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A STUDY OF THE SIGNIFICANCE, EXTENT, AND IMPLICATIONS  
OF TEACHING BASIC ACADEMIC SKILLS AS PERCEIVED BY  
SECONDARY VOCATIONAL MARKETING EDUCATION TEACHERS  
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Donald O. Quinn

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A STUDY OF THE SIGNIFICANCE, EXTENT, AND IMPLICATIONS  
OF TEACHING BASIC ACADEMIC SKILLS AS PERCEIVED BY  
SECONDARY VOCATIONAL MARKETING EDUCATION TEACHERS

By

Donald Orie Quinn

A DISSERTATION

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## ABSTRACT

### A STUDY OF THE SIGNIFICANCE, EXTENT, AND IMPLICATIONS OF TEACHING BASIC ACADEMIC SKILLS AS PERCEIVED BY SECONDARY VOCATIONAL MARKETING EDUCATION TEACHERS

By

Donald O. Quinn

The descriptive ex post facto study was aimed at collecting, analyzing, and interpreting secondary public school vocational marketing education teachers' perceptions and opinions concerning the significance, extent, and implications of teaching basic academic skills as part of their classroom curricula. The objectives of the study were to:

1. To obtain measurements from survey data of Michigan secondary vocational marketing education teachers' perceptions and opinions regarding:
  - a. who (vocational or general education teachers) should be teaching basic academic skills at the secondary educational level.
  - b. whether there were deficiencies in secondary vocational marketing education students' basic academic skills training.
  - c. whether or not they concurred with various field authorities concerning the significance and mastery of basic academic skills for job preparedness.

2. To obtain measurements regarding the extent to which Michigan secondary vocational marketing education teachers currently taught basic academic math and communication skills.

3. To obtain measurements of the effects, as perceived by Michigan secondary vocational marketing education teachers, of engaging in certain classroom activities related to heightening student awareness and acceptance of training in basic academic skills.

4. To identify whether there was a relationship between certain demographic characteristics of Michigan secondary vocational marketing education teachers and their responses to the survey items.

The research problem is associated with growing accusations of lack of preparedness and deficiencies in basic academic skills inherent in high school graduates making the transition from school to the world of work. A mail questionnaire was designed based upon the seven research questions germane to the problem and mailed to a representative random sample of 151 certified secondary vocational marketing education teachers in the State of Michigan.

The research findings derived from the data were synthesized through the use of frequencies, percentages, means, and standard deviations for individual survey items. Cumulative or weighted averages were computed on scales comprising individual survey items that answered each research question. Univariate analyses of variance were conducted to test hypotheses of differences between the six scales associated with the

research questions and independent variables being measured.

Major findings of the study indicated: (1) respondents believed that the teaching of basic academic skills should be the joint and shared responsibility of both general and vocational education teachers; (2) a slight majority of respondents believed that marketing education students, by in large, did not have deficiencies in basic academic skills; (3) the respondents' perceptions and opinions concurred with various field authorities regarding the significance and importance of mastering basic academic skills; (4) the majority of respondents did teach and emphasize most of the basic academic skills listed on the survey; (5) respondents were having some success at heightening student awareness and acceptance of basic academic skill training through selected classroom activities; and (6) respondents did conduct classroom activities designed to heighten student awareness and acceptance of remedial basic academic skill training.

Tests of hypotheses with respect to the research scales indicated two significant differences: (1) female teachers taught more basic academic skills than did male teachers and (2) teachers with class size of 25 or fewer students taught more basic academic skills than did teachers with over 25 students within their classrooms. Finally, several significant differences were also found on individual survey items with respect to the extent and type of basic academic skill instruction associated with the independent variables of "sex" and "class size."

## ACKNOWLEDGMENTS

The author wishes to extend his sincere thanks and appreciation to a number of skilled and supportive persons who aided the researcher during the course of this study and deserve recognition. The researcher would like to extend his gratitude to Dr. Frank Bobbitt, who served as advisor and chairman of the guidance committee, for his helpful support, assistance, and guidance during the process of writing this doctoral dissertation. Secondly, special thanks are given to Dr. George Ferns for his thoughts and contributions on education while serving on the doctoral committee. Furthermore, appreciation is extended to both Dr. Donald Burke and Dr. Daniel Kruger for serving on the doctoral committee and lending their time and consideration.

