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AN ASSESSMENT OF MAINSTREAMING COMPETENCY IMPORTANCE
AND ABILITY RATINGS AS PERCEIVED BY MICHIGAN AREA
VOCATIONAL CENTER TEACHERS

Michigan State University

PH.D.

1979

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IMPORTANCE AND ABILITY RATINGS AS PERCEIVED
BY MICHIGAN AREA VOCATIONAL CENTER TEACHERS

by

Jerry L. Roiter

A DISSERTATION

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1979

ABSTRACT

AN ASSESSMENT OF MAINSTREAMING COMPETENCY IMPORTANCE AND ABILITY RATINGS AS PERCEIVED BY MICHIGAN AREA VOCATIONAL CENTER TEACHERS

By

Jerry L. Roiter

Purpose of the Study

The purpose of this study was two-fold. First of all it was intended to assess the importance of mainstreaming competencies as perceived by Michigan Area Vocational Center teachers. Secondly, the study was intended to ascertain the perceived ability of Michigan Area Vocational Center teachers to perform the aforementioned mainstreaming competencies.

Mainstreaming is a term commonly used to describe the education of handicapped children in regular classrooms. With the perceived importance and perceived ability ratings contained in this study it is possible to identify what mainstreaming competencies Michigan Area Vocational Center teachers believe they need to understand as well as to identify the related degree of need to increase the teachers' ability to perform the concerned competencies. This information can be utilized to design teacher training programs and in-service programs which appropriately prepare teachers to teach in a mainstreaming setting.

Population and Samples

The population for this study was comprised of 722 Michigan Area Vocational Center teachers. The teachers were employed at Michigan Area Vocational Centers in which only vocational education coursework and no general education coursework is offered.

Two proportional samples were randomly selected. The initial sample surveyed consisted of 143 teachers or 20 percent of the population. Of these teachers 80 responded for a total of 56 percent of the sample. A replication survey which followed the initial survey consisted of 72 teachers or 10 percent of the population. 33 teachers responded for a total of 46 percent of the replication sample.

Data Collection and Analysis

Data were collected by means of a questionnaire mailed to the teachers sampled. Part I of the questionnaire sought demographic information about the respondents. Part II sought perceptions of the importance of 52 selected mainstreaming competencies as well as the perceived ability of the teachers to perform the competencies. The chi-square statistic (.05 level of significance) was used to determine relationships in response patterns for selected explanatory variables.

Summary of the Findings

The most typical demographic characteristics of the respondents were:

1. Occupational Area: Trade and Industrial Education,
55.2 percent

2. Employment Status: Full-time, 97 percent
3. Earned Educational Degree Level: Bachelors Degree, 35.8 percent
4. Years of Vocational Education Teaching Experience: 3 to 5 years, 32.8 percent
5. Type(s) of Handicap(s) of Students Served: Learning Disabled, 80.6 percent

In the initial survey 49 of the 52 mainstreaming competencies were rated as being important by 73 percent or more of the respondents. Of the 52 mainstreaming competencies, 47 had less than 50 percent of the respondents in the "Can Do Well" category of perceived ability. The replication survey had 48 of the 52 mainstreaming competencies rated as being important by 70 percent or more of the sample. In the replication survey 45 of the 52 mainstreaming competencies had less than 50 percent of the respondents in the "Can Do Well" category of perceived ability.

The independent variables of Occupational Area and Employment Status were inappropriate for analysis by chi-square statistics due to skewed respondent characteristics. The independent variable of type(s) of handicapping condition(s) was inappropriate for analysis due to data which were not mutually exclusive.

The independent variables of Earned Educational Degree Level and Years of Vocational Education Teaching Experience had little effect on the perceived importance and ability ratings of the respondents.

The open-ended question on the questionnaire yielded five suggestions for additional competencies to be added to the questionnaire.

This study is dedicated to my wife, Margaret Ann, and our children, Jeanne Lynnette, Catherine Ann, David Lee, and Diane Elizabeth.

ACKNOWLEDGEMENTS

I wish to thank Dr. Robert Poland, Dr. Castelle Gentry, and Dr. Frederick Ignatovich for their assistance as members of my doctoral committee. Their comments and guidance were very helpful in formulating and carrying out this research study.

Special thanks are extended to my committee chairman, Dr. Billie T. Rader, whose expertise in mainstreaming and research techniques were invaluable in the production of this research study. In addition, Dr. Rader's sincerity and assistance at any and all times have made it a pleasure to work with him.

Particular thanks are extended to my wife, Margaret Ann, whose understanding, support, and assistance made it possible to complete this research study.

Appreciation is felt for the years of support which my parents, Mr. and Mrs. Robert C. Roiter, and my wife's parents, Mr. and Mrs. Earl S. Parker, have provided in the achievement of this goal.

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CHAPTER ONE

THE PROBLEM

Introduction

The intent of this study was to determine the importance of selected competencies related to teaching handicapped persons in regular vocational education classes as perceived by Michigan Area Vocational Center teachers as well as to assess the perceived ability of Michigan Area Vocational Center Teachers to perform these stated competencies. The education of handicapped persons in regular classrooms is commonly called "mainstreaming", although it should be noted that this term is not used in the legislation which pioneered the practice.

The education of handicapped persons in regular classrooms is a reality. Furthermore it is a civil right of handicapped persons and an obligation of our society. The following statement illustrates the importance of this concept and the support it is receiving:

Hairston et al v. Drosick, 423 F. Supp. (1976, 183):

A child's chance in this society is through the educational process. A major goal of the educational process is the socialization process that takes place in the regular classroom, with the resulting capability to interact in a social way with one's peers. It is therefore imperative that every child receive an education with his or her peers insofar as it is at all possible. This conclusion is further enforced by the critical importance of

education in this society.

It is an educational fact that the maximum benefits to a child are received by placement in as normal environment as possible. The expert testimony established that placement of children in abnormal environments outside of peer situations imposes additional psychological and emotional handicaps upon children which, added to their existing handicaps causes them greater difficulties in future life. A child has to learn to interact in a social way with its peers and the denial of this opportunity during his minor years imposes added lifetime burdens upon a handicapped individual.

This educational fact that handicapped children should be excluded from the regular classroom situation only as a last resort is recognized in federal law.

We as a society are becoming more aware of the rights of handicapped persons. This awareness is physically evidenced by the increase in parking spaces reserved for the handicapped, ramps in place of steps, lowered appliances, wider doorways and numerous other physical adaptations of facilities. Although legal rights such as job and education opportunities are not as visible as physical provisions, they too comprise an essential part of the rights of handicapped persons.

Part of the problem handicapped persons face in their attempts to attain equal opportunities is society's attitudes toward them. Based on incorrect and/or ill-informed beliefs, members of society continue to frequently regard handicapped persons as being inferior to non-handicapped persons. These beliefs are exemplified by such actions as incorrect associations of physical impairments with

mental impairments. Neither are these incorrect beliefs confined to value judgments of a subjective nature. There exist even today testing and classification procedures which sometimes inappropriately label and place persons within our society. The possibility of misplacing children within our school systems as a result of such assessment procedures was summarized by Reynolds and Birch (1977, 38) when they wrote:

It is doubtful if present day assessment procedures are, on their own, able to indicate with sufficient certainty that children will need to be educated outside the mainstream. Actual experience, first, in an integrated setting is necessary before that determination can be made. Strong efforts should be made to build appropriate instructional capacity into the mainstream for every child possible, thus limiting extrusions to other settings and hurrying the return of those children who are removed from the mainstream for any period of time.

The ill effects of such assessment procedures were summarized very well by Hobbs (1975, 1) when he said:

Classification, or inappropriate classification. . . can blight the life of a child, reducing opportunity, diminishing his competency and self-esteem, alienating him from others, nurturing a meanness of spirit, and making him less a person than he could become. Nothing less than the futures of children is at stake.

An informed society can eliminate such misconceptions and the detrimental effects resulting from them. This will allow better realization of the maximum potential of handicapped individuals.

Society's understanding of handicapping conditions is increasing. Many of the causes and effects of handicapping conditions have been and are being uncovered. Advances in the treatment of handicapping

conditions have been so effectual that some handicapping conditions can be rendered virtually nonexistent. Diabetes is one example of a handicapping condition which, when treated with insulin, can be regulated to allow diabetics to actively participate in our society. Prior to the development of insulin, diabetics were physically restricted in their involvement in society and had shorter than average lives. Another handicapping condition which can now be treated to allow its victims to lead normal lives is epilepsy. Dilatin and other similar medications are now given to epileptics to help control their seizures, thus making epilepsy another handicapping condition that can, in some cases, be rendered virtually nonexistent. With the growth in understanding and the treatment of handicapping conditions, the potential for handicapped persons to lead normal lives in our society is ever increasing. Society, therefore, has the opportunity to aid in the growth and development of handicapped persons.

Education plays a key role in the success of handicapped persons in our society, as is evidenced in the Hairston et al v. Drosick decision (1976). It is the right of handicapped persons to an education within our educational system and it is the responsibility of our educational system to provide handicapped persons with the most beneficial education possible. Knowledge, methods, and resources available to educators provide a sound base upon which to build beneficial educational programs for handicapped persons in the regular school system. Essential to the success of such educational programs are teachers who are competent to work

effectively with handicapped students.

Statement of the Problem

Although studies dealing with mainstreaming competencies for teachers as a whole existed at the time of this study, there were no studies of mainstreaming competencies designed specifically for vocational education teachers. Therefore, the problem of this study was to:

1. Determine and compare what stated mainstreaming competencies Michigan Area Vocational Center teachers perceive to be important.
2. Determine and compare Michigan Area Vocational Center teachers' perceived ability to perform stated mainstreaming competencies.

Answers to the following research questions were sought:

1. Is there a relationship between occupational areas regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?
2. Is there a relationship between full-time vocational education teachers and part-time vocational education teachers regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?
3. Is there a relationship between educational degree levels regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?
4. Is there a relationship between categories of years of vocational education teaching experience regarding the

perceived importance of and the perceived ability to perform mainstreaming competencies?

5. Is there a relationship between type(s) of handicapping condition(s) present in classes regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?
6. In terms of importance, what prioritized rank are the mainstreaming competencies assigned by Michigan Area Vocational Center teachers?
7. What mainstreaming competencies do Michigan Area Vocational Center teachers believe should be added to the questionnaire used in this study?

Operational Definitions of the Variables

This study was comprised of two dependent variables and five independent variables.

The dependent variables were:

1. The perceived importance of stated mainstreaming competencies.
2. The perceived ability of Michigan Area Vocational Center teachers to perform the stated mainstreaming competencies.

The independent variables were:

1. Certified occupational area(s) currently teaching based on the following categories according to Michigan vocational education certification categories: agricultural education, distributive education, health education, home economics education, office education, trade and industrial education.

2. Employment status defined as full-time or part-time employment.
3. Highest educational degree earned based on the following categories: less than baccalaureate, Bachelor of Arts/Science, Master of Arts/Science, Specialist, Doctor of Education/Philosophy.
4. Years of vocational education teaching experience based on the following categories: less than 2 years, 3 to 5 years, 6 to 8 years, 9 to 11 years, 12 or more years.
5. Type(s) of handicapping condition(s) in present and/or past classes based on the following categories: none, emotional impairment, hearing impairment, learning disability, mental impairment, physical impairment, speech impairment, visual impairment.

Need for the Study

The field of education is experiencing an increasing emphasis on the rights of handicapped persons to a free public education in the least restrictive environment that their handicaps will allow them to beneficially participate. This thrust to provide a free public education is supported by the federal law Public Law 94-142 (1975):

It is the purpose of this act to assure that all handicapped children have available to them, within the time periods specified, a free appropriate public education which emphasizes special education and related service designed to meet their unique needs, to assure that the rights of handicapped children and their parents or guardians are protected, to assist States and localities to provide for education of all handicapped children and to assess and assure the effectiveness of efforts to educate handicapped children.

Michigan has also placed emphasis on providing beneficial education for handicapped persons with the passage of Public Act 198 (1971).

This act:

. . . establishes the right of each handicapped person in this State to such educational training opportunities as will fully develop his/her maximum potential. In addition it provides for the restructuring and supplementing of the existing statutory provisions governing special education programs and services, to insure that such programs and services are delivered to each and every handicapped person up to 25 years of age in this State.

According to Mark D. Zimmerman (1978) there are an estimated 46-million handicapped individuals in the United States. Approximately 10 to 12 percent of the overall school-age population is handicapped. Due to the complexity and variety of types of handicaps, it is important that these figures be regarded as approximations. Actual counts can be made only when specific cases are identified and then it is often difficult to distinguish those cases which lie on the border in terms of handicapped/non-handicapped.

In Michigan there were reported to be 155,044 handicapped school-aged children during 1977-1978 (State Special Education Services October 1 Count, 1977). It has been estimated by a survey of special education coordinators (Goldhammer, Rader, & Reuschlein, 1976) that more than 5,909 handicapped students have been mainstreamed into regular vocational education classrooms in Michigan.

Although some handicapped students are already being mainstreamed into regular classrooms, many others have yet to be included in the mainstreaming program. One of the efforts included in mainstreaming

legislation is directed at locating handicapped students who have failed to be included in school population records. The reasons why some handicapped students have not previously been included in these school population records range from the handicapped student who is under private supervision to cases where handicapped students are totally removed from social contact and in extreme cases confined exclusively and interminably to a household while their existence is denied to the rest of society.

Whatever the actual number of handicapped students in Michigan who rightfully should be mainstreamed is, their inclusion in our educational system will certainly have an impact. Legislation requiring that handicapped students be placed in the regular classroom will affect virtually every classroom teacher, every administrator, and every counselor in the State of Michigan.

Virtually all teachers, therefore, need to be given instruction in mainstreaming in order to meet the special requirements that working with handicapped students involves.

R. N. Evans addressed the problem in the 1976 report of the National Workshop on Vocational Education for Special Needs Students with the following commentary:

Vocational education teachers with no special education background are teaching special needs students, and special education teachers are trying to prepare these same types of students for employment. This situation exists in public schools because there are virtually no teacher education programs with both types of skills.

In the State of Michigan only three institutions of higher education, Central Michigan University, Michigan State University, and the University of Michigan, offer pre-service courses in the

area of mainstreaming, and these are relatively new developments. A report of special needs coordinators for Vocational Education in Michigan (Goldhammer, Rader, & Reuschlein, 1976) showed that there is a need to develop in-service teacher training programs as well as a need to develop in-service teachers to deliver special education and mainstreaming methods courses.

Mainstreaming is complex in that it requires many adjustments for situations not commonly found in the regular classroom. These considerations range from the need to make physical adaptations such as wider aisles in order to accommodate wheelchair-bound students to increasing communication between regular teachers and special education teachers for the purpose of making individual handicapped students' learning programs most effective.

In order to provide effective services for handicapped students it will be necessary for teachers to acquire mainstreaming competencies which are in addition to the competencies required in traditional teacher education programs. In her article entitled "Channeling Students into the Mainstream" Nancy Hartley (1978, 39) states:

A 1976 report by the General Accounting Office stated that only 2 percent of vocational teachers in the school districts sampled were trained to work with special needs students. Approximately 78 percent of the school districts sampled stated that their vocational teachers had insufficient backgrounds to work with these students.

Dr. John Porter, Michigan Superintendent of Public Instruction, expressed his concern on this topic with the following statement (1978, 5):

My hangup is that we've trained certified people to teach the handicapped. Now we're saying everyone can (teach the handicapped). What are we saying here? There must be some unique competencies teachers need in order to provide quality services to the handicapped. I'm 100% for the education of the handicapped. But I'm concerned that kids might not get the same quality of services in the (regular) classroom as children taught by specially trained teachers.

One essential step in achieving an effective mainstreaming program is to identify teacher competencies necessary for mainstreaming in order that teacher preparation programs may understand the needs of mainstreaming teachers and thereby appropriately prepare them to teach in a mainstreaming setting.

Purpose of the Study

Research has been conducted to determine the competencies teachers as a whole need for mainstreaming. At the time of this study, however, no research was found that was directly concerned with determining the competencies vocational education teachers perceive to be important in order to make mainstreaming work effectively as well as to determine their perceived ability to perform these competencies.

The purpose of this study was two-fold. It was intended to assess the importance of mainstreaming competencies and to ascertain the perceived ability of Michigan Area Vocational Center teachers to perform the aforementioned competencies.

It is intended that the findings of this study will prove useful to teacher training institutions, teacher preparation centers, State and local education agencies, classroom teachers, counselors,

administrators, and students involved in vocational education mainstreaming programs. By knowing what competencies are considered to be important and the corresponding perceived ability to perform the competencies, teacher trainers can deal specifically with the essential needs of mainstreaming teachers. Some of the more important uses for this study's findings will be to insure that competencies ranked high in importance are utilized to:

1. provide a basis for designing vocational education teacher training programs which incorporate appropriate mainstreaming competencies.
2. provide a basis for a more realistic approach to vocational education teacher in-service programs in mainstreaming.
3. provide a basis for improved State and local guidelines for mainstreaming in vocational education.
4. provide a basis for improved opportunities for handicapped students by means of a well-designed and positively implemented delivery system of vocational education and mainstreaming.

Basic Assumptions of the Study

The following assumptions were made for this study:

1. Michigan Area Vocational Center teachers were sufficiently well-informed on the concept of mainstreaming to enable them to realistically rate the importance of the stated mainstreaming competencies.
2. Michigan Area Vocational Center teachers were accurate in

their assessment of their ability to perform the stated mainstreaming competencies.

Delimitations of the Study

This study possessed the following delimitations:

1. The concern of this study was solely with Michigan Area Vocational Center teachers.
2. The questionnaire for this study could not feasibly contain all possible mainstreaming competencies and was therefore comprised of mainstreaming competencies which were most commonly found in other competency studies and/or were identified as being important by experts and professionals involved in educating handicapped persons.
3. This study sought to identify the perceived ability of Michigan Area Vocational Center teachers to perform the stated mainstreaming competencies and did not gather data regarding the implementation of such competencies.

Limitation of the Study

Because the population of this study consisted solely of Michigan Area Vocational Center teachers, and because the programs in which they teach are solely Michigan vocational education programs, the findings of this study are limited to this same population and to Michigan vocational education programs. The study did not gather data from the entire population and therefore is an approximation of the population.

Definition of Terms

For purposes of this study the following terms shall be interpreted as follows:

Area Vocational Center: A secondary public school facility designed specifically for offering vocational education courses. This classification shall not include public school facilities which offer general education as well as vocational education courses.

Competency: "Professional ability including both the ability to demonstrate acquired knowledge and higher-level conceptualization (Peter, 1975, 8).

Handicapped:

"Handicapped person" means a person identified by an educational planning and placement committee as severely mentally impaired, trainable mentally impaired, hearing impaired, visually impaired, physically and otherwise health impaired, speech and language impaired, homebound, hospitalized, learning disabled, or having a combination of two or more of these impairments and requiring special education programs and services (Michigan Special Education Code, 1977, 2).

Severely Mentally Impaired:

"Severely mentally impaired" means a person identified by an educational planning and placement committee, based upon a comprehensive evaluation by a school psychologist, certified psychologist or certified consulting psychologist, and other pertinent information, as having all the following behavioral characteristics: (a) Development at a rate approximately $4\frac{1}{2}$ or more standard deviations below the mean as determined through intellectual assessment. (b) Lack of development primarily in the cognitive domain (Michigan Special Education Code, 1977, 2).

Trainable Mentally Impaired:

"Trainable mentally impaired" means a person identified by an educational planning and placement committee, based upon a comprehensive evaluation by a school psychologist, certified psychologist or certified consulting psychologist, and other pertinent information, as having all the following behavioral characteristics: (a) Development at a rate approximately 3 to 4½ standard deviations below the mean as determined through intellectual assessment. (b) Lack of development primarily in the cognitive domain. (c) Unsatisfactory school performance not found to be based on his social, economic and cultural background (Michigan Special Education Code, 1977, 2).

Educable Mentally Impaired:

"Educable mentally impaired" means a person identified by an educational planning and placement committee, based upon a comprehensive evaluation by a school psychologist, certified psychologist or certified consulting psychologist, and other pertinent information, as having all the following behavioral characteristics: (a) Development at a rate approximately 2 to 3 standard deviations below the mean as determined through intellectual assessment. (b) Scores approximately within the lowest 6 percentiles on a standardized test in reading and arithmetic. (c) Lack of development primarily in the cognitive domain. (d) Unsatisfactory academic performance not found to be based on his social, economic and cultural background (Michigan Special Education Code, 1977, 2-3).

Emotionally Impaired:

"Emotionally impaired" means a person identified by an educational planning and placement committee, based upon a comprehensive evaluation by a school psychologist and social worker, a certified psychologist, a certified consulting psychologist, or a certified psychiatrist, and other pertinent information, as having 1 or more of the following behavioral characteristics: (a) Disruptive to the learning process of other students or himself in the regular classroom over an extended period of time. (b) Extreme withdrawal from social interaction in the school environment over an extended period of time. (c) Manifestations of symptoms characterized by diagnostic labels such as psychosis, schizophrenia and autism. (d) Disruptive behavior which has resulted in placement in a juvenile detention facility (Michigan Special Education Code, 1977, 3).

Hearing Impaired:

"Hearing impaired" means a person identified by an educational planning and placement committee, based upon an evaluation by an audiologist and otolaryngologist, and other pertinent information as having a hearing impairment which interferes with learning (Michigan Special Education Code, 1977, 3).

Visually Impaired:

"Visually impaired" means a person identified by an educational planning and placement committee, based upon an evaluation by an ophthalmologist, or equivalent, and other pertinent information as having a visual impairment which interferes with learning and having 1 or more of the following behavioral characteristics: (a) A central visual acuity of 20/70 or less, in the better eye after correction. (b) A peripheral field of vision restricted to no greater than 20 degrees (Michigan Special Education Code, 1977, 3).

Physically and Otherwise Health Impaired:

"Physically and otherwise health impaired" means a person identified by an educational planning and placement committee, based upon an evaluation by an orthopedic surgeon, internist, neurologist, pediatrician or equivalent, and other pertinent information, as having a physical or other health impairment which interferes with learning or requires physical adaptation in the school environment (Michigan Special Education Code, 1977, 3).

Speech and Language Impaired:

"Speech and language impaired" means a person certified by a teacher with full approval as a teacher of the speech and language impaired, who has earned a master's degree and has completed at least 5 years of successful teaching of the speech and language impaired, as having 1 or more of the following speech, oral language and verbal communication impairments which interferes with learning or social adjustment: (a) Articulation which includes omissions, substitutions or distortions of sound. (b) Voice with inappropriate voice pitch, rate of speaking, loudness or quality of speech. (c) Fluency of speech distinguished by speech interruptions (blocks), repetition of sounds, words, phrases or sentences which interfere with effective communication. (d) Inability to comprehend, formulate and use functional language (Michigan Special Education Code, 1977, 3).

Homebound:

"Homebound" means a person certified at least annually by a licensed physician as having a severe physical or other health impairment preventing school attendance (Michigan Special Education Code, 1977, 4).

Hospitalized:

"Hospitalized" means a person who cannot attend school because of hospitalization for a physical or medical impairment, exclusive of emotional impairment unless as an accompaniment to a physical or medical impairment (Michigan Special Education Code, 1977, 4).

Learning Disabled:

"Learning disabled" means a person identified by an educational planning and placement committee, based upon a comprehensive evaluation by a school psychologist or certified psychologist or certified consulting psychologist or an evaluation by a neurologist, or equivalent medical examiner qualified to evaluate neurological dysfunction, and other pertinent information, as having all the following characteristics: (a) Disorder in 1 or more of the basic psychological processes involved in understanding or in using spoken or written language, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell or do mathematical calculation. (b) Manifestation of symptoms characterized by diagnostic labels such as perceptual handicap, brain injury, minimal brain dysfunction, dyslexia or aphasia. (c) Development at less than the expected rate of age group in the cognitive, affective or psychomotor domains. (d) Inability to function in regular education without supportive special education services. (e) Unsatisfactory performance not found to be based on social, economic or cultural background (Michigan Special Education Code, 1977, 4).

Severely Multiply Impaired:

"Severely multiply impaired" means a person identified by an educational planning and placement committee, based upon a comprehensive evaluation by a school psychologist, certified psychologist or certified consulting psychologist and an evaluation by a neurologist, orthopedic surgeon, ophthalmologist, or otolaryngologist and an audiologist, and other pertinent information such as previous medical records and any education history, as having all of the following behavioral characteristics: (a) Severe multiplicity of handicaps in the physical and cognitive domains.

(b) Inability or expected inability to function within other special education programs which deal with a single handicap. (c) Development at less than the expected rate of age group in the cognitive, affective or psychomotor domains (Michigan Special Education Code, 1977, 4).

In-service: Instructional activities for individuals currently employed in the field of education for the purpose of updating their knowledge and understanding of relevant information.

Instruction may be received by means of activities such as workshops and conferences, and may be for credit or non-credit.

Mainstreaming:

An educational placement procedure and process for exceptional children, based on the conviction that each such child should be educated in the least restrictive environment in which his educational and related needs can be satisfactorily provided. This concept recognizes that exceptional children have a wide range of special educational needs, varying greatly in intensity and duration; that there is a recognized continuum of educational settings which may, at a given time, be appropriate for an individual child's needs; that to the maximum extent appropriate, exceptional children should be educated with nonexceptional children; and that special classes, separate schooling, or other removal of an exceptional child from education with nonexceptional children should occur only when the intensity of the child's special education and related needs is such that they cannot be satisfied in an environment including nonexceptional children, even with the provision of supplementary aids and services (Jenkins & Mayhall, 1976, 43).

Pre-service: Instruction received by individuals prior to employment in the field of education.

Regular Education: " 'Regular education' means education other than special education programs and services" (Michigan Special Education Code, 1977, 1).

Special Education Classroom:

"Special education classroom" means a classroom which is under the direction of approved special education personnel and in which a child is taught for all or a portion of his school day (Michigan Special Education Code, 1977, 2).

CHAPTER TWO

REVIEW OF THE LITERATURE

The following review of literature deals with (1) the historical development of mainstreaming, (2) the legislative basis for mainstreaming, and (3) descriptions of studies concerned with mainstreaming teacher education competencies.

Historical Development of Mainstreaming

In order to understand the concept of mainstreaming it is important to be familiar with the major historical events which have had an effect on the development of the practice known as special education.

Prior to the 19th century handicapped persons were typically neglected and rejected by society. "The history of education for exceptional children is a simple story of massive neglect, denial, and rejection," wrote Reynolds and Birch (1977, 14). They continue:

For every Helen Keller and the other notable few who received intensive special help, tens of thousand of other exceptional children, both gifted and handicapped, were doomed to constricted lives; it was believed that they could not be taught, were not worth teaching, or could proceed on their own.

People either did not care about the handicapped, were afraid of handicapping conditions they did not understand or were unwilling to offer assistance to the handicapped because of the personal sacrifice it would have involved.

The beginnings of special education can be traced back to the early years of the 19th century when a few dedicated people began to try to break through the walls of ignorance which surrounded the handicapped and which segregated them from the rest of society. Through the efforts of such men as Gaspard Itard and Edouard Seguin, who began studying and training mentally handicapped children, Samuel G. Howe, who founded the first school for the blind, Thomas H. Gallaudet and his work with the deaf, and Louis Braille, who devised the system of tactile writing by which the blind could be taught to read, the barriers to understanding and educating the handicapped began to be pulled down.

These initial efforts and others which followed them to organize schools to serve the blind, the deaf, and the mentally handicapped closely duplicated European residential schools and asylums. One of the problems these schools faced was that at that time there were no teacher training institutions which prepared teachers with the skills necessary to work with the handicapped. Therefore, the teachers at these schools were forced to receive on-the-job training.

But securing qualified personnel to teach the handicapped was not the only problem facing these early schools and the handicapped themselves. Although most states established residential schools after the private schools had demonstrated that handicapped children could indeed be taught, facilities at these state-supported schools were limited. The cost of the private schools was too great for many of the families who had handicapped children. Some

families just did not want to remove their child on a permanent basis from the home environment even if it meant depriving the child of educational opportunities. And some children with severe or multiple handicaps could not gain admittance to any school.

The next step in the development of educating handicapped children came in the early 20th century when some special classes and public day schools were being developed to serve the handicapped as community based programs. The residential schools already in existence played an important part in supplying the programs with leadership, curricula, and teacher preparation (Reynolds and Birch, 1977, 17). But the progress contributed to the special education movement by these community based schools was slow. The schools were not set up to handle the educational needs of children who were difficult to teach. These slow learners, many of whom had repeatedly been held back from year to year, were assigned to "special" rooms apart from the regular classroom. Students assigned to these "special" rooms also became the recipients of derogatory labels. And when funding for such programs was limited, as it was during the Depression of the 1930's, special education programs were not expanded.

But the schools are not entirely to blame for the slow advances made in the education of the handicapped during these years. Society's attitudes toward the handicapped, especially toward the mentally handicapped, did much to hinder any real development of educational programs that could have helped such individuals. A prevalent attitude in the early years of this century was that

mental retardation was generally a hopeless condition (Sloan, 1963).

Yet in spite of the inhospitable attitudes which were dominant at that time toward educating the handicapped, certain improvements were being made. A few universities such as Wayne State University, Eastern Michigan University, the Teachers College of Columbia University, and the University of Wisconsin at Milwaukee were implementing programs to prepare teachers to work in educational systems for the handicapped. Although these teachers were being trained as specialists and not regular classroom teachers, and although their training closely paralleled the practices in use at residential schools, the beginnings of programs which provided qualified personnel to work with the handicapped were being developed.

During the period from 1945 to 1970 a large increase in the support given by society to the handicapped occurred. It came in the form of programs designed to teach the handicapped in public schools. It was accompanied by new programs at teacher training institutions which prepared teachers in the area of special education.

Special education enrollment figures for this period illustrate the rapid change which took place. Special education enrollments increased as follows:

1948: 442,000 persons (Mackie, 1965)

1963: 1,660,000 persons (Mackie, 1965)

1971-1972: 2,857,551 persons (Bureau of Education for the Handicapped, 1971)

The increase in special education teacher training programs further emphasizes the growing support for educating the handicapped. The number of teacher training institutions with special education

programs grew as follows:

1948: approximately 77 institutions

1954: approximately 122 institutions (Mackie & Dunn, 1954)

1973: approximately 400 institutions

1976: approximately 600 institutions (Reynolds & Birch, 1977)

A number of factors helped to bring about the increased support for educating handicapped persons. First of all, parents of handicapped children began collaborating as early as 1950 when a group formed an organization known as the National Association for Retarded Citizens (Reynolds & Birch, 1977, 19). Organizations such as this became socially and politically effective in promoting services for the handicapped. In response to political pressure from concerned parental groups, many states passed legislation directed toward the inclusion of handicapped persons in public schools. This legislation made money available to help school systems finance special education programs.

Another factor in the tremendous growth rate of special education in this post-1945 era was due to research and work done with World War II and Korean War handicapped veterans. In many instances knowledge gained in connection with war disabilities was transferable to non-war related handicapping conditions, thus providing an overall increase in the beneficial treatment of the handicapped.

While the period from 1945-1970 brought an increase in the understanding and treatment of handicapping conditions, educational programs continued to segregate handicapped persons from non-handicapped persons. It has been during the 1970's that there has been a movement

to place handicapped persons in regular classrooms in as much as their handicapping conditions will permit.

Reynolds and Birch (1977, 22-23) summarized the historical development of special education and the current trend of the 1970's known as mainstreaming in these words:

The whole history of education for exceptional children can be told in terms of one steady trend that can be described as progressive inclusion. Exceptional children have come, in a period of less than two centuries, from total neglect, first into isolated residential schools, for just a few -- then into isolated community settings, mostly in the form of special classes for a limited population -- and now into more integrated arrangements for many children. In the 1970's, we are in the midst of what undoubtedly will be recorded by future historians as a remarkable reversal of the negative cascade that sent these children off to isolated classes and centers. The agendas of local school boards in communities all across the country now reflect the influx of children with complex and severe educational problems, pupils who had been sent off to hospitals and residential centers earlier; and virtually every school principal in every school district is facing difficult questions about the accommodation of more exceptional children in regular classrooms. . . .

This historical perspective suggests that the current mainstreaming trend is not a minor pendulum swing or a temporary enthusiasm. There has been a steady, progressive, inclusive trend in special education from the beginning, from unconcern to distal (far away) to proximal (near) arrangements. It would be naive to assume a straight line, uncomplicated, and continuing trend but there appear to be fundamental forces at work supporting the general trend toward more inclusive arrangements for the education of children with special needs.

Legislative Basis for Mainstreaming

The period of the 1960's and 1970's saw an extremely large increase in the support for public school programs dedicated to educating handicapped students. Just as this era of civil rights witnessed an increasing awareness and organization on the part of persons seeking to insure equality in regard to such things as race and sex, there too was an effective unification of persons dedicated to the achievement of equal rights for handicapped persons. These social and political groups gained the strength and recognition necessary to initiate changes in state and federal regulations which reflected the recognition of handicapped persons' rights to equitable and respectful positions in society.

Certain pieces of civil rights legislation which became law during the 1960's and 1970's have had an effect on the passage of legislation regarding the rights of handicapped individuals. Much of the legislation of this era aroused an awareness of civil rights for people in our society.

Among these pieces of legislation were:

Civil Rights Act of 1964: Public Law 88-352

Title IV: Desegregation of public education

Title VI: Nondiscrimination in federally assisted programs

Prohibition of Sex Discrimination: Public Law 92-318

Title IX: Education Amendments of 1972

Vocational Rehabilitation Act: Public Law 93-112

Title V: Nondiscrimination by reason of handicap in
federally assisted programs

When handicapped persons saw the legal support being provided for a number of factions in our society who had in the past been treated unequally and unjustly, they began to understand they too had rights which were commonly denied them. Handicapped persons not only benefitted from civil rights legislation which had been passed, but they also began work to insure rights specifically for the handicapped through legislation.

Three major pieces of legislation which directly affect the rights of handicapped individuals and vocational education are the federal Public Law 94-142, the Michigan Public Act 198, and the federal Public Law 94-482. These three pieces of legislation contain conditions directly concerned with handicapped persons and provide legal grounds which insure that handicapped persons may realize equal rights and opportunities in our society. Major provisions specifically related to each piece of legislation include:

I. Federal Public Law 94-142 (1975)

- A. Free public education for handicapped persons
from age 5 through age 21 by 1978 and from age
3 through age 25 by 1980
- B. Annual program plans to be submitted by the
State Department of Education to the
U. S. Office of Education

II. Public Act 198 of the State of Michigan (1971)

- A. Free public education from birth through age 25
- B. State and intermediate school district program plans

III. Federal Public Law 94-482 (1976) states that 10 percent of vocational funds be set aside with 50 percent matching expenditure by State and local funds to be used specifically for the education of the handicapped.

Jointly these three pieces of legislation specify regulations for the following:

1. Educational planning and placement committees (EPPC):

"Educational planning and placement committee" means a committee of an operating district or agency whose members shall include, as a minimum, a representative of the administrative personnel, instructional personnel, diagnostic personnel and parents invited to participate when their children are involved (Michigan Special Education Code, 1977, 1).

2. Individualized education programs (IEP): "An individualized education program is defined as a written statement about the objectives, content, implementation, and evaluation of a child's educational program" (Reynolds & Birch, 1977, 157).
3. The right of appeal where parents and/or handicapped persons disagree with placement of the handicapped person.
4. Funding specifically designated for the education of the handicapped.

Studies Concerned with Mainstreaming Teacher Education Competencies

Regular classroom teachers who work directly with handicapped students are of extreme importance to the success of mainstreaming. These teachers will need a variety of competencies that exceed those which have been traditionally required in a classroom with no handicapped students.

In order to prepare teachers for mainstreaming it is necessary to identify the competencies they will need in order to function effectively in a mainstreaming setting. Although a review of literature yielded no studies of mainstreaming competencies specifically for vocational education teachers, there are studies which deal with mainstreaming competencies for teachers as a whole. While it is not possible to fully equate mainstreaming competencies of vocational education teachers with teachers as a whole, the studies reviewed provided a sound base upon which to select competencies appropriate for vocational education teachers. The designs, findings, and summaries of mainstreaming competencies studies, which are related hereafter, provided valuable insight into the complexity of mainstreaming competencies and the means by which they may be identified.

The purpose of a study involving 155 teachers in Alabama was the establishment of instructional objectives that teachers perceived as necessary for teaching handicapped students in the regular classroom (Gear, 1976). A questionnaire was developed to collect the desired information. The study looked at the effects of school site, degree level, special education training, and teaching experience on mainstreaming competencies identification.

The data based on the locations of schools showed that teachers in rural schools felt most capable to perform competencies stated in the study. The teachers in rural schools were followed in capability rating by teachers working in urban and suburban schools respectively. It was noted in the study, however, that the teachers in all of the school sites rated their capability to perform mainstreaming competencies below adequate.

Respondents of differing degree levels perceived training needs equally. As degree status increased there was a corresponding increase in the perceived ability to educate handicapped students. It was reported that special education course work had no effect on the identification of training needs but did increase the level of self-confidence. Varying years of teaching experience had no significant effect on the identification of training needs with the exception of goal setting which increased with increased experience.

Gear's study identified four significant areas of training needs for mainstreaming teachers:

1. Assessment of student needs
2. Resources for learning
3. Professional knowledge
4. Communication

A study conducted by Redden (1976) investigated mainstreaming competencies among regular education teachers in Kentucky. The teachers were employed by 24 elementary, middle, and junior high schools. The teachers surveyed had been in a mainstreaming setting for 2 years. The major competency categories identified by the study as essential for effectively teaching in a mainstreaming setting were:

1. Developing Orientation Strategies for Mainstream Entry
2. Assessing of Needs and Setting Goals
3. Planning Teaching Strategies and Use of Resources
4. Implementing Teaching Strategies and Utilization of Resources
5. Facilitation of Learning
6. Evaluation of Learning

In a workshop conducted by teachers from the vocational education and special education departments at the University of Illinois and the University of Kansas (Phelps, Allen & others, 1976), 54 university and State department personnel were questioned about how they could best prepare teachers who will be involved with handicapped persons and vocational education. The workshop sought to develop a program containing competencies which are needed by teachers to effectively teach handicapped persons.

Workshop participants were asked to rate 49 tasks in terms of "criticality" (How important is the task to the effectiveness of the instructional program?) and the need for additional preparation to perform the task. As a result of the data collected six tasks were identified as important in terms of criticality and need. The tasks were:

1. Identify instructional techniques appropriate for special needs learners
2. Evaluate and upgrade the effectiveness of instruction
3. Analyze students' occupational interest and aptitudes
4. Plan a sequence of modules or units of instruction according to the learners' needs
5. Develop instructional materials for special needs learners
6. Select or modify instructional materials appropriate for different special needs learners

A vocational education in-service needs assessment of 300 Michigan Upper Peninsula educational personnel, conducted by the Marquette-Alger Intermediate School District in 1977, yielded a

strong emphasis in the area of mainstreaming. The survey instrument contained 65 items. In the top ten priorities for in-service needs were:

1. Designing your curriculum to meet the needs of all students (ranked fifth in priority)
2. Developing a team approach to vocational and special education (ranked sixth in priority)
3. Assisting disadvantaged and handicapped students in achieving occupational and career goals (ranked seventh in priority)
4. Dealing with students who are behavior problems (ranked tenth in priority)

The preceding studies were read and the competencies within each study were then recorded on a list of possible competencies to be used in this study. In consultation with professional persons involved in mainstreaming, the list was reviewed concerning the relevance of the competencies contained therein. Where similar competencies existed, they were combined into a single competency. Competencies which were unrelated to this study were deleted. Competencies which were relevant to this study but were not found in the previous studies were added.

Appreciation is extended to those individuals and their studies that have previously looked at mainstreaming competencies for teachers. The assistance of those previous studies was invaluable in efficiently developing this study of mainstreaming competencies identification of vocational education teachers in Michigan.

CHAPTER THREE

RESEARCH PROCEDURES

This chapter describes the research design for this study. Included in this description are: the population, the sample and sampling technique, the instrument development, instrument validity, data collection, questions to be answered, and the data analysis.

Population and Sample

The population of this study was all Michigan Area Vocational Center teachers. A total of 24 Michigan Area Vocational Centers were identified by Michigan Department of Education's Vocational-Technical Education Service personnel. Collectively Michigan's Area Vocational Centers employed 722 full-time and part-time teachers in 1977-1978 (Michigan Department of Education, Vocational-Technical Education Service, 1978). The sample for this study was 143 Michigan Area Vocational Center teachers. The sample represented 20 percent of the population of vocational education teachers at each Area Vocational Center, randomly selected using an alphabetical list of teachers at each center.

Data were collected by means of a questionnaire mailed to each teacher in the sample. Enclosed with the questionnaire were a cover letter and a postage paid return envelope. The teachers were asked to return the questionnaire within 2 weeks.

Of the 143 teachers sampled 58 returned completed questionnaires on the first mailing. This was the equivalent of 40 percent of the total sample. In order to increase the response rate a second mailing was made of which 16 persons responded. This was an additional 11 percent of the sample for a total of 51 percent.

Following the second mailing, questionnaires were delivered to representatives from the different Area Vocational Centers in the sample. These representatives were asked to personally deliver the questionnaires to the individuals whose names appeared on the questionnaires. This method of contacting persons resulted in six more returned questionnaires or 4 percent of the sample.

The final number of respondents was 80 for a total of 56 percent of the sample. Of these responses 13 questionnaires were returned with the explanation that the person being surveyed was no longer employed at the given Area Vocational Center.

In addition to the initial survey of 143 teachers, a replication survey was also conducted. The sample for the second survey consisted of 72 Michigan Area Vocational Center teachers or 10 percent of the population. None of the 72 teachers surveyed was included in the first sample of 143 teachers.

A questionnaire, cover letter and postage paid return envelope were mailed to each of the 72 teachers. The teachers were asked to return the questionnaire within 2 weeks. Thirty-three questionnaires were returned for a response rate of 46 percent. Of these responses six indicated that the person being surveyed was no longer employed at the given Area Vocational Center. Appendix A contains a list of

the Michigan Area Vocational Centers which employ the vocational education teachers who constitute the population of this study.

Instrument Development

Although teacher competencies survey instruments exist in the area of mainstreaming, they are designed for general education. It was for the purpose of specifically addressing vocational education teachers that the instrument for this study was developed.

The instrument used in this study was developed after having studied a variety of sources relevant to the topic of mainstreaming competencies. These sources included:

1. Communication with teachers, teacher educators, administrators, and other individuals involved in and/or familiar with mainstreaming.
2. Literature concerning the concept, function, and implementation of mainstreaming.
3. Research projects which have been conducted on the topic of mainstreaming competencies and related topics. These projects based the majority of their instrument development on information gathered from teachers, special needs educators and related persons involved in mainstreaming implementation.

In light of the information gathered from the aforementioned sources, nine topical areas were identified. These nine topical areas were intended to address the major concerns of mainstreaming competencies for vocational education teachers. The nine topical areas were:

1. Mainstreaming Laws: The legal guidelines which regulate the operation of mainstreaming opportunities.
2. Attitudes: attitudes concerning handicapped persons held by teachers, students, employers, parents, and handicapped persons.
3. Resource and Support Systems: Services which are designed to improve the operation of mainstreaming programs.
4. Learning Styles: The differing means by which students learn, i.e. video, audio, printed matter, and other methods of learning.
5. Curriculum Design: The designing of curricula which best serve individuals and groups in learning environments.
6. Teaching Strategies: The methodology employed by a teacher to provide instruction.
7. Communication: Verbal and non-verbal interaction of individuals and groups.
8. Student Assessment: The means by which a teacher and other pertinent individuals assess a student for placement and develop his/her program.
9. Employment Opportunities: An awareness of and planning for the employment of students when appropriate.

In all, 52 mainstreaming competency statements, covering all of the nine topical areas, were assembled for the instrument. The competency statements were not organized consecutively by topical areas but were randomly placed. If the competency statements had been grouped according to topical area, it was felt that the

responding vocational education teacher might record his/her perceived importance/ability ratings of the topical area as a whole rather than his/her perceived importance/ability ratings of each individual competency statement. In addition, space was provided at the end of the questionnaire for the responding vocational education teacher to write any mainstreaming competencies which he/she believed to be important and which were not included in the questionnaire's 52 mainstreaming competency statements.

The goal of the competency statements was to address all of the important concerns of mainstreaming and yet be of a practical size; that is, to be not too detailed and yet descriptive. In some instances competencies overlap in their relationship with two or more topical areas. For the purpose of interpreting data the competencies may be described in terms of a specific topical area. However, it should be understood that they may appropriately relate to other topical areas as well.

The scales which were used in this study consisted of an importance scale and an ability scale. The importance scale was designed to identify teacher competencies that are important to effectively mainstream handicapped students in vocational education. The importance scale was divided into two choices: Important, Not Important. Once important competencies were identified, the ability scale was utilized to assess which of the competencies indicated a related need for more teacher training on that particular competency. The ability scale was broken down into three choices: Can Do Well, Can Do Somewhat, and Cannot Do. If a competency was rated high in

perceived importance and had a correspondingly low rating in the perceived ability of teachers to perform that competency, the indication is that there is a need to better prepare teachers on that topic and as such should warrant the attention of teacher training personnel. An example of the questionnaire and the cover letters which accompanied it are located in Appendix B.

Instrument Validity

In order to assess the validity of this study's competencies, a preliminary design for a questionnaire was distributed to two classes at Michigan State University: one a course in mainstreaming (ED 482: Mainstreaming the Handicapped in Vocational Education), and the other a course in research (ED 982: Experimental Research Methods in Vocational Education). The students possessed mainstreaming and research experience which, it was believed, would be beneficial in the evaluation of and suggestions for an appropriate questionnaire for this study. The students in both classes were asked to fill out the questionnaire and to comment on the clarity of instructions and competency statements. The students were asked to add or delete competencies where they felt it would improve the effectiveness of the questionnaire. The comments and suggestions for revisions obtained from these two classes were considered in regard to the intent of this study and the instrument was then revised where the students' suggestions seemed pertinent.

Following these changes vocational education teachers then reviewed the questionnaire and provided suggestions for change.

These vocational education teachers were employed in area vocational programs which were taught in facilities that also taught general education courses. These ten teachers were not a part of the population of this study because this study surveyed only teachers at Michigan Area Vocational Centers which are freestanding and as such are not physically connected with regular high schools.

These ten vocational education teachers were asked to fill out the questionnaire and note remarks on the questionnaire concerning clarity and relevance. These remarks were considered in regard to the intent of the study and changes were made accordingly where deemed appropriate.

In addition the competencies instrument was reviewed by a special needs teacher and an employee of the Michigan Department of Education Special Needs Services.

It was with the help and suggestions of these individuals that the competencies instrument was validated for face and content validity. It was intended that these types of validity show that the competencies instrument:

1. was appropriate for the group surveyed.
2. contained sufficient directions for completion.
3. contained relevant competency statements necessary to answer the Questions of this study.

Survey Methodology

The data for this survey were collected by the use of a questionnaire. The questionnaire was mailed to each of the 143 teachers in the sample. Included with the questionnaire were a

cover letter explaining the purpose of the survey and a postage paid return envelope. Teachers were requested to return the questionnaire within 2 weeks.

A second mailing was made to those teachers who had not responded by the end of the 2 week period. This mailing included a different cover letter and a postage paid return envelope. Teachers were asked to return the questionnaire within 2 weeks.

After the second mailing, questionnaires were delivered to representatives from the Area Vocational Centers. These representatives were asked to personally deliver the questionnaires to the individuals whose names appeared on the questionnaires. These individuals were the teachers in the original sample of 143 teachers who had not previously responded.

Following the collection of data from the 143 teachers initially surveyed, a replication survey was conducted. This consisted of 72 teachers not in the original sample of 143 teachers. These 72 teachers constituted 10 percent of the population. One mailing was made to this sample. Included were a cover letter, the questionnaire, and a postage paid return envelope. The teachers were asked to return the questionnaire within 2 weeks.

Questions to be Answered

Answers to the following questions were sought:

1. Is there a relationship between occupational areas regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?

2. Is there a relationship between full-time vocational education teachers and part-time vocational education teachers regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?
3. Is there a relationship between educational degree levels regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?
4. Is there a relationship between categories of years of vocational education teaching experience regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?
5. Is there a relationship between type(s) of handicapping condition(s) present in classes regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?
6. In terms of importance, what prioritized rank are the mainstreaming competencies assigned by Michigan Area Vocational Center teachers?
7. What mainstreaming competencies do Michigan Area Vocational Center teachers believe should be added to the questionnaire used in this study?

Data Analysis

The data procured from the responses were analyzed using the "Statistical Package for Social Sciences" (SPSS). Analysis was done on the Control Data Corporation (CDC) 6500 Computer at Michigan State University.

The desired analysis was achieved by the use of:

1. Frequencies Subprogram
 - A. Mean
 - B. Frequencies
 - C. Percentages
2. Crosstabs Subprogram
 - A. Chi-square
 - B. Significance (.05 level)

Since the variables being considered in this study were categorical, the aforementioned statistics were deemed appropriate for analyzing the related data.

CHAPTER FOUR

ANALYSIS OF THE DATA

For the purpose of analysis the 67 responses from persons employed at the Michigan Area Vocational Centers were used. These 67 responses represent 51.5 percent of the sample which was 130 after eliminating the 13 returns that were no longer employed at the site surveyed.

Overview of Chapter Four

The first portion of this chapter concerns the profile of the respondents by demographic variables.

The second portion of this chapter is devoted to answering the question regarding the profile of the importance of the competencies contained in the questionnaire as rated by all of the respondents. The perceived ability ratings which were correlated with the importance ratings are provided in this portion also.

The third portion of this chapter addresses five demographic relationship questions to which answers were being sought by this survey.

The fourth portion of this chapter concerns suggestions made by the respondents for competency statements to be added to the questionnaire used in this study.

The fifth portion of this chapter concerns the replication survey and its related profile of importance of the competencies.

The last portion of this chapter is a summary of Chapter Four.

PROFILE OF RESPONDENTS

Table 1 is a description of the number and sample percentage of respondents in each of the six categories of Occupational Areas. Of the six categories Trade and Industrial Education had the largest number of respondents with a total of 37, or 55.2 percent of the response group. The fewest number of respondents from any one category was 3, or 4.5 percent of the response group, from the Distributive Education area. This was closely followed by Agricultural Education which had 4 respondents. The remaining categories were Office Education with 9 respondents, Health Education with 7 respondents, and Home Economics Education with 7 respondents.

TABLE 1

FREQUENCY AND PERCENT COUNTS BY OCCUPATIONAL AREA

Occupational Area	Frequency	Percent
Agricultural Education	4	6.0
Distributive Education	3	4.5
Health Education	7	10.4
Home Economics Education	7	10.4
Office Education	9	13.5
Trade & Industrial Education	37	55.2
Totals	67	100.0

Table 2 presents data pertaining to the employment status of the respondents. The two categories in this table are full-time and part-time employment. Of the 67 respondents, 65 were employed on a full-time basis for a total of 97 percent of the response group. The 2 remaining respondents were reported as 1 employed part-time and 1 no response to the question.

TABLE 2
FREQUENCY AND PERCENT COUNTS BY EMPLOYMENT STATUS

Employment Status	Frequency	Percent
Full-time	65	97.0
Part-time	1	1.5
No Response	1	1.5
Totals	67	100.0

Contained in Table 3 are data which describe the frequency and percent of respondents in each of the five categories of Degree Level. The majority of the respondents, 65.7 percent, had a Bachelors degree or less. Within this majority were 20 respondents, or 29.9 percent of the response group, who had less than a Bachelors degree. These respondents are certified to teach in vocational programs based on work experience in their occupational area.

Of the remaining respondents 22 had a Masters degree. One respondent had the Specialist degree and no respondents had the

Doctoral degree. The total number of respondents was quite evenly divided among the first three categories of Degree Status, namely Less than Bachelors, Bachelors Degree, and Masters Degree. The two highest Degree Status categories were, with the exception of one respondent, devoid of respondents.

TABLE 3
FREQUENCY AND PERCENT COUNTS BY DEGREE STATUS

Degree Status	Frequency	Percent
Less than Bachelors	20	29.9
Bachelors Degree	24	35.8
Masters Degree	22	32.8
Specialist Degree	1	1.5
Doctoral Degree	0	0
Totals	67	100.0

Contained in Table 4 are data pertaining to Teaching Experience in years that the respondents have had. The category of 3 to 5 years of teaching experience contained 32.8 percent of the respondents and as such was the largest group within any one category. The category of 6 to 8 years of teaching experience was the second largest with 28.4 percent of the response group. The majority, 61.2 percent of respondents, therefore, had 3 to 8 years of teaching experience.

Of the respondents 4 had less than 2 years of teaching experience. At the other extreme of the categories, 9 respondents had 12 or more years of teaching experience.

TABLE 4
FREQUENCY AND PERCENT COUNTS
BY THE NUMBER OF YEARS OF TEACHING EXPERIENCE

Teaching Experience in Years	Frequency	Percent
Less than 2	4	6.0
3 to 5	22	32.8
6 to 8	19	28.4
9 to 11	12	17.9
12 or more	9	13.4
No response	1	1.5
Totals	67	100.0

Table 5 reports the number of respondents who have had handicapped students in their classes and what types of impairments the students have had. In this category it was possible for respondents to identify more than one impairment since many of the respondents have had students in their classes who have had a variety of impairments. The identification and classification of impairments is not an exact science and this table should be viewed in that light. Identification and classification of impairments may vary between schools, staff, and faculty.

The most prevalent type of impairment identified was Learning Disabled with 80.6 percent of the response group responding that they have had students with learning disabilities in their classes.

Not far behind in frequency of occurrence was the presence of Emotionally Impaired students in classes. A total of 70.1 percent of the response group have had Emotionally Impaired students in their classes.

The impairments reported least frequently were Speech, 34.3 percent; Visual, 37.3 percent; and Hearing, 38.8 percent. Of the response group 11.9 percent indicated never having had any student who was handicapped. This indicates that 88.1 percent of the respondents have taught handicapped students in their classes.

TABLE 5
FREQUENCY AND PERCENT COUNTS
BY TYPE(S) OF HANDICAP(S) OF STUDENTS SERVED

Type of Handicap	Frequency	Percent
Emotionally Impaired	47	70.1
Hearing Impaired	26	38.8
Learning Disabled	54	80.6
Mentally Impaired	29	43.3
Physically Impaired	38	56.7
Speech Impaired	23	34.3
Visually Impaired	25	37.3
None	8	11.9

Note: Respondents could respond to as many handicaps as needed to describe their students.

PROFILE OF COMPETENCY IMPORTANCE RATINGS

Table 6 contains the nine topical areas which encompass the 52 competencies of this study. The topical areas are ranked by the averaged percentage ratings of importance for all of the competencies within each topical area. The topical area ranked highest in importance was Attitudes with an average competency importance rating of 92.9 percent. The topical area of Communication received a similar rating with an average competency importance rating of 92.5 percent.

The topical areas of Resource and Support Systems, Teaching Strategies, Curriculum Design, Student Assessment, Employment Opportunities, and Learning Styles had average competency importance ratings that ranged from 89.6 percent to 81.35 percent.

The topical area ranked lowest in importance was Mainstreaming Laws with an average competency importance rating of 73.51 percent.

TABLE 6
RANKED TOPICAL AREAS BY AVERAGES
OF MAINSTREAMING COMPETENCIES' IMPORTANCE RATINGS

Priority Rank	Topical Area	Competency Number	Competency Importance Rating	Average Competency Importance Rating
1	Attitudes	6	95.5	92.9
		11	94.0	
		17	98.5	
		37	95.9	
		40	80.6	

Table 6, Continued

Priority Rank	Topical Area	Competency Number	Competency Importance Rating	Average Competency Importance Rating
2	Communication	7	91.0	92.5
		32	94.0	
3	Resource & Support Systems	5	94.0	89.86
		34	89.6	
		39	85.1	
		43	86.6	
		50	94.0	
4	Teaching Strategies	10	83.6	87.77
		15	88.1	
		16	85.1	
		25	88.1	
		26	80.6	
		28	95.5	
		33	86.6	
		41	97.0	
		47	95.5	
5	Curriculum Design (Continued on next page)	52	77.6	86.58 (Average for all of Priority Rank #5)
		4	85.1	
		9	86.6	
		13	95.5	

Table 6, Continued

Priority Rank	Topical Area	Competency Number	Competency Importance Rating	Average Competency Importance Rating
5	Curriculum Design (Continued)	19	86.6	86.58 (Average for all of Priority Rank #5)
		20	76.1	
		42	89.6	
6	Student Assessment	2	97.0	86.26
		3	94.0	
		12	91.0	
		14	77.6	
		21	92.5	
		22	56.7	
		27	91.0	
		30	86.6	
		35	88.1	
7	Employment Opportunities	44	88.1	85.825
		18	86.6	
		23	80.6	
		38	94.0	
8	Learning Styles	45	82.1	81.35
		8	80.6	
		31	82.1	

Table 6, Continued

Priority Rank	Topical Area	Competency Number	Competency Importance Rating	Average Competency Importance Rating
		1	80.6	
		24	56.7	
		29	79.1	
		36	89.6	
9	Mainstreaming Laws	46	41.8	73.51
		48	73.1	
		49	83.6	
		51	83.6	

The competencies in Table 7 are ranked and grouped according to the percentage of respondents who identified the competencies as being important. They are listed by priorities starting with the competency which had the highest percentage of respondents identifying it as being important and descending through the competency which had the lowest percentage of respondents identifying it as being important. In this survey the lowest percentage of respondents identifying a competency as being important was 41.8.

Once the competencies were listed by priorities, they were then divided into groups by the percent of the respondents rating the competency as being important. The groups were broken down as follows:

- Group #1: 95.0-100.0 percent of the response group identified the competency as being important.
- Group #2: 90.0-94.9 percent of the response group identified the competency as being important.
- Group #3: 85.0-89.9 percent of the response group identified the competency as being important.
- Group #4: 80.0-84.9 percent of the response group identified the competency as being important.
- Group #5: 75.0-79.9 percent of the response group identified the competency as being important.
- Group #6: 41.8-74.9 percent of the response group identified the competency as being important.

Also in Table 7 are the ability ratings which were assigned to each of the competencies. These ability ratings are recorded in Table 7 in percentages of all respondents who identified their perceived ability to perform each competency in one of three categories: Can Do Well, Can Do Somewhat, Cannot Do. The ability ratings were recorded beside their corresponding competency importance ratings.

In Group #1 of the Importance ratings there were eight competencies. Of these eight competencies three were concerned with attitudinal factors:

Competency #17: "Understand the self-concepts held by
handicapped students."

Competency #6: "Be able to foster a positive relationship
between handicapped and non-handicapped students."

Competency #37: "Be aware of employer attitudes toward
handicapped employees."

Four of these eight competencies in Group #1 were concerned with teaching methods and delivery:

Competency #41: "Be able to positively reinforce handicapped students for their achievements."

Competency #13: "Be able to plan educational programs which provide handicapped students with the maximum number of job opportunities their impairments will allow."

Competency #47: "Be able to provide safe learning conditions in the classroom(s) and the lab(s)."

Competency #28: "Be able to establish a system for recording student progress in terms of stated objectives."

One competency in Group #1 was concerned with the identification of impairments:

Competency #2: "Be able to recognize students with physical impairments."

Of all 52 competencies contained in the questionnaire, Competency #17 received the largest percentage of importance ratings with 98.5 percent of the respondents identifying it as being important. The rating of perceived ability to perform Competency #17 shows 19.4 percent of the respondents feel they can "understand the self-concepts held by handicapped students." Both Competency #13 and Competency #37 received similarly low ratings by respondents in the Can Do Well category, with 19.4 percent of respondents feeling that they are "able to plan educational programs which provide handicapped students with the maximum number of job opportunities their impairments will allow," and 28.4 percent of the response group reporting that they

Can Do Well the competency "be aware of employer attitudes toward handicapped employees."

In Group #2 of the Importance ratings there were ten competencies. Of these ten competencies Competency #21, "Be able to recognize hearing impairment conditions," received the lowest Can Do Well rating at 17.9 percent. Also receiving a low Can Do Well rating in Group #2 was Competency #12, "Be able to recognize mental impairment conditions," with 22.4 percent.

Group #3 of the Importance ratings contained 16 competencies, the largest number of competencies in any one group. Of these 16 competencies six had lower than 21 percent Can Do Well ratings:

Competency #36: "Be knowledgeable of the rights of handicapped students to employment."

Competency #15: "Be able to provide prescriptive teaching methods."

Competency #18: "Have knowledge of agencies assisting in the employment of handicapped students."

Competency #19: "Be able to develop, with the assistance of special education personnel, an individualized educational plan which best suits each handicapped student's learning style."

Competency #4: "Be able to work with parents in planning individualized educational plans."

Competency #43: "Be knowledgeable of student records available to vocational education teachers."

The percentage of respondents who reported that they feel "knowledgeable of the rights of handicapped students to employment" (Competency #36) was 19.4. Those of the response group who reported feeling "able to provide prescriptive teaching methods" (Competency #15) was 14.9 percent. The lowest Can Do Well rating in Group #3 was 13.4 percent of the respondents reporting that they "have knowledge of agencies assisting in the employment of handicapped students" (Competency #18).

Those of the response group who reported feeling that they Can Do Well Competency #19, which was concerned with the development of individualized educational plans for each handicapped student, was 19.4 percent. Competency #43 which dealt with student records available to vocational education teachers received a Can Do Well rating of 20.9 percent. Those of the response group who felt that they Can Do Well the competency "be able to work with parents in planning individualized education plans" (Competency #4) was 16.4 percent.

Group #4 of the Importance ratings included ten competencies. Four of these ten competencies had lower than 15 percent Can Do Well ratings:

Competency #51: "Understand the implications of the State Department of Education's plans related to handicapped students."

Competency #31: "Be able to match instructional methods to handicapped students based on medical, psychological, and diagnostic findings."

Competency #26: "Be able to implement learning centers, criterion reference tests, team teaching, and media to benefit handicapped students."

Competency #1: "Understand the legal responsibilities of teachers described in Public Law 94-142 and Public Act 198." Competencies #51 and #31 were very low in their Can Do Well ratings. The percentage of respondents who felt that they "understand the implications of the State Department of Education's plans related to handicapped students" (Competency #51) was 10.4, and 7.5 percent of the response group reported being "able to match instructional methods to handicapped students based on medical, psychological, and diagnostic findings" (Competency #31). Competency #1 which dealt with the legal aspects of teachers as described in Public Law 94-142 and Public Act 198 received a Can Do Well rating of 14.9 percent. Those of the response group who reported that they are "able to implement learning centers, criterion reference tests, team teaching, and media to benefit handicapped students" (Competency #26) was 13.4 percent.

Group #5 of the Importance ratings contained four competencies. Three of the four competencies had lower than 11 percent Can Do Well ratings:

Competency #29: "Be knowledgeable of the rights of handicapped students under Public Law 94-142 and Public Act 198."

Competency #14: "Be able to utilize student records (test scores, psychological reports, and performance indicators) to evaluate the capabilities and potential of handicapped students."

Competency #52: "Understand the functions of prosthetic devices for handicapped persons."

The competency dealing with the legal aspects of handicapped students as described in Public Law 94-142 and Public Act 198 received a Can Do

Well rating of 10.4 percent of the response group for Competency #29. Competencies #14 and #52 had very low Can Do Well ratings, with 4.5 percent of the respondents reporting that they Can Do Well the competency "be able to utilize student records (test scores, psychological reports, and performance indicators) to evaluate the capabilities and potential of handicapped students" (Competency #14), and 6.0 percent of the response group reporting that they "understand the functions of prosthetic devices for handicapped persons" (Competency #52).

Group #6 of the Importance ratings contained the competencies rated lowest in importance by the respondents. Group #6 included four competencies:

Competency #48: "Understand due process procedures regarding contested placements of handicapped students."

Competency #22: "Be able to administer and interpret formal assessment instruments for handicapped students."

Competency #24: "Understand what the concept 'least restrictive environment' means."

Competency #46: "Understand the historical development of mainstreaming."

All four of these competencies had lower than 21 percent Can Do Well ratings. The percentage of respondents who felt that they Can Do Well the competency "understand what the concept 'least restrictive environment' means" (Competency #24) was 20.9 percent. Competencies #46 and #48 had identical Can Do Well ratings with 6.0 percent of the response group reporting that they "understand the historical development of mainstreaming" (Competency #46), and 6.0 percent of the response group reporting that they "understand due process procedures

regarding contested placements of handicapped students" (Competency #48). Competency #22, "be able to administer and interpret formal assessment instruments for handicapped students," received a Can Do Well rating of 0.0 percent.

Of the 52 competencies included in this survey, the respondents rated all but three relatively high in importance (73.1 percent or above). The three competencies which received the lowest ratings of importance were as follows:

Competency #22: "Be able to administer and interpret formal assessment instruments for handicapped students." This competency was rated as being important by 56.7 percent of the response group.

Competency #24: "Understand what the concept 'least restrictive environment' means." This competency was rated as being important by 56.7 percent of the response group.

Competency #46: "Understand the historical development of mainstreaming." With 41.8 percent of the response group identifying this competency as being important, Competency #46 received the lowest importance rating of the 52 mainstreaming competencies contained in this survey.

The highest rating by respondents in the Can Do Well category was 67.2 percent. This rating was given to Competency #28: "Be able to establish a system for recording student progress in terms of stated objectives." This competency was included in Group #1, the group of competencies identified by 95.0-100.0 percent of the response group as being important, ranking eighth in priority. The lowest rating

in the Can Do Well category was given to Competency #22: "Be able to administer and interpret formal assessment instruments for handicapped students." This competency, included in Group #6 which contained the competencies rated lowest in importance by the respondents, received a rating of 0.0 percent of the response group who reported that they Can Do Well this competency.

TABLE 7

RANKED AND GROUPED MAINSTREAMING COMPETENCIES WITH PERCEIVED IMPORTANCE AND ABILITY RATINGS

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do	
1	1	17	Understand the self-concepts held by handicapped students.	98.5	0	19.4	44.8	28.4	19
	2.5	2	Be able to recognize students with physical impairments.	97.0	1.5	47.8	46.3	1.5	
	2.5	41	Be able to positively reinforce handicapped students for their achievements.	97.0	0	61.2	31.3	0	
	6	13	Be able to plan educational programs which provide handicapped students with the maximum number of job opportunities their impairments will allow.	95.5	1.5	19.4	56.7	16.4	
	6	6	Be able to foster a positive relationship between handicapped and non-handicapped students.	95.5	1.5	55.2	32.8	4.5	
	6	37	Be aware of employer attitudes toward handicapped employees.	95.5	1.5	28.4	47.8	13.4	

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
1	6	47	Be able to provide safe learning conditions in the classroom(s) and the lab(s).	95.5	1.5	61.2	25.4	4.5
	6	28	Be able to establish a system for recording student progress in terms of stated objectives.	95.5	1.5	67.2	22.4	3.0

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
2	11.5	38	Be able to identify occupations and skills which match the capabilities of handicapped students.	94.0	3.0	28.4	55.2	9.0
	11.5	11	Be aware of and understand administrator, teacher, parent, and student attitudes toward handicapped students.	94.0	3.0	28.4	61.2	1.5
	11.5	50	Be able to utilize paraprofessionals and volunteers in the classroom.	94.0	3.0	50.7	31.3	9.0
	11.5	5	Understand when to involve specialists, such as a psychologist, speech therapist, etc., in consultation.	94.0	3.0	38.8	38.8	10.4
	11.5	3	Be able to use observation and other informal methods to assess handicapped students' classroom performances.	94.0	1.5	43.3	47.8	1.5
	11.5	32	Be able to develop positive and active communications with handicapped students.	94.0	1.5	49.3	40.3	1.5

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
2	15	21	Be able to recognize hearing impairment conditions.	92.5	4.5	17.9	47.8	25.4
	17	12	Be able to recognize mental impairment conditions.	91.0	3.0	22.4	55.2	14.9
	17	27	Be able to recognize visual impairment conditions.	91.0	6.0	29.9	46.3	13.4
	17	7	Be able to provide handicapped students with communication skills necessary for interviewing for a job and performing the duties of a procured job.	91.0	7.5	29.9	53.7	7.5

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
	20	36	Be knowledgeable of the rights of handicapped students to employment.	89.6	7.5	19.4	46.3	23.9
	20	42	Be able to obtain and utilize parental knowledge of their handicapped child to further the understanding of that handicapped student.	89.6	6.0	28.4	53.7	9.0
	20	34	Utilize services provided by school psychologists.	89.6	4.5	32.8	38.8	17.9
3	23.5	15	Be able to provide prescriptive teaching methods.	88.1	6.0	14.9	52.2	23.9
	23.5	35	Be able to evaluate readiness skills.	88.1	3.0	23.9	40.3	23.9
	23.5	44	Be able to accurately evaluate handicapped students for occupational placement.	88.1	9.0	26.9	47.8	17.9
	23.5	25	Be able to conduct activities which promote positive interaction of handicapped students with non-handicapped students.	88.1	9.0	43.3	40.3	7.5

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
3	28.5	18	Have knowledge of agencies assisting in the employment of handicapped students.	86.6	10.4	13.4	49.3	26.9
	28.5	19	Be able to develop, with the assistance of special education personnel, an individualized educational plan which best suits each handicapped student's learning style.	86.6	7.5	19.4	50.7	19.4
	28.5	43	Be knowledgeable of student records available to vocational education teachers.	86.6	9.0	20.9	46.3	25.4
	28.5	33	Be able to make physical adaptations in the classroom to meet the specific needs of handicapped students.	86.6	10.4	31.3	44.8	11.9
	28.5	9	Understand the functions of the educational planning and placement committees.	86.6	9.0	40.3	40.3	13.4
	28.5	30	Be able to recognize speech impairment conditions.	86.6	10.4	35.8	50.7	4.5

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
	33	4	Be able to work with parents in planning individualized education plans.	85.1	9.0	16.4	50.7	23.9
3	33	39	Utilize services provided by school social workers.	85.1	10.4	23.9	52.2	11.9
	33	16	Be able to implement tutoring of handicapped students by non-handicapped students.	85.1	10.4	31.3	47.8	10.4

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
	36	51	Understand the implications of the State Department of Education's plans related to handicapped students.	83.6	13.4	10.4	44.8	37.3
	36	49	Understand school district and building procedures regarding contested placements of handicapped students.	83.6	11.9	28.4	43.3	11.9
4	36	10	Be able to provide parents of handicapped students with a description of goals and techniques used to teach their handicapped child.	83.6	10.4	29.9	44.8	16.4
	38.5	31	Be able to match instructional methods to handicapped students based on medical, psychological, and diagnostic findings.	32.1	10.4	7.5	49.3	32.8
	38.5	45	Have a knowledge of how to adapt physical conditions of jobs to fit handicapped individuals.	82.1	11.9	20.9	47.8	16.4

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
4	42	26	Be able to implement learning centers, criterion reference tests, team teaching, and media to benefit handicapped students.	80.6	16.4	13.4	50.7	23.9
	42	1	Understand the legal responsibilities of teachers described in Public Law 94-142 and Public Law 198.	80.6	13.4	14.9	40.3	31.3
	42	40	Be aware of the attitudes of non-handicapped employees toward handicapped employees.	80.6	16.4	25.4	47.8	19.4
	42	23	Be able to arrange employment opportunities with prospective employers.	80.6	14.9	31.3	35.8	20.9
	42	8	Understand child development and learning theories.	80.6	13.4	31.3	49.3	13.4

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
5	45	29	Be knowledgeable of the rights of handicapped students under Public Law 94-142 and Public Act 198.	79.1	14.9	10.4	35.8	40.3
	46.5	14	Be able to utilize student records (test scores, psychological reports, and performance indicators) to evaluate the capabilities and potential of handicapped students.	77.6	19.4	4.5	49.3	35.8
	46.5	52	Understand the functions of prosthetic devices for handicapped persons.	77.6	14.9	6.0	40.3	43.3
	48	20	Be able to individualize commercially available programs and texts.	76.1	20.9	23.9	47.8	16.4

Table 7, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
6	49	48	Understand due process procedures regarding contested placements of handicapped students.	73.1	20.9	6.0	38.8	41.8
	50.5	22	Be able to administer and interpret formal assessment instruments for handicapped students.	56.7	35.8	0	25.4	61.2
	50.5	24	Understand what the concept "least restrictive environment" means.	56.7	26.9	20.9	25.4	35.8
	52	46	Understand the historical development of mainstreaming.	41.8	52.2	6.0	32.8	47.8

RESEARCH QUESTIONS

Introduction

It was the intention of this survey to answer questions concerning the importance of certain mainstreaming competencies and vocational education teachers' abilities to perform the same competencies. The competencies were rated in terms of both importance and ability as perceived by Michigan Area Vocational Center teachers. These teachers also provided demographic information describing their "Occupational Area(s) of Teaching, Employment Status, Educational Degree Level, Years of Vocational Teaching Experience, and Type(s) of Handicapping Condition(s) Students Served Have Had."

This study set forth five questions to be answered in terms of data collected from the respondents. The five questions sought to determine whether or not there was any relationship between each of the five demographic characteristics and the corresponding teacher ratings of perceived importance and perceived ability to perform the competencies contained in the questionnaire.

Question Number One

Question Number One was as follows:

"Is there a relationship between occupational areas regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

The category of Trade and Industrial Education had 37 respondents for a total of 55.2 percent of all respondents. This represents a highly skewed proportion of the response group. Due to the degree

of disparity in the number of respondents in each of the six categories of Occupational Areas, analysis by Occupational Area would be meaningless to conduct.

Question Number Two

Question Number Two was as follows:

"Is there a relationship between full-time vocational education teachers and part-time vocational education teachers regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

In order to do any analysis of the data collected in terms of Employment Status, it is necessary to have a reasonably equal number of respondents in both the full-time and part-time categories. Because there was only 1 part-time respondent and there were 65 full-time respondents, it was useless to attempt to draw any conclusions based upon Employment Status.

Question Number Three

Question Number Three was as follows:

"Is there a relationship between educational degree levels regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

Because there was only one respondent with a Specialist Degree, the categories of Masters and Specialist were grouped together in order to eliminate empty cells in the crosstabulation tables.

In terms of Earned Educational Degree Levels and their corresponding importance ratings, three competencies were significantly related at the .05 level. The remaining 49 competencies were not significant

at the .05 level.

Table 8 contains data regarding the importance rating of Competency #23, "Be able to arrange employment opportunities with prospective employers." This competency had a significance level of .0213. The chi-square value for this competency was 7.694 with 2 degrees of freedom. Therefore there was a significant relationship between teachers with less than a Bachelors, Bachelors, and Masters and Specialist Degrees on the importance ratings each category gave to this competency. Teachers with Masters and Specialist Degrees rated this competency highest in importance while the category of Bachelors Degrees rated the competency lowest in importance. Teachers with Less than a Bachelors Degree gave this competency importance ratings between the other two groups.

TABLE 8

CROSSTABULATION OF DEGREE LEVEL BY IMPORTANCE OF THE COMPETENCY:
"BE ABLE TO ARRANGE EMPLOYMENT OPPORTUNITIES WITH PROSPECTIVE EMPLOYERS"

Degree Level		Important	Not Important
Less than Bachelors	Frequency	18	2
	Percent	90.0	10.0
Bachelors	Frequency	14	7
	Percent	66.7	33.3
Masters and Specialist	Frequency	22	1
	Percent	95.7	4.3

RAW CHI-SQUARE = 7.694 WITH 2 DEGREES OF FREEDOM

SIGNIFICANCE = .0213

Table 9 contains data regarding the importance rating of Competency #24, "Understand what the concept 'least restrictive environment' means". This competency had a significance level of .0172. The chi-square value for this competency was 8.121 with 2 degrees of freedom. Therefore there was a significant relationship between teachers with less than a Bachelors, Bachelors, and Masters and Specialist Degrees on the importance rating each category gave to this competency. Teachers with Less than a Bachelors degree rated the competency highest in importance while teachers with a Bachelors Degree rated the competency lowest in importance. Masters and Specialist Degree teachers' ratings were between the other two groups.

TABLE 9

CROSSTABULATION OF DEGREE LEVEL BY IMPORTANCE OF THE COMPETENCY:
"UNDERSTAND WHAT THE CONCEPT 'LEAST RESTRICTIVE ENVIRONMENT' MEANS"

Degree Level		Important	Not Important
Less than Bachelors	Frequency	14	1
	Percent	93.3	6.7
Bachelors	Frequency	9	10
	Percent	47.4	52.6
Masters and Specialist	Frequency	15	7
	Percent	68.2	31.8

RAW CHI-SQUARE = 8.121 WITH 2 DEGREES OF FREEDOM

SIGNIFICANCE = .0172

Table 10 contains data regarding the importance rating of Competency #30, "Be able to recognize speech impairment conditions." This competency had a significance level of .0483. The chi-square value for this competency was 6.062 with 2 degrees of freedom. Therefore there was a significant relationship between teachers with less than a Bachelors, Bachelors, Masters and Specialist Degrees on the importance ratings each category gave to this competency. Teachers with Masters and Specialist Degrees rated the competency highest in importance while teachers with Bachelors Degrees rated the competency lowest in importance. The ratings of teachers with less than a Bachelors Degree were between the other two groups.

TABLE 10

CROSSTABULATION OF DEGREE LEVEL BY IMPORTANCE OF THE COMPETENCY:
"BE ABLE TO RECOGNIZE SPEECH IMPAIRMENT CONDITIONS"

Degree Level		Important	Not Important
Less than Bachelors	Frequency	18	2
	Percent	90.0	10.0
Bachelors	Frequency	17	5
	Percent	77.3	22.7
Masters and Specialist	Frequency	23	0
	Percent	100.0	0

RAW CHI-SQUARE = 6.062 WITH 2 DEGREES OF FREEDOM

SIGNIFICANCE = .0483

In addition to the preceding three competencies which dealt with relationships in importance ratings, there were four competencies with perceived ability ratings which had a significant relationship at the .05 level in terms of Earned Educational Degree Levels. The remaining

48 competencies were not significant at the .05 level.

Table 11 contains data regarding the ability rating of Competency #4, "Be able to work with parents in planning individualized education plans." This competency had a significance level of .0388. The chi-square value for this competency was 10.099 with 4 degrees of freedom. Therefore there was a significant relationship between teachers with less than a Bachelors, Bachelors, and Masters and Specialist Degrees on the ability ratings each category gave to the competency. Teachers in the Masters and Specialist Degree category had the highest perceived ability rating in the Can Do Well category. Teachers with Bachelors Degrees had the lowest perceived ability rating in the Can Do Well category. Teachers with Less than a Bachelors Degree had ability ratings between the other two groups.

TABLE 11

CROSSTABULATION OF DEGREE LEVEL BY PERCEIVED ABILITY TO PERFORM THE COMPETENCY: "BE ABLE TO WORK WITH PARENTS IN PLANNING INDIVIDUALIZED EDUCATION PLANS"

Degree Level		Can Do Well	Can Do Somewhat	Cannot Do
Less than Bachelors	Frequency	3	12	4
	Percent	15.8	63.2	21.1
Bachelors	Frequency	2	8	10
	Percent	10.0	40.0	50.0
Masters and Specialist	Frequency	6	14	2
	Percent	27.3	63.6	9.1

RAW CHI-SQUARE = 10.099 WITH 4 DEGREES OF FREEDOM

SIGNIFICANCE = .0388

Table 12 contains data regarding the ability rating of Competency #23, "Be able to arrange employment opportunities with prospective employers." This competency had a significance level of .0189. The chi-square value for this competency was 11.804 with 4 degrees of freedom. Therefore there was a significant relationship between teachers with Less than a Bachelors, Bachelors, and Masters and Specialist Degrees on the ability ratings each category gave to this competency. Teachers with Less than a Bachelors degree had the highest perceived ability rating in the Can Do Well category. Teachers with Bachelors Degrees had the lowest perceived ability rating in the Can Do Well category. Masters and Specialist Degree teachers' perceived ability ratings were between the other two groups.

TABLE 12

CROSSTABULATION OF DEGREE LEVEL BY PERCEIVED ABILITY TO PERFORM THE COMPETENCY: "BE ABLE TO ARRANGE EMPLOYMENT OPPORTUNITIES WITH PROSPECTIVE EMPLOYERS"

Degree Level		Can Do Well	Can Do Somewhat	Cannot Do
Less than Bachelors	Frequency	9	8	2
	Percent	47.4	42.1	10.5
Bachelors	Frequency	3	5	9
	Percent	17.6	29.4	52.9
Masters and Specialist	Frequency	9	11	3
	Percent	39.1	47.8	13.0

RAW CHI-SQUARE = 11.804 WITH 4 DEGREES OF FREEDOM

SIGNIFICANCE = .0189

Table 13 contains data regarding the ability rating of Competency #33, "Be able to make physical adaptations in the classroom to meet the specific needs of handicapped students." This competency had a significance level of .0474. The chi-square value for this competency was 9.619 with 4 degrees of freedom. Therefore there was a significant relationship between teachers with Less than a Bachelors, Bachelors, and Masters and Specialist Degrees on the ability ratings each category gave to this competency. Teachers with less than Bachelors Degrees had the highest perceived ability ratings in the Can Do Well category. Teachers with Masters and Specialist Degrees had the lowest perceived ability ratings in the Can Do Well category. Teachers with Bachelors Degrees had perceived ability ratings between the other two groups.

TABLE 13

CROSSTABULATION OF DEGREE LEVEL BY PERCEIVED ABILITY TO PERFORM THE COMPETENCY: "BE ABLE TO MAKE PHYSICAL ADAPTATIONS IN THE CLASSROOM TO MEET THE SPECIFIC NEEDS OF HANDICAPPED STUDENTS"

Degree Level		Can Do Well	Can Do Somewhat	Cannot Do
Less than Bachelors	Frequency	8	10	1
	Percent	42.1	52.6	5.3
Bachelors	Frequency	6	6	6
	Percent	33.3	33.3	33.3
Masters and Specialist	Frequency	7	14	1
	Percent	31.8	63.6	4.5

RAW CHI-SQUARE = 9.619 WITH 4 DEGREES OF FREEDOM

SIGNIFICANCE = .0474

Table 14 contains data regarding the ability rating of Competency #45, "Have a knowledge of how to adapt physical conditions of jobs to fit handicapped individuals." This competency had a significance level of .0141. The chi-square value for this competency was 12.484 with 4 degrees of freedom. Therefore there was a significant relationship between teachers with Less than a Bachelors, Bachelors, and Masters and Specialist Degrees on the perceived ability ratings each category gave to this competency. Teachers with Less than Bachelors Degrees had the highest perceived ability ratings in the Can Do Well category. Teachers with Bachelors Degrees had the lowest perceived ability ratings in the Can Do Well category. Teachers with Specialist and Masters Degrees had ability ratings between those of the other two groups.

TABLE 14

CROSSTABULATION OF DEGREE LEVEL BY PERCEIVED ABILITY TO PERFORM THE COMPETENCY: "HAVE A KNOWLEDGE OF HOW TO ADAPT PHYSICAL CONDITIONS OF JOBS TO FIT HANDICAPPED INDIVIDUALS"

Degree Level		Can Do Well	Can Do Somewhat	Cannot Do
Less than Bachelors	Frequency	9	5	4
	Percent	50.0	27.8	22.2
Bachelors	Frequency	2	12	5
	Percent	10.5	63.2	26.3
Masters and Specialist	Frequency	3	15	2
	Percent	15.0	75.0	10.0

RAW CHI-SQUARE = 12.484 WITH 4 DEGREES OF FREEDOM

SIGNIFICANCE = .0141

Question Number Four

Question Number Four was as follows:

"Is there a relationship between categories of years of vocational education teaching experience regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

In regard to significant relationships between each of the five categories of years of vocational education teaching experience there was one competency which had a significant relationship at the .05 level in relation to importance ratings. The remaining 51 competencies had no significant relationships for importance at the .05 level.

Table 15 contains data regarding the importance rating of Competency #1, "Understand the legal responsibilities of teachers described in Public Law 94-142 and Public Act 198." This competency had a significance level of .0052. The chi-square value was 14.783 with 4 degrees of freedom. Therefore there was a significant relationship between the categories of years of vocational education teaching experience on the importance ratings each category gave to this competency. Teachers with less than 2 years of vocational education teaching experience rated this competency highest in importance. Teachers with 6 to 8, 9 to 11, and 3 to 5 years of vocational education teaching experience rated the competency respectively lower. Teachers with 12 or more years of vocational education teaching experience rated this competency lowest in importance.

TABLE 15

CROSSTABULATION OF YEARS OF TEACHING EXPERIENCE BY IMPORTANCE OF THE COMPETENCY: "UNDERSTAND THE LEGAL RESPONSIBILITIES OF TEACHERS DESCRIBED IN PUBLIC LAW 94-142 AND PUBLIC ACT 198"

Years of Experience		Important	Not Important
Less than 2	Frequency Percent	4 100.0	0 0
3 to 5		19 95.0	1 5.0
6 to 8		16 88.9	2 11.1
9 to 11		10 90.9	1 9.1
12 or more		4 44.4	5 55.6

RAW CHI-SQUARE = 14.783 WITH 4 DEGREES OF FREEDOM

SIGNIFICANCE = .0052

No significant relationships were found between each of the five categories of years of vocational education teaching experience on the perceived ability ratings of competencies.

Question Number Five

Question Number Five was as follows:

"Is there a relationship between type(s) of handicapping conditions present in classes regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

It is impossible to answer this question due to the fact that teachers who responded could respond to several different types of handicapping conditions. This provided data which were not mutually exclusive.

SUGGESTED ADDITIONS TO COMPETENCY LIST

Space was provided at the end of the questionnaire for respondents to suggest mainstreaming competencies which they believed should be added to the questionnaire's list of 52 mainstreaming competency statements. The following five competencies were provided in this available space:

1. "Be able to see individual psychological differences (between handicapped students) who can cope with everyday problems regardless of handicapping conditions and those who use it as a crutch."
2. "Make handicapped students aware of their limits."
3. "Be able to implant a positive self-image in handicapped students."
4. "Support staff sharing techniques."
5. "Be able to have, as far as possible, handicapped students attain self-attained goals."

REPLICATION SURVEY

Following the initial survey of 143 Michigan Area Vocational Center teachers, a replication of the survey was conducted. The replication surveyed 72 Michigan Area Vocational Center teachers who

were a part of the population of this study which was not included in the initial survey. One mailing was made which yielded responses from 33 teachers. Six questionnaires were returned due to the concerned teachers no longer being employed at the address surveyed. The remaining 27 responses were used for analysis.

Table 16 contains the ranking of competencies by perceived importance as rated by the response group in the replication survey. Also included are the ratings of the teachers' perceived ability to perform the competencies. The competencies are arranged in Table 16 according to Group Numbers just as the competencies of the initial survey were arranged in Table 7. The groups designate the percentage of respondents rating the competency as being important. The groups are:

- Group #1: 95.0-100.0 percent of the replication response group identified the competency as being important.
- Group #2: 90.0-94.9 percent of the replication response group identified the competency as being important.
- Group #3: 85.0-89.9 percent of the replication response group identified the competency as being important.
- Group #4: 80.0-84.9 percent of the replication response group identified the competency as being important.
- Group #5: 75.0-79.9 percent of the replication response group identified the competency as being important.
- Group #6: 40.7-74.9 percent of the replication response group identified the competency as being important.

In comparison with the initial survey, the replication survey had all but four competencies rated as being important by 70 percent or more of the response group, while the initial survey had all but three of the competencies similarly rated. Competency #22, "Be able to administer and interpret formal assessment instruments for handicapped students," and Competency #46, "Understand the historical development of mainstreaming," were rated low in importance in both the initial and the replication survey. Differences in low importance ratings of competencies between the initial and the replication survey occurred in three instances. Competency #9, "Understand the functions of the educational planning and placement committees," and Competency #15, "Be able to provide prescriptive teaching methods," were rated low in importance in the replication survey but not in the initial survey. Competency #24, "Understand what the concept 'least restrictive environment' means," was rated low in importance in the initial survey but not in the replication survey.

TABLE 16

REPLICATION SURVEY: RANKED AND GROUPED MAINSTREAMING COMPETENCIES
WITH PERCEIVED IMPORTANCE AND ABILITY RATINGS

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
1	2.5	5	Understand when to involve specialists, such as a psychologist, speech therapist, etc., in consultation.	100.0	0	37.0	44.4	11.1
	2.5	3	Be able to use observation and other informal methods to assess handicapped students' classroom performances.	100.0	0	55.6	37.0	3.7
	2.5	47	Be able to provide safe learning conditions in the classroom(s) and the lab(s).	100.0	0	63.0	33.3	0
	2.5	2	Be able to recognize students with physical impairments.	100.0	0	66.7	25.9	3.7
	7.5	45	Have a knowledge of how to adapt physical conditions of jobs to fit handicapped individuals.	96.3	3.7	29.6	37.0	29.6
	7.5	27	Be able to recognize visual impairment conditions.	96.3	3.7	33.3	48.1	14.8

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
1	7.5	50	Be able to utilize paraprofessionals and volunteers in the classroom.	96.3	3.7	33.3	48.1	11.1
	7.5	30	Be able to recognize visual impairment conditions.	96.3	3.7	44.4	48.1	0
	7.5	32	Be able to develop positive and active communication with handicapped students.	96.3	0	63.0	27.0	0
	7.5	41	Be able to positively reinforce handicapped students for their achievements.	96.3	0	70.4	29.6	0

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
2	15	36	Be knowledgeable of the rights of handicapped students to employment.	92.6	7.4	18.5	44.4	33.3
	15	44	Be able to accurately evaluate handicapped students for occupational placement.	92.6	7.4	25.9	51.9	18.5
	15	37	Be aware of employer attitudes toward handicapped employees.	92.6	7.4	29.6	44.4	22.2
	15	21	Be able to recognize hearing impairment conditions.	92.6	3.7	33.3	44.4	22.2
	15	42	Be able to obtain and utilize parental knowledge of their handicapped child to further the understanding of that handicapped student.	92.6	7.4	33.3	44.4	14.8
	15	39	Utilize services provided by school social workers.	92.6	7.4	40.7	33.3	22.2
	15	12	Be able to recognize mental impairment conditions.	92.6	3.7	44.4	37.0	14.8

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
2	15	25	Be able to conduct activities which promote positive interaction of handicapped students with non-handicapped students.	92.6	3.7	48.1	48.1	3.7
	15	28	Be able to establish a system for recording student progress in terms of stated objectives.	92.6	3.7	59.3	37.0	3.7

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
3	25	1	Understand the legal responsibilities of teachers described in Public Law 94-142 and Public Act 198.	88.9	11.1	11.1	44.4	37.0
	25	7	Be able to provide handicapped students with communication skills necessary for interviewing for a job and for performing the duties of a procured job.	88.9	3.7	11.1	74.1	3.7
	25	52	Understand the functions of prosthetic devices for handicapped persons.	88.9	11.1	14.8	44.4	33.3
	25	17	Understand the self-concepts held by handicapped students.	88.9	7.4	25.9	51.9	22.2
	25	49	Understand school district and building procedures dealing with handicapped students.	88.9	11.1	25.9	48.1	18.5
	25	31	Be able to match instructional methods to handicapped students based on medical, psychological, and diagnostic findings.	88.9	7.4	29.6	22.2	44.4

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
	25	33	Be able to make physical adaptations in the classroom to meet the specific needs of handicapped students.	88.9	3.7	37.0	44.4	14.8
	25	38	Be able to identify occupations and skills which match the capabilities of handicapped students.	88.9	7.4	40.7	30.7	22.2
3	25	40	Be aware of the attitudes of non-handicapped employees toward handicapped employees.	88.9	11.1	40.7	40.7	11.1
	25	11	Be aware of and understand administrator, teacher, parent, and student attitudes toward handicapped students.	88.9	11.1	48.1	44.4	0
	25	6	Be able to foster a positive relationship between handicapped and non-handicapped students.	88.9	7.4	59.3	40.7	0

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
3	32	29	Be knowledgeable of the rights of handicapped students under Public Law 94-142 and Public Act 198.	85.2	14.8	14.8	44.4	33.3
	32	19	Be able to develop, with the assistance of special education personnel, an individualized educational plan which best suits each handicapped student's learning style.	85.2	14.8	14.8	66.7	14.8
	32	43	Be knowledgeable of student records available to vocational education teachers.	85.2	14.8	37.0	25.9	25.9

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
	35	4	Be able to work with parents in planning individualized education plans.	81.5	14.8	18.5	51.9	18.5
4	35	34	Utilize services provided by school psychologists.	81.5	11.1	25.9	37.0	25.9
	35	36	Be able to evaluate readiness skills.	81.5	14.8	25.9	40.7	25.9

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
	39	51	Understand the implications of the State Department of Education's plans related to handicapped students.	77.8	22.2	3.7	48.1	40.7
	39	18	Have knowledge of agencies assisting in the employment of handicapped students.	77.8	18.5	7.4	44.4	44.4
5	39	23	Be able to arrange employment opportunities with prospective employers.	77.8	18.5	22.2	55.6	22.2
	39	13	Be able to plan educational programs which provide handicapped students with the maximum number of job opportunities their impairments will allow.	77.8	18.5	22.2	51.9	22.2
	39	26	Be able to implement learning centers, criterion reference tests, team teaching, and media to benefit handicapped students.	77.8	18.5	29.6	44.4	22.2

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
	44	14	Be able to utilize student records (test scores, psychological reports, and performance indicators) to evaluate the capabilities and potential of handicapped students.	74.1	22.2	18.5	44.4	37.0
	44	16	Be able to implement tutoring of handicapped students by non-handicapped students.	74.1	18.5	25.9	55.6	14.8
6	44	24	Understand what the concept "least restrictive environment" means.	74.1	18.5	29.6	18.5	40.7
	44	8	Understand child development and learning theories.	74.1	22.2	29.6	55.6	7.4
	44	10	Be able to provide parents of handicapped students with a description of goals and techniques used to teach their handicapped child.	74.1	22.2	33.3	59.3	7.4
	47.5	48	Understand due process procedures regarding contested placements of handicapped students.	70.4	25.9	7.4	40.7	44.4

Table 16, Continued

Group Number	Priority Rank	Competency Number	Mainstreaming Competency Statement	Important	Not Important	Can Do Well	Can Do Somewhat	Cannot Do
6	47.5	20	Be able to individualize commercially available programs and texts.	70.4	25.9	14.8	63.0	14.8
	49.5	9	Understand the functions of the educational planning and placement committees.	63.0	29.6	14.8	51.9	25.9
	49.5	15	Be able to provide prescriptive teaching methods.	63.0	29.6	22.2	33.3	40.7
	51	22	Be able to administer and interpret formal assessment instruments for handicapped students.	44.4	51.9	0	22.2	74.1
	52	46	Understand the historical development of mainstreaming.	40.7	55.6	7.4	33.3	44.4

SUMMARY OF CHAPTER FOUR

The most typical demographic characteristics of the respondents were:

1. Occupational Area: Trade and Industrial Education,
55.2 percent
2. Employment Status: Full-time, 97 percent
3. Earned Educational Degree Level: Bachelors Degree,
35.8 percent
4. Years of Vocational Education Teaching Experience:
3 to 5 years, 32.8 percent
5. Type(s) of Handicap(s) of Students Served: Learning
Disabled, 80.6 percent

In the initial survey 49 of 52 mainstreaming competencies were rated as being important by 73 percent or more of the respondents. Of the 52 competencies 47 had less than 50 percent of the respondents in the Can Do Well category of perceived ability to perform those competencies. The replication survey had 48 of the 52 mainstreaming competencies rated as being important by 70 percent or more of the sample. Of the 52 competencies 45 had less than 50 percent of the replication survey's respondents in the Can Do Well category of perceived ability to perform those competencies.

The independent variables of Occupational Area and Employment Status were inappropriate for analysis by chi-square statistics due to skewed respondent characteristics. The independent variable of type(s) of handicapping condition(s) was inappropriate for analysis due to data which were not mutually exclusive.

The independent variable of Earned Educational Degree Level yielded three competencies with significant relationships on importance ratings and four competencies with significant relationships on perceived ability ratings. The remainder of the competencies had no significant relationships.

The independent variable of Years of Vocational Education Teaching Experience had one competency with a significant relationship on importance ratings. The remaining importance and perceived ability ratings had no significant relationships between the categories of Years of Vocational Education Teaching Experience.

The open-ended question on the questionnaire yielded five suggestions for additional competencies to be added to the questionnaire. These five suggestions were:

1. "Be able to see individual psychological differences (between handicapped students) who can cope with everyday problems regardless of handicapping conditions and those who use it as a crutch."
2. "Make handicapped students aware of their limits."
3. "Be able to implant a positive self-image in handicapped students."
4. "Support staff sharing techniques."
5. "Be able to have, as far as possible, handicapped students attain self-attained goals."

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The Problem

The purpose of this study was to identify what mainstreaming competencies Michigan Area Vocational Center teachers perceived to be important in order to successfully teach handicapped students in regular classrooms. In addition to importance, the study sought to identify how able the teachers perceived themselves to be to perform selected mainstreaming competencies.

The legislative and social support given to a free appropriate public education for handicapped persons insures that practically every teacher, counselor and administrator involved in education will be involved in educating handicapped persons in regular classrooms.

In order to effectively and proficiently teach handicapped students in regular classrooms it is necessary for teachers to receive appropriate instruction and preparation in a variety of methods. It is intended that this study will provide guidance for teacher education institutions, teacher preparation centers, and State and local education agencies in the preparation of teachers to teach handicapped students in regular classrooms.

The population of this study was 722 Michigan Area Vocational

Center teachers. These teachers represented all of the teachers employed at the 24 free-standing Michigan Area Vocational Centers. Free-standing centers are those centers not physically connected to educational facilities which provide both general education courses and vocational education courses. Those centers which are physically connected with general education facilities were not a part of this study.

The sample for this study was 143 Michigan Area Vocational Center teachers. This was a 20 percent sample of the population. The teachers were randomly selected from an alphabetical list of the 722 vocational education teachers employed at the 24 Michigan Area Vocational Centers.

A replication survey was conducted following the completion of the survey of 143 teachers. The sample for the replication survey was 72 Michigan Area Vocational Center teachers. These 72 teachers represented a 10 percent sample of the population. The teachers were randomly selected from an alphabetical list of the 722 vocational education teachers employed at the 24 Michigan Area Vocational Centers. None of the teachers in the replication survey were included in the original survey of 143 teachers.

Research Procedures

As a part of this study the answers to seven questions were sought.

The collection of data was achieved by the use of a questionnaire. The first part of the questionnaire sought demographic information of the respondents. The second part of the questionnaire was concerned

with identifying the perceived importance and perceived ability to perform selected mainstreaming competencies as rated by Michigan Area Vocational Center teachers. A cover letter, questionnaire, and postage paid return envelope were mailed to each of the 143 teachers sampled. The teachers were asked to return the questionnaire, completed, within 2 weeks.

A second mailing was made to those teachers sampled who did not respond to the first mailing. The second mailing contained a different cover letter than the first mailing, a questionnaire and a postage paid return envelope. The teachers were asked to return the questionnaire, completed, within 2 weeks.

In order to get responses from the teachers sampled who had not yet responded after the second mailing, questionnaires were delivered to representatives from the different Michigan Area Vocational Centers. The questionnaires were enclosed in postage paid return envelopes which included the name of the teacher being sampled.

Following the survey of 143 teachers a replication survey was conducted. A cover letter, questionnaire, and postage paid return envelope were mailed to 72 teachers not previously sampled. These 72 teachers were asked to return the questionnaire, completed, within 2 weeks.

Respondents

Of 143 teachers surveyed there were 80 questionnaires returned. Of these 80 returns, 13 were unusable and as such were subtracted from the 143 teachers surveyed.

The data contained in this study represent the responses of

67 (51.5 percent of the sample) Michigan Area Vocational Center teachers in an initial survey of 130 teachers. An additional 33 responses (41.7 percent of the sample) were obtained from a replication survey of 72 teachers. 27 completed responses were used for analysis.

Profile of Respondents

A profile of the most frequently occurring demographic characteristics of respondents is as follows:

1. Occupational Area: Trade and Industrial Education, 55.2 percent of the response group.
2. Employment Status: Full-time, 97.0 percent of the response group.
3. Earned Educational Degree Level: Bachelors Degree, 35.8 percent of the response group.
4. Number of Years of Teaching Experience: 3 to 5 years, 32.8 percent of the response group.
5. Type(s) of Handicap(s) of Students Served: Learning Disabled, 80.6 percent of the response group.

Ratings of Competencies

Attitudinal and Communication competencies received the highest importance ratings. Mainstreaming Laws competencies received the lowest importance ratings.

Of the 52 competencies contained in the questionnaire, 48 competencies were rated as being important by 75.0 percent or more of the response group. In the importance range from 95.0 percent to 100.0 percent,

Group #1, the teachers identified eight competencies. These competencies emphasized attitudinal and methodological concerns of mainstreaming. Competency #17, "Understand the self-concepts held by handicapped students," was rated as being important by more of the teachers, 98.5 percent, than any other single competency. Competency #17 had 19.4 percent of the teachers who said they "Can Do Well" this competency. Competency #13, "Be able to plan educational programs which provide handicapped students with the maximum number of job opportunities their impairments will allow," also had a low "Can Do Well" ability rating, 19.4 percent, but a high importance rating at 95.5 percent.

In the 90.0 to 94.9 percent importance range, Group #2, Competencies #21, "Be able to recognize hearing impairment conditions," and #12, "Be able to recognize mental impairment conditions," had low "Can Do Well" ability ratings. Competency #21 was rated "Important" by 92.5 percent of the respondents with a correlated "Can Do Well" ability rating of 17.9 percent. Competency #12 had "Important" and "Can Do Well" ratings of 91.0 percent and 22.4 percent, respectively.

In Group #3, the 85.0 to 89.9 percent importance range, five competencies had low "Can Do Well" ability ratings. Competency #6, "Be knowledgeable of the rights of handicapped students to employment," had an "Important" rating of 89.6 percent and a "Can Do Well" rating of 19.4 percent. Competency #15, "Be able to provide prescriptive teaching methods," had an "Important" rating of 88.1 percent and a "Can Do Well" rating of 14.9 percent. Competency #18, "Have knowledge of agencies assisting in the employment of handicapped students," had an "Important" rating of 86.6 percent and a "Can Do Well" rating of 13.4 percent.

Competency #19, "Be able to develop, with the assistance of special education personnel, an individualized educational plan which best suits each handicapped student's learning style," had an "Important" rating of 86.6 percent and a "Can Do Well" rating of 19.4 percent. Competency #4, "Be able to work with parents in planning individualized education plans," had an "Important" rating of 85.1 percent and a "Can Do Well" rating of 16.4 percent.

Four competencies in the 80.0 to 84.9 percent importance range, Group #4, had low "Can Do Well" ability ratings. Competency #51, "Understand the implications of the State Department of Education's plans related to handicapped students," received an "Important" rating of 83.6 percent and a "Can Do Well" rating of 10.4 percent. Competency #31, "Be able to match instructional methods to handicapped students based on medical, psychological, and diagnostic findings," had an "Important" rating of 82.1 percent and a "Can Do Well" rating of 7.5 percent. Competency #26, "Be able to implement learning centers, criterion reference tests, team teaching, and media to benefit handicapped students," had an "Important" rating of 80.6 percent and a "Can Do Well" rating of 13.4 percent. Competency #1, "Understand the legal responsibilities of teachers described in Public Law 94-142 and Public Act 198," had an "Important" rating of 80.6 percent and a "Can Do Well" rating of 14.9 percent.

Three competencies in the 75.0 to 79.9 percent importance range, Group #5, had low "Can Do Well" ability ratings. Competency #29, "Be knowledgeable of the rights of handicapped students under Public Law 94-142 and Public Act 198," had an "Important" rating of 79.1 percent and a "Can Do Well" rating of 10.4 percent. Competency #14,

"Be able to utilize student records (test scores, psychological reports, and performance indicators) to evaluate the capabilities and potential of handicapped students," had an "Important" rating of 77.6 percent and a "Can Do Well" rating of 4.5 percent. Competency #52, "Understand the functions of prosthetic devices for handicapped persons," had an "Important" rating of 77.6 percent and a "Can Do Well" rating of 6.0 percent.

In Group #6, those competencies rated by 75.0 percent or less of the respondents as being important, three competencies had considerably lower importance ratings than the remaining 49 competencies in all of the other groups. Competency #22, "Be able to administer and interpret formal assessment instruments for handicapped students," as well as Competency #24, "Understand what the concept 'least restrictive environment' means," were rated "Important" by 56.7 percent of the respondents. Competency #46, "Understand the historical development of mainstreaming," was rated "Important" by 41.8 percent of the respondents and as such was rated least "Important" of all the 52 competencies contained in the questionnaire used for this study.

The findings related to the use of the chi-square test statistic (.05 level of significance) to answer the five research questions of this study are as follows:

Research Question Number One: "Is there a relationship between occupational areas regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

A skewed response rate among the respondents in the six Occupational Areas made it impractical to address this question.

Research Question Number Two: "Is there a relationship between full-time vocational education teachers and part-time vocational education teachers regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

The overwhelming number of respondents in the Full-time category as opposed to the lone respondent in the Part-time category made it unrealistic to attempt to answer this question.

Research Question Number Three: "Is there a relationship between educational degree levels regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

Significant relationships were found in the teachers' importance ratings of the following competencies:

Competency #23: "Be able to arrange employment opportunities with prospective employers."

This competency received the highest Importance ratings at the Masters and Specialist Degree levels, and the lowest Importance ratings at the Bachelors Degree level.

Competency #24: "Understand what the concept 'least restrictive environment' means."

This competency received the highest Importance ratings at the Less than Bachelors Degree level, and the lowest Importance ratings at the Bachelors Degree level.

Competency #30: "Be able to recognize speech impairment conditions."

This competency received the highest Importance ratings at the Masters and Specialist Degree levels, and the lowest Importance ratings at the Bachelors Degree level.

Significant relationships were found in the teachers' Can Do Well category of ability ratings of the following competencies:

Competency #4: "Be able to work with parents in planning individualized education plans."

This competency received the highest Can Do Well ability rating at the Masters and Specialist Degree levels, and the lowest Can Do Well ability rating at the Bachelors Degree level.

Competency #23: "Be able to arrange employment opportunities with prospective employers."

This competency received the highest Can Do Well ability rating at the Less than Bachelors Degree level, and the lowest Can Do Well ability rating at the Bachelors Degree level.

Competency #33: "Be able to make physical adaptations in the classroom to meet the specific needs of handicapped students."

This competency received the highest Can Do Well ability rating at the Less than Bachelors Degree level, and the lowest Can Do Well ability rating at the Masters and Specialist Degree levels.

Competency #45: "Have a knowledge of how to adapt physical conditions of jobs to fit handicapped individuals."

This competency received the highest Can Do Well ability rating at the Less than Bachelors Degree level, and the lowest Can Do Well ability rating at the Bachelors Degree level.

Research Question Number Four: "Is there a relationship between categories of years of vocational education teaching experience regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

A significant relationship was found in the following competency:

Competency #1: "Understand the legal responsibilities of teachers described in Public Law 94-142 and Public Act 198."

The highest importance rating for this competency was in the category of Less than 2 Years of Teaching Experience. The lowest importance rating for this competency was

recorded by the teachers in the category of 12 or more Years of Vocational Education Teaching Experience.

Research Question Number Five: "Is there a relationship between type(s) of handicapping condition(s) present in classes regarding the perceived importance of and the perceived ability to perform mainstreaming competencies?"

Due to the fact that respondents could select more than one category concerning types of handicaps, the data were not mutually exclusive. It is therefore impossible to attempt to answer Question Number Five.

CONCLUSIONS

Conclusions of this study are:

1. The competencies contained in the questionnaire used in this study were, with few exceptions, important to the respondents in order to mainstream handicapped students. This indicates a need for vocational education teachers to be appropriately prepared to practice the important competencies.
2. Michigan Area Vocational Center teachers' perceived ability to perform the competencies contained in the questionnaire used in this study indicate a need for improved preparation of teachers to mainstream handicapped students.
3. Educational Degree Level is related to three of the perceived importance ratings of mainstreaming competencies.
4. Educational Degree Level is related to four of the perceived ability ratings of vocational education teachers to perform mainstreaming competencies.

5. Years of Vocational Education Teaching Experience is related to one of the perceived importance ratings of mainstreaming competencies.
6. Years of Vocational Education Teaching Experience is not related to the perceived ability ratings of vocational education teachers to perform mainstreaming competencies.

RECOMMENDATIONS

In light of the findings of this study, the following recommendations are made:

1. Considering the high importance ratings and low ability ratings of the competencies contained in this study, Michigan Area Vocational Center teachers should be upgraded in their ability to perform mainstreaming competencies.
2. Due to the fact that attitudinal competencies received the highest importance ratings and sources related to mainstreaming indicate a similar importance, attitudes should be emphasized very strongly in instructional programs which prepare vocational education teachers to teach in a mainstreaming setting.
3. Although competencies dealing with Mainstreaming Laws received the lowest importance ratings of the nine topical areas in this study, sources related to mainstreaming indicate that such competencies are important and should be included in instructional programs which prepare vocational education teachers to teach in a mainstreaming setting.

4. Because attitudinal competencies are of so much importance and because this study was concerned with nine competency topical areas rather than with attitudinal competencies alone, research should be conducted to specifically determine all of the attitudinal competencies vocational education teachers need to be familiar with in order to effectively teach in a mainstreaming setting. For the same reason, a complete collection of attitudinal instructional materials should be procured and arranged for reference and use in providing expertise in attitudinal competencies to vocational education teachers.
5. Because each of the competencies which had significant relationships was rated lowest in importance by respondents in the Bachelors degree level, research should be conducted to determine the cause(s) of the relationships between degree levels in regard to the importance ratings of the competencies:
 - "Be able to arrange employment opportunities with prospective employers."
 - "Understand what the concept 'least restrictive environment' means."
 - "Be able to recognize speech impairment conditions."
6. Because three of the four competencies which had significant relationships were rated lowest in ability by respondents in the Bachelors degree level, research should be conducted to determine the cause(s) of the relationships between degree levels in regard to the ability ratings of the competencies:
 - "Be able to work with parents in planning individualized education plans."

"Be able to arrange employment opportunities with prospective employers."

"Be able to make physical adaptations in the classroom to meet the specific needs of handicapped students."

"Have a knowledge of how to adapt physical conditions of jobs to fit handicapped individuals."

7. Because there was a significant relationship between years of vocational education teaching experience in regard to the importance rating of the competency:

"Understand the legal responsibilities of teachers described in Public Law 94-142 and Public Act 198.",

research should be conducted to determine the cause(s) of the relationship.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Almanza, H. P. Where Are We Going? Reflections on Mainstreaming. Washington, D.C.: Education Service Center, Region III, U.S. Office of Education, 1976.
- Andelman, F., et. al. Mainstreaming. Today's Education, March - April, 1976, 18-29.
- Baxter, J. Development and Implementation of Secondary Special Education Programs. Lake Odessa, Michigan: Mentally, Physically, and Emotionally Handicapped of E.B.I. Breakthrough, Inc., 1975.
- Bureau of Education for the Handicapped. The Decisive Decade. Washington, D.C.: U.S. Office of Education, U.S. Government Printing Office, 1971.
- College of Education, Ohio State University. Mainstreaming Preparation for Regular Education Personnel. Columbus, Ohio: Ohio State University, 1976.
- College of Education, University of Minnesota. Mainstreaming: Origins and Implications. Minneapolis, Minnesota: University of Minnesota. Volume 2, Number 2, Winter 1976.
- College of Education, University of Missouri - Columbia. Competencies for Teaching Exceptional Children in the Regular Classroom. Columbia, Missouri: University of Missouri - Columbia.
- College of Education, Wichita State University. Competencies. Wichita, Kansas: Wichita State University.
- Council for Exceptional Children. Official Actions. Reston, Virginia: 1976, 43.
- Dean's Project, University of Maine. Competencies for Mainstreaming. Orono, Maine: University of Maine.
- Department of Special Education, The Pennsylvania State University. Proposed Student Teacher Competencies Based on EEC 400. University Park, Pennsylvania: The Pennsylvania State University.

Evans, R. N., Phelps, L. A., Abbas, E. K., & Frison, K. D. Vocational Education for Special Needs Students: Competencies and Models for Personnel Preparation. Final Report. National Workshop on Vocational Education for Special Needs Students. Urbana, Illinois: University of Illinois, Urbana-Champaign, 1976.

Federal Supplement, Hairston et. al. v. Drosick. Volume 423, 1976, 180.

Gear, G. H. Educating Mildly Handicapped Children in the Regular Classroom: Needs Assessment in Teacher Preparation. Birmingham, Alabama: Interrelated Teacher Education Project, University of Alabama in Birmingham, 1976.

Gerlach, K. Preparing for Mainstreaming in Teacher Education Institutions. Sioux Falls, South Dakota: Augustana College, April 13, 1977.

Goldhammer, K., Rader, B., & Reuschlein, P. Mainstreaming: Planning for a Pre-Service Program in Vocational, Industrial Arts and Physical Education. East Lansing, Michigan: Michigan State University, 1976.

Goldhammer, K., Rader, B., & Reuschlein, P. Mainstreaming: Teacher Competencies. East Lansing, Michigan: Michigan State University, 1977.

Hartley, N. Channeling Students into the Mainstream. Voc Ed, October 1978, 39-42.

Heath, E. In-Service Training: Preparing to Meet Today's Needs. Academic Therapy, 1974, IX (5), 267-279.

Hobbs, N. The Futures of Children. San Francisco, California: Jossey-Boss, 1975.

Jenkins, J. R., & Mayhall, W. F. Development and Evaluation of a Resource Teacher Program. Exceptional Children, 1976, 43.

Mackie, R. P. Spotlighting Advances in Special Education. Exceptional Children, 1965, 32, 77-81.

Mackie R. P. & Dunn, L. N. College and University Programs for the Preparation of Teachers of Exceptional Children (Office of Education Bulletin, 1954, No. 13). Washington, D.C.: U.S. Government Printing Office, 1954.

Marquette-Alger Intermediate School District. In-Service Needs Assessment Survey. Marquette, Michigan: Marquette-Alger Intermediate School District, 1977.

- Michigan Department of Education. Michigan Inter-Agency Model and Delivery System of Vocational Education Services for the Handicapped. Lansing, Michigan: Michigan Department of Education, 1976.
- Michigan Department of Education. Michigan Special Education Code. Lansing, Michigan: Michigan Department of Education, 1977.
- Michigan Department of Education. State Special Education Services October 1 Counts, 1977 - 1978. Lansing, Michigan: Michigan Department of Education, 1977.
- Michigan Department of Education, Vocational-Technical Education Services. Program/Course/Section Data Verification & Enrollment Report. Lansing, Michigan: Department of Education, January, 1978.
- Peter, L. J. Competency for Teaching Teacher Education. Belmont, California: Wadsworth Publishing Company, 1975.
- Porter, John. Education of the Handicapped, 1978, 5.
- Rader, B. Competencies for Mainstreaming Teachers: An Analysis. East Lansing, Michigan: Michigan State University, 1978.
- Redden, M. R. An Investigation of Mainstreaming Competencies of Regular Elementary Teachers. (Doctoral Dissertation, University of Kentucky, 1976). Listed with University Abstracts, University of Michigan, Ann Arbor, Michigan.
- Reynolds, M. Special Education. Encyclopedia of Educational Research. Toronto: Macmillan, 1969.
- Reynolds, M. VESEP II: Vocational Education/Special Education Project II. Mt. Pleasant, Michigan: Central Michigan University, June 30, 1976.
- Reynolds, M. & Birch, J. Teaching Exceptional Children in All America's Schools. Reston, Virginia: The Council for Exceptional Children, 1977.
- School of Education, California State University, San Francisco. Competency Areas and Corresponding Competencies for Mainstream Classroom Teachers. San Francisco, California: California State University, San Francisco.
- School of Education, University of Louisville. Teacher Competencies and Skills Prerequisite to Mainstreaming in the Regular Elementary School Classroom. Louisville, Kentucky: University of Louisville.

Sloan, W. Four Score and Seven. American Journal of Mental Deficiency, 1963.

State of Michigan. Public Act 198 of 1971. Lansing, Michigan: 76th Legislature, 1971.

Stovall, T. A Description of the TEMPO Project to Prepare Mainstream Classroom Teachers. Nashville, Tennessee: George Peabody College for Teachers, August, 1976.

Train Classroom, Not Special Education Teachers, Report Says. Education Daily, October 15, 1976, 5-6.

U.S. Department of Health, Education and Welfare. Public Law 88-352: Civil Rights Act of 1964. Washington, D.C.: Department of Health, Education, and Welfare, 1964.

U.S. Department of Health, Education and Welfare. Public Law 92-318: Prohibition of Sex Discrimination Act. Washington, D.C.: Department of Health, Education and Welfare, 1972.

U. S. Department of Health, Education and Welfare. Public Law 93-112: Vocational Rehabilitation Act. Washington, D.C.: Department of Health, Education and Welfare, 1973.

U.S. Department of Health, Education and Welfare. Public Law 94-142: Education for All Handicapped Children Act. Washington, D.C.: Department of Health, Education and Welfare, Bureau for the Education of Handicapped, Washington, D.C., 1975.

U.S. Department of Health, Education and Welfare. Public Law 94-482: Vocational Education Amendments of 1976. Washington D.C.: Department of Health, Education and Welfare, Office of Vocational Education, 1976.

Weintraub, F. J., Obeson, A., Ballard, J., & La Vor, M. L. (Eds.). Public Policy and the Education of Exceptional Children. Reston, Virginia: The Council for Exceptional Children, 1976, 43.

Zimmerman, M. D. Rehabilitation Engineering: Technology for the Handicapped. Machine Design, November 9, 1978, 24-29.

APPENDIX A

MICHIGAN AREA VOCATIONAL CENTERS INCLUDED IN SAMPLE

Walter C. Averill, Jr. Career Opportunities Center
2102 Weiss Street
Saginaw, Michigan 48603

Bay-Arenac Skill Center
6311 Monitor Road
Bay City, Michigan 48706

Branch Area Career Center
366 Morse Street
Box 509
Coldwater, Michigan 49039

Calhoun Area Vocational Education Center
475 East Roosevelt
Battle Creek, Michigan 49017

Capital Area Career Center
611 Hagadorn Road
Mason, Michigan 48854

Dickinson Area Vocational Center
300 N. Boulevard
Kingsford, Michigan 49801

Genesee Area Skill Center
G-5081 Torrey Road
Flint, Michigan 48507

Jackson Area Career Center
6800 Browns Lakes Road
Jackson, Michigan 49201

Kent Skill Center - Downtown
111 College Avenue
Grand Rapids, Michigan 49506

Kent Skills Center - East Beltline
1655 East Beltline, N.E.
Grand Rapids, Michigan 49506

Lapeer County Vocational Technical Center
690 Lake Pleasant Road
Attica, Michigan 49412

Lenawee Vocational-Technical Center
2345 North Adrian Highway
Adrian, Michigan 49221

Mecosta-Osceola Career Center
205 Maple Street
Big Rapids, Michigan 49307

Newaygo Area Vocational Education Center
4645 West 48th Street
Fremont, Michigan 49412

Northeast Oakland Vocational Education Center
1371 N. Perry Street
Pontiac, Michigan

Northwest Oakland Vocational Education Center
8211 Big Lake Road
Clarkston, Michigan 48016

Ottawa Area Vocational Center
P.O. Box 628
Grand Haven, Michigan 48417

Sanilac Career Center
175 E. Aitkins Road
Peck, Michigan 48466

Southeast Oakland Vocational Education Center
5055 Delemere
Royal Oak, Michigan

Southwest Oakland Vocational Education Center
1000 Beck Road
Walled Lake, Michigan 48088

St. Clair County Skill Center
499 Range Road, POCS-1
Marysville, Michigan 48046

Traverse Bay Area Vocational Center
880 Parsons Road
Traverse City, Michigan 49684

Van Buren Skill Center
250 South Street
Lawrence, Michigan 49064

Wexford-Missaukee Area Vocational Center
9901 E. 36 Mile Road
Cadillac, Michigan 49601

APPENDIX B



CENTRAL MICHIGAN UNIVERSITY

September 28, 1978

Dear Vocational Education Teacher:

Your help is needed to develop teacher preparation programs which provide teaching skills necessary to educate handicapped students in regular classrooms. Our society has exhibited increasing awareness and legislative support for the rights of handicapped students to a free, appropriate public education. Consequently teachers will be serving an increasing number of handicapped students.

The enclosed questionnaire is being sent to vocational education teachers at area vocational centers throughout Michigan. The intent of this study is to determine important competencies for vocational education teachers in respect to teaching handicapped students in regular classrooms and laboratories. You can help by providing information which will permit an analysis of current conditions regarding teacher competencies and thereby assist in identifying competencies which need to be stressed in pre-service and in-service teacher training programs.

Please help us in this effort that we may all help handicapped students receive the education they need and deserve. Your completion and return of the accompanying questionnaire by October 6, 1978, will be very beneficial and most appreciated. All responses are confidential. A stamped, pre-addressed envelope is enclosed for your return.

Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script, reading "Jerry L. Roiter".

Jerry L. Roiter
Assistant Professor
Central Michigan University



CENTRAL MICHIGAN UNIVERSITY

October 19, 1978

Dear Vocational Education Teacher:

Recently you were mailed a questionnaire as part of a statewide study of vocational education teachers, seeking your evaluation of certain mainstreaming competencies. Specifically this study is seeking answers to such questions as, "What mainstreaming competencies do Michigan area vocational center teachers feel are important?" and "How do these teachers perceive their present capability to perform these competencies?"

Since we have not yet received your response, another copy of the questionnaire is enclosed. Please complete this questionnaire and return it in the accompanying stamped, addressed envelope by October 28, 1978.

Your cooperation in helping to plan teacher education courses to incorporate instruction in mainstreaming competencies will be very much appreciated.

Sincerely,

A handwritten signature in cursive script, reading "Jerry L. Roiter".

Jerry L. Roiter
Assistant Professor
Central Michigan University



CENTRAL MICHIGAN UNIVERSITY

February 12, 1979

Dear Vocational Education Teacher:

Your help is needed to develop teacher preparation programs which provide teaching skills necessary to educate handicapped students in regular classrooms. Our society has exhibited increasing awareness and legislative support for the rights of handicapped students to a free, appropriate public education. Consequently teachers will be serving an increasing number of handicapped students.

The enclosed questionnaire is being sent to vocational education teachers at area vocational centers throughout Michigan. The intent of this study is to determine important competencies for vocational education teachers in respect to teaching handicapped students in regular classrooms and laboratories. You can help by providing information which will permit an analysis of current conditions regarding teacher competencies and thereby assist in identifying competencies which need to be stressed in pre-service and in-service teacher preparation programs.

Please help us in this effort that we may all help handicapped students receive the education they need and deserve. Your completion and return of the accompanying questionnaire by February 21, 1979, will be very beneficial and most appreciated. All responses are confidential. A stamped, pre-addressed envelope is enclosed for your return.

Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script, reading "Jerry L. Roiter".

Jerry L. Roiter
Assistant Professor
Department of Industrial
Education and Technology

pks
Enclosures

**MAINSTREAMING COMPETENCIES ASSESSMENT INSTRUMENT
FOR VOCATIONAL EDUCATION TEACHERS**

Name: _____

PART I. In order to analyze the data collected by this survey, it is necessary to collect information about the backgrounds and experiences of respondents. Please circle the number which precedes each appropriate response.

1. In what occupational area(s) are you currently teaching?

- | | |
|--------------------------|--------------------------------|
| 1 Agricultural Education | 4 Home Economics Education |
| 2 Distributive Education | 5 Office Education |
| 3 Health Education | 6 Trade & Industrial Education |

2. What is your current employment status?

- | | |
|-------------|-------------|
| 1 Full-time | 2 Part-time |
|-------------|-------------|

3. What is the highest education degree you have earned?

- | | |
|---------------------------|--------------|
| 1 less than Baccalaureate | 4 Specialist |
| 2 Bachelors | 5 Doctorate |
| 3 Masters | |

4. How many years have you been teaching vocational education?

- | | |
|---------------------|--------------------|
| 1 less than 2 years | 4 9 to 11 years |
| 2 3 to 5 years | 5 12 or more years |
| 3 6 to 8 years | |

5. What type(s) of impairment(s) have students in your present and/or past classes had? (Circle as many as apply)

- | | |
|------------------------|-----------------------|
| 1 None | 5 Mental Impairment |
| 2 Emotional Impairment | 6 Physical Impairment |
| 3 Hearing Impairment | 7 Speech Impairment |
| 4 Learning Disability | 8 Visual Impairment |

The following definition is included to provide a common concept of mainstreaming among respondents:

Mainstreaming: Inclusion of handicapped students* in regular classroom instruction to the greatest extent which their impairments will permit them to benefit. Handicapped students will be placed by an educational planning and placement committee; placements will range from a full schedule in regular classrooms to no inclusion at all in regular classrooms, depending upon the degree of the impairment of each individual handicapped student.

*Handicapped students are defined as those students who are mentally impaired, emotionally impaired, hearing impaired, visually impaired, physically impaired, speech impaired, or learning disabled; or who have a combination of any two or more of these impairments.

PART II. The following is a list of selected mainstreaming competencies for vocational education teachers. Please read each competency carefully then indicate:

- A. Is the competency important for vocational education teachers who may be teaching in a mainstreaming setting?

If you think the competency is important, circle the number 1 under the column marked "IMPORTANT".

If you think the competency is not important, circle the number 2 under the column marked "NOT IMPORTANT".

- B. To what degree do you believe you are now able to perform the competency?

If you feel you can now do the competency well, circle the number 1 under the column marked "CAN DO WELL".

If you feel you can now do the competency somewhat, circle the number 2 under the column marked "CAN DO SOMEWHAT".

If you feel you cannot do the competency, circle the number 3 under the column marked "CANNOT DO".

MAINSTREAMING COMPETENCY STATEMENTS

In order to effectively educate handicapped students, the vocational education teacher should:

	IMPORTANT	NOT IMPORTANT	CAN DO WELL	CAN DO SOMEWHAT	CANNOT DO
1. understand the legal responsibilities of teachers described in Public Law 94-142 and Public Act 198.	1	2	1	2	3
2. be able to recognize students with physical impairments.	1	2	1	2	3
3. be able to use observation and other informal methods to assess handicapped students' classroom performances.	1	2	1	2	3
4. be able to work with parents in planning individualized education plans.	1	2	1	2	3
5. understand when to involve specialists, such as a psychologist, speech therapist, etc., in consultation.	1	2	1	2	3
6. be able to foster a positive relationship between handicapped and non-handicapped students.	1	2	1	2	3
7. be able to provide handicapped students with communication skills necessary for interviewing for a job and for performing the duties of a procured job.	1	2	1	2	3
8. understand child development and learning theories.	1	2	1	2	3

	IMPORTANT	NOT IMPORTANT	CAN DO WELL	CAN DO SOMEWHAT	CANNOT DO
9. understand the functions of the educational planning and placement committees.	1	2	1	2	3
10. be able to provide parents of handicapped students with a description of goals and techniques used to teach their handicapped child.	1	2	1	2	3
11. be aware of and understand administrator, teacher, parent, and student attitudes toward handicapped students.	1	2	1	2	3
12. be able to recognize mental impairment conditions.	1	2	1	2	3
13. be able to plan educational programs which provide handicapped students with the maximum number of job opportunities their impairments will allow.	1	2	1	2	3
14. be able to utilize student records (test scores, psychological reports, and performance indicators) to evaluate the capabilities and potential of handicapped students.	1	2	1	2	3
15. be able to provide prescriptive teaching methods.	1	2	1	2	3
16. be able to implement tutoring of handicapped students by non-handicapped students.	1	2	1	2	3
17. understand the self-concepts held by handicapped students.	1	2	1	2	3

		IMPORTANT	NOT IMPORTANT	CAN DO WELL	CAN DO SOMEWHAT	CANNOT DO
18.	have knowledge of agencies assisting in the employment of handicapped students.	1	2	1	2	3
19.	be able to develop, with the assistance of special education personnel, an individualized educational plan which best suits each handicapped student's learning style.	1	2	1	2	3
20.	be able to individualize commercially available programs and texts.	1	2	1	2	3
21.	be able to recognize hearing impairment conditions.	1	2	1	2	3
22.	be able to administer and interpret formal assessment instruments for handicapped students.	1	2	1	2	3
23.	be able to arrange employment opportunities with prospective employers.	1	2	1	2	3
24.	understand what the concept "least restrictive environment" means.	1	2	1	2	3
25.	be able to conduct activities which promote positive interaction of handicapped students with non-handicapped students.	1	2	1	2	3
26.	be able to implement learning centers, criterion reference tests, team teaching, and media to benefit handicapped students.	1	2	1	2	3

		IMPORTANT	NOT IMPORTANT	CAN DO WELL	CAN DO SOMEWHAT	CANNOT DO
27.	be able to recognize visual impairment conditions.	1	2	1	2	3
28.	be able to establish a system for recording student progress in terms of stated objectives.	1	2	1	2	3
29.	be knowledgeable of the rights of handicapped students under Public Law 94-142 and Public Act 198.	1	2	1	2	3
30.	be able to recognize speech impairment conditions.	1	2	1	2	3
31.	be able to match instructional methods to handicapped students based on medical, psychological, and diagnostic findings.	1	2	1	2	3
32.	be able to develop positive and active communications with handicapped students.	1	2	1	2	3
33.	be able to make physical adaptations in the classroom to meet the specific needs of handicapped students.	1	2	1	2	3
34.	utilize services provided by school psychologists.	1	2	1	2	3
35.	be able to evaluate readiness skills.	1	2	1	2	3
36.	be knowledgeable of the rights of handicapped students to employment.	1	2	1	2	3
37.	be aware of employer attitudes toward handicapped employees.	1	2	1	2	3

	IMPORTANT	NOT IMPORTANT	CAN DO WELL	CAN DO SOMEWHAT	CANNOT DO
38. be able to identify occupations and skills which match the capabilities of handicapped students.	1	2	1	2	3
39. utilize services provided by school social workers.	1	2	1	2	3
40. be aware of the attitudes of non-handicapped employees toward handicapped employees.	1	2	1	2	3
41. be able to positively reinforce handicapped students for their achievements.	1	2	1	2	3
42. be able to obtain and utilize parental knowledge of their handicapped child to further the understanding of that handicapped student.	1	2	1	2	3
43. be knowledgeable of student records available to vocational education teachers.	1	2	1	2	3
44. be able to accurately evaluate handicapped students for occupational placement.	1	2	1	2	3
45. have a knowledge of how to adapt physical conditions of jobs to fit handicapped individuals.	1	2	1	2	3
46. understand the historical development of mainstreaming.	1	2	1	2	3
47. be able to provide safe learning conditions in the classroom(s) and the lab(s).	1	2	1	2	3

	IMPORTANT	NOT IMPORTANT	CAN DO WELL	CAN DO SOMEWHAT	CANNOT DO
48. understand due process procedures regarding contested placements of handicapped students.	1	2	1	2	3
49. understand school district and building procedures dealing with handicapped students.	1	2	1	2	3
50. be able to utilize paraprofessionals and volunteers in the classroom.	1	2	1	2	3
51. understand the implications of the State Department of Education's plans related to handicapped students.	1	2	1	2	3
52. understand the functions of prosthetic devices for handicapped persons.	1	2	1	2	3

PART III. The space below is provided for you to write any mainstreaming competencies which you believe are important and which have not been included in the preceding 52 mainstreaming competencies.

Thank you for your assistance. Please return this form in the accompanying pre-addressed and stamped envelope to:

Jerry L. Roiter
 Assistant Professor
 Mainstreaming Survey
 Room 202
 Wightman Hall
 Central Michigan University
 Mt. Pleasant, Michigan 48859