasny
From: Mary Anne Bunda, Chair
Re: HSIRB Project Number: 92-02-21

This letter will serve as confirmation that your research protocol, "The Extent to which the Career Guidance and Counseling Component is Addressed in the Administration of Tech Prep Programs" has been approved under the exempt category of review by the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

xc: Cowden, EDLD

Approval Termination: February 27, 1993
Appendix D

Survey Letter
March 2, 1992

I'm sure the last thing you have time to fit into your busy schedule is a survey from some student, but I really need your help! I am currently employed as the Student Services Coordinator for secondary vocational education in Kalamazoo County, and am doing research for my doctoral dissertation in the area of tech prep. The research includes examining the eleven tech prep grants which were awarded in the state of Michigan during the 1990-91 school year in the area of guidance programming.

I would be very grateful if you would take the approximately ten minutes needed to complete the enclosed survey, answering each question without input from others, based only upon your individual involvement and understanding. Others in your agency may receive the same survey, but I am looking for your individual perspective, which may differ from that of your colleagues. Your results will be kept completely anonymous, for I am interested in developing a statewide picture of the pre-Carl Perkins tech prep guidance effort, and not a listing of individual district or agency efforts. The results will be used to summarize past efforts, with recommendations for the improvement of future tech prep planning and possible inservice topics.

I would appreciate your returning the survey by March 16. Thank you again for taking time from your busy schedule to help me complete my research, and ultimately my degree, and please don't hesitate to call if you have any questions.

Sincerely,

Linda Kwasny

Education for Employment/Eastern Service Area
Appendix E

Follow Up Survey Letter
March 17, 1992

Dear first name:

Recently you were asked to respond to a survey relating to tech prep. As of yet, I have not received a response. As mentioned previously, the information collected from the survey will not be identified by individuals, but rather used to gather a statewide picture of previous tech prep efforts.

If you have returned the survey before this letter reaches you, please disregard this letter and accept my sincere thanks. If you have not completed the survey, I am again asking your help in taking some of your valuable time to do so. You will ultimately lend to the success of my dissertation research.

If you have any questions, or need further information, please don't hesitate to call.

Again, many thanks for helping me achieve my goal!

Sincerely,

Linda Kwasny
Student Services Coordinator
BIBLIOGRAPHY


Education Conference on Education and Work: Directions for the 80's, Washington, DC.


Research in Vocational Education.