A special note of thanks is extended to all of the participants in the research study without whose assistance and input would have made the results of the study impossible. Included in this group of people would be the dedicated and giving secondary vocational teachers and administrators in the State of Michigan who served on the pilot testing of the survey instrument or graciously filled-out and returned the research questionnaire.

The researcher would also like to thank his friends and family members for their support, interest, and encour-

agement during this often trying and demanding period of time. A special note of thanks is extended to my lovely wife, Martha, who throughout the doctoral program, lent unselfishly her time, support, understanding, and love in the pursuit of this doctoral degree.

Finally, this educational research endeavor is dedicated to the Eastern Star Villa, a Masonic home that I lived and grew up in during my formative years in Adrian, Michigan. This dissertation is warmly dedicated to the staff at this Order of Eastern Star children's home who raised and help educate the researcher. As a result of an academic scholarship awarded to me upon graduation from high school from the Order of Eastern Star, a foundation was laid for the remainder of my educational pursuits.

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## CHAPTER I

### INTRODUCTION TO THE STUDY

If vocational education is to remain an integral and viable component in the overall philosophy of education on a local, state, or national basis, then vocational educators need to continually evaluate, appraise, and eventually modify their curriculum offerings in terms of structure, content, and goals. With the advent of a powerful undercurrent of criticism and debate regarding a seemingly rising tide of illiteracy, mediocrity, and unpreparedness in terms of fundamental basic academic skills necessary for a lifetime of learning, it is paramount that vocational educators reexamine their effectiveness in achieving the primary goal of training individuals with the knowledge, skills, and attitudes to perform occupational life roles.

According to "The Common Goals of Michigan Education" as portrayed and outlined by the Michigan Department of Education, student learning should achieve the following goal:

Michigan education must help each individual acquire a positive attitude toward school and the learning process so that, as a result of his educational experience, he is able to achieve optimum personal growth, to progress in a worthwhile and rewarding manner in the career of his choice, and to render valuable service to society.<sup>1</sup>

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<sup>1</sup>The Common Goals of Michigan Education, State of Michigan, Michigan Department of Education, 1981, p. 5.

These "common goals" serve as policy statements that outline both the broad direction and general purpose for Michigan's dynamic and comprehensive educational system. Furthermore, it is rather important that these educational goals common to all of Michigan's schools play a vital role in developing mature and responsible citizens that support and advance the principles of democracy while meeting the growing and changing needs of a present-day society. Within this broad educational framework and objective associated with "student learning," an extremely important subordinate aim pertaining to basic academic skill acquisition is outlined.

Michigan education must assure the acquisition of basic communication, computation, and inquiry skills to the fullest extent possible for each student. . . . Continual evaluation of his aptitudes, abilities, and needs must be undertaken. Every effort must be made to afford each individual the opportunity for mastery which he needs to pursue his chosen goals, to the point of program entrance and beyond.<sup>2</sup>

These common fundamental basic academic skills that are sometimes referred to as "survival skills" necessary for continual learning over a citizen's working lifetime have come under public scrutiny and attention which warrant additional research and investigation.

When one considers the factors which impact upon the educational task of acquiring and mastering basic academic skills, it becomes readily apparent that a joint or shared responsibility exists between administrators, educators, parents, and most

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<sup>2</sup>Ibid., p. 5.

importantly the students themselves in mastering basic academic math, communication, and inquiry skills to the fullest extent possible. While it stands to reason that level of performance and mastery on basic academic skills will certainly vary from person to person on an individual basis due to such factors as aptitude, ability, interest, and socio-economic variables, the level of expectation of each individual student must be accurately assessed and continually nurtured.

Today's students, to be successful later in life as either citizens or productive employees, must possess the ability to comprehend ideas through reading and listening, communicate ideas and thoughts via writing and speaking, manipulate mathematical concepts and operations, and finally apply rational intellectual processes to problem-solving situations. From an employer's point of view, educational emphasis and attention must be placed upon the teaching of basic academic math and communication skills in addition to specific vocational entry-level job skills:

Much of the criticism leveled at vocational education has concerned a lack of emphasis on the academic basics . . . . a panel of educators and business leaders who examined what employers want most from high school graduates entering the work force stated their conclusions: more than specific job skills, employers want sound reading, speaking, and problem-solving skills as well as an understanding of scientific and technological fundamentals.<sup>3</sup>

In a speech entitled "Three Key Words for Vocational

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<sup>3</sup>Lucia Solorzano, "Vocational Education Gets Back to Basics," U.S. News & World Report, 97:55, July 23, 1984, p. 55.

Education" delivered to an Annual Meeting of the National Association of State Advisory Councils on Vocational Education, the following statement was made:

Some may say that teaching these fundamentals is not the mission of programs in vocational education--that vocational education must concern itself only with training in specific workplace skills . . . . Reading, writing, addition, and subtraction are essential workplace skills. No vocational education program which hopes for success can ignore the need for these skills. No vocational education program which neglects these skills can hope to establish a fruitful partnership with business.<sup>4</sup>

Employers, therefore, feel that a serious problem or gap exists between their needs and demands within a constantly changing workplace and the level of preparedness of high school graduates in terms of basic academic skills. It is increasingly apparent that many employers view high school vocational graduates as having deficiencies in fundamental basic academic skills that are so necessary and essential to success on the job, productivity within the labor force, shifting job or retraining requirements, and the competitive nature of the world of work. The job performance of many young people entering the work force is not of the caliber desired and expected by employers due, in large part, to training problems and competitive disadvantages associated with basic academic skill deficiencies found manifested in employees.

In short, a growing number of high school vocational students and graduates are not sufficiently prepared for the

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<sup>4</sup>William B. Reed, "Three Key Words for Vocational Education," Vital Speeches of the Day, June 15, 1983, p. 542.

demands and rigors found inherent within the workplace when certain vocational education training programs are found to be primarily emphasizing the acquisition of specific job skills and not fundamental basic academic survival skills. In addition, changing demands and requirements within the workplace associated with technological advancements are forcing many individual workers to either retrain and make adjustments or undergo several career or job changes over their working lifetimes. Workers who possess a solid foundation and mastery of basic academic math and communication skills will certainly be better prepared and more highly qualified to make these difficult and demanding job/career adjustments. Particularly affected will be those fortunate students who are exposed to "career clustering" which stresses and prepares students with entry-level skills in a wide range of related occupations.

Today's high school graduates will change jobs--even occupations--several times throughout their lives. They'll require new skills, confront new citizenship obligations. Of necessity, their education will be lifelong. . . . What counts most for students who plan to go to work directly from high school is that their courses put them on the first rung of a career ladder and prepare them for many options.<sup>5</sup>

#### Statement of the Problem

The problem examined in this research study was to analyze and assess, through the use of a mail-out survey questionnaire, secondary public school vocational marketing education teachers' perceptions and opinions concerning the significance,

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<sup>5</sup>E. L. Boyer, "On the Cutting Edge: Vocational Education," Today's Education, '84/'85, p. 44.

. extent, and implications of teaching basic academic skills as part of their classroom instruction. This was done in order to meet the accusations of a growing tide of mediocrity, lack of preparedness, and basic academic skill deficiencies inherent in students making the transition from school to the world of work. If the State of Michigan's educational system was to be successful in meeting both the short- and long-term needs of its citizens, then its objectives ought to be carefully planned so as to insure compatibility with the constantly changing social, political, and economic environment which impacts upon the job market. Employers, representing both business and industry, indicated that they were dissatisfied with the level of preparedness with respect to basic academic skills demonstrated by their employees.

Employers were seeking, in addition to specific vocational skills, literate workers who possessed proper attitudes and initiative, problem-solving skills, command of the English language, math and computation skills, communication skills, self-discipline, and the ability to acquire and apply new knowledge. Vocational educators had an obligation, therefore, to incorporate instruction in basic academic skills into their individual classroom curricula in order to strengthen vocational proficiencies and satisfy the needs of employers in business, government, and industry.

The importance of acquiring a sound basic academic skill foundation necessary to compete in the various job markets and

adapt to the ever-changing needs of society was emphasized in the following statement:

Critics of vocational education programs often complain that the programs do not educate students, but simply train them for specific jobs. The jobs that we train for today may not exist tomorrow. An emphasis on basic skills will help vocational programs prepare students for occupational change later in life.<sup>6</sup>

Furthermore, the proper mastery of basic academic "survival" skills has been a key factor in giving each student the prerequisite building blocks for life in order to successfully meet his or her role and responsibility as adult, employee, parent, and citizen who has a sense of self-respect, respect for others, and respect for the law. Citizenship, morality, and equal opportunity were noble goals which can be nurtured and sustained through the properly directed educational efforts of Michigan's schools working together to further the aim of The Constitution of the State of Michigan which reads: "Religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged."<sup>7</sup>

Vocational education, in concert with general education, has played a joint cooperative role in providing the necessary knowledge, attitudes, and skills to meet both the individual needs of students, as well as, the aggregate needs of society.

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<sup>6</sup>Alice McDonald, "Toward a Broader Vision," Vocational Education/Journal of the American Vocational Association, (May 1985), p. 17.

<sup>7</sup>The Constitution of the State of Michigan, The Common Goals of Michigan Education, Michigan Department of Education, 1981, p. 3.

### Purpose of the Study

The purpose of this study was to collect, analyze, and interpret data pertaining to the preparedness and basic academic skill levels of vocational students entering the world of work. In general, the data derived from this study has been designed to help in ascertaining whether or not secondary vocational marketing education teachers were aware of and/or in agreement with the public controversy regarding the extent and type of basic academic skill training currently being taught in their classrooms, and student perceptions, awareness, and acceptance of remedial basic academic skill training.

More specifically, the research study was designed to investigate vocational marketing education teachers' perceptions and opinions concerning the significance, extent, and implications of teaching basic academic skills as part of their classroom curricula regarding:

1. The proper role of vocational education versus general education with respect to who should be teaching and emphasizing basic academic skill training at the high school level.
2. The present level of preparedness of vocational marketing education students relevant to basic academic math and communication skills.
3. The level of awareness, agreement, and concurrence between vocational marketing education



teachers and various field authorities concerning the significance and mastery of basic academic skills.

4. The extent and type of basic academic skill instruction currently being taught in the classrooms by secondary vocational marketing education teachers as part of their classroom curricula.
5. The extent that vocational marketing education teachers engage in certain classroom activities related to heightening student awareness and acceptance of remedial basic academic skill training.
6. The effects that these classroom activities have on heightening student awareness and acceptance of remedial basic academic skill training.

The researcher therefore attempted to ascertain whether or not secondary vocational marketing education teachers believe that there were indeed valid implications or inferences for teaching and emphasizing basic academic skills as part of their individual classroom content. Valid implications pertaining to a strong basic academic skill foundation involved their relationship to work related factors associated with successful entry-level job procurement, job retraining, and career adjustments.

Moreover, if the data obtained from the teacher respondents demonstrated a sense of awareness of the problem, a consensus of agreement pertaining to the magnitude of the problem,

along with an indication that basic academic skill deficiencies were germane and appropriate for vocational marketing education students, then the researcher attempted to ascertain just how vocational marketing education teachers were addressing the problem within their classrooms.

In addition, the teacher respondents were asked to present information concerning their perceptions and opinions regarding the impact that classroom activities had on heightening student awareness and acceptance of remedial basic academic skill training. Did their students feel that there was a strong necessity for remedial basic academic skill training? Did their students discern a relationship between a strong foundation in basic academic skills and being properly prepared for the demands of the future job market? Finally, were the teachers successful in their attempts to underscore the important ramifications of the mastery of basic academic skills as a stepping stone to improved employment marketability, expanded occupational choices and options, and a feeling of confidence as employee and citizen.

#### Background and Significance of the Study

In light of the recent publication of average scores on the Scholastic Aptitude Test (SAT) by 1985 students' intended field of study where the combined verbal and math tally for "Trade/Vocational" was the lowest of some twenty-nine groups, it appeared that vocational students were indeed lacking the basic academic skills necessary for life's roles as citizen, parent, and worker (See Appendix D).

Personal interviews with Dr. Frank Bobbitt and Dr. George Ferns, Department of Vocational Education, Michigan State University;

Mr. John Xenos, Director, South-West Oakland Vocational Area Center (SWOVAC); Mrs. Rose Bellanca, Director of Vocational Education, Chippewa Valley Schools, Mt. Clemens, Michigan; and Dr. Barbara Rupp, Director of Calhoun Area Vocational Center, Battle Creek, Michigan; universally indicated that continued research on this particular problem and topic of concern would prove to be both beneficial and interesting.

The findings of this research study could be utilized to improve the curriculum and content of vocational education programs, to enhance the employability and adaptability of students, graduates, and coops (cooperative education students) in the world of work, and serve as a useful guide for teacher in-service training for vocational education teaching and support staff. Alan Weisberg, in a recent issue of Phi Delta Kappan magazine, summarized the significance and implications pertaining to the research problem when he made the following statement:

We know that general literacy skills are more likely than any other factor to yield success in the labor market. Such skills facilitate further education. They qualify young people for training in the technical fields that pay well but do not require a college degree. Comprehensive high schools must make clear to youngsters the link between mastery of basic skills and expanded career opportunities.<sup>8</sup>

Based upon the apparent magnitude of the problem and seemingly universal or widespread concern that permeates the research studies and professional articles, there appeared to be a logical and professional need to investigate and examine

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<sup>8</sup>Alan Weisberg, "What Research Has to Say About Vocational Education and the High Schools," Phi Delta Kappan, January (1983), p. 359.

the significance, extent, and implications of teaching basic academic skills to high school vocational marketing education students by secondary vocational marketing education teachers. Too many high school graduates, vocational and general education students alike, while apparently proficient in certain technical skills, lacked the basic academic skills associated with reading, writing, math computation, English and communication proficiency, and problem-solving, that would prepare them to be productive employees capable of successfully coping with the changing demands, diversification, and needs of the workplace.

Employers and executives in both business and industry, as well as, administrators representing colleges and universities of higher learning, have been placing more and more emphasis on students acquiring a "common core" of knowledge (basic academic skills--reading, writing, mathematics, and reasoning) that prepares them for a lifetime of continual learning. Many employers and executives representing business and industry were also finding it necessary to conduct in-plant or on-site high school classes that provided training in basic academic skills for their employees who lacked these necessary skills. These skills were perceived to be the foundation for job re-training as job requirements changed or became obsolete due to modifications or alterations in technology applied in the workplace.

A worker's "occupational half-life" was defined as the time in which half of a worker's job skills will become obsolete

through technology. While it used to be a rule of thumb that a worker's occupational half-life ranged from seven to 14 years, a growing number of employees in the 1980's were facing occupational half-lives of between three and five years. Workers who did not possess a solid foundation in basic academic skills did not have many of the proficiencies and aptitudes necessary for job retraining and inevitable workplace adjustments. While employers in both business and industry necessarily sustained and covered the costs of retraining for their respective employees, they did not expect to incur the costs of teaching basic academic skills that these same employees should have brought with them to the workplace as a result of their formal public education schooling.

As tax dollars continued to be earmarked for vocational and career education programs at local, state, and federal levels, it was imperative that the objectives of vocational education match the employment needs of business and industry. It was critical that vocational education teachers recognize and understand the importance or significance of coordinating the objectives of secondary vocational programs in conjunction with business and industry with respect to addressing the need for employees to master basic academic skills prior to entering the labor force. The results of a research study of this type could obviously be instrumental in promoting and nurturing continued support from the public in terms of taxpayers' dollars, along with political backing, for continued and renewed funding of various vocational programs.

Large amounts of public monies and taxpayers' dollars were channeled into and allocated for various vocational education programs at various governmental levels. The study investigated the extent to which these funded programs were effectively meeting their established goals and objectives.

The findings of this study could be used to assess the effectiveness of current vocational programs and curricula at the secondary school level in order for constructive changes to be implemented and improvements to occur. If vocational education classes taught and emphasized the mastery of basic academic skills in conjunction with specific technical skills necessary for various job tasks, then vocational courses might someday be given equal status with other general education courses and afforded recognition as courses having academic parity with other high school courses. The notion of vocational education offering an alternative to the academically based curriculum and thereby strengthening its role and purpose in secondary education was highlighted in the following recent article:

Vocational education offers an alternative to academically based curriculum. If embraced seriously, it could lead more students to stay in school and achieve the first priority of secondary education--the development of strong learning and thinking skills . . . Each state should appoint a task force of academic and vocational teachers to design pilot courses and programs which link academic learning to practical applications and which also meet academic requirements for graduation.<sup>9</sup>

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<sup>9</sup>David Spence, "Rethinking the Role of Vocational Education," The Education Digest, 52 (February 1987), p. 51.

### Objectives of the Study

There are several pertinent objectives associated with the results of this research study:

1. To obtain measurements from survey data of Michigan secondary vocational marketing education teachers' perceptions and opinions regarding:
  - a. who (vocational or general education teachers) should be teaching basic academic skills at the secondary educational level.
  - b. whether there were deficiencies in secondary vocational marketing education students' basic academic skills training.
  - c. whether or not they concurred with various field authorities concerning the significance and mastery of basic academic skills for job preparedness.
2. To obtain measurements regarding the extent to which Michigan secondary vocational marketing education teachers currently taught basic academic math and communication skills.
3. To obtain measurements of the effects, as perceived by Michigan secondary vocational marketing education teachers, of engaging in certain classroom activities related to heightening student awareness and acceptance of training in basic academic skills.
4. To identify whether there was a relationship between certain demographic characteristics of Michigan

secondary vocational marketing education teachers and their responses to the survey items.

### Research Questions and Hypotheses

The data obtained from the analyses of the individual survey items were used to answer the following research questions which stem from the objectives or outcomes of the study:

1. Who (vocational or general education teachers) did Michigan secondary vocational marketing education teachers feel should be teaching basic academic skills at the high school level?
2. Did Michigan secondary vocational marketing education teachers perceive that there were deficiencies in secondary vocational marketing education students' basic academic skill training?
3. To what extent did Michigan secondary vocational marketing education teachers' perceptions and opinions concur with various field authorities regarding the significance and mastery of basic academic skill training?
4. To what extent did Michigan secondary vocational marketing education teachers currently teach basic academic math and communication skills?
5. What effects did Michigan secondary vocational marketing education teachers perceive certain classroom activities had on heightening student awareness and acceptance of remedial basic academic skill training?



6. To what extent did Michigan secondary vocational marketing education teachers indicate that they engaged in certain classroom activities related to heightening student awareness and acceptance of remedial basic academic skill training?
7. Were any of the above research questions related to such demographic characteristics as age, sex, class size, years of teaching experience, educational degree, or present teaching position?

Null hypotheses were tested to determine if a relationship or significant difference existed between the six (6) measures or scales for each of the six (6) independent variables listed in Section I of the survey questionnaire: age, sex, class size, years of teaching experience, educational degree, and present teaching position. The scales measuring each research question were developed by computing cumulative or weighted averages for those specific questionnaire items pertaining to that particular research question or dependent measure. These 36 null hypotheses were stated together in both their descriptive and statistical forms in Chapters III and IV for all six measures for all six independent variables.

#### Assumptions of the Study

The following basic assumptions were established in order to facilitate the implementation of the study:

1. The descriptive method of research was the appropriate investigative method for gathering, interpreting, and understanding the data for realizing the purpose

and intent of this ex post facto study.

2. Respondents were willing to provide information pertaining to their experiences, teaching methodologies, personal demographic characteristics, and perceptions or opinions relevant to the research problem.
3. The responses obtained from a majority of the sample from the population under study represented unbiased typical opinions and perceptions assumed to be accurate.
4. Teachers who had an opportunity to evaluate their own personal teaching methods and the importance given to teaching basic academic skills in relationship to job retraining and career changes provided useable information regarding strengths and weaknesses inherent in their programs.
5. The control, handling, mailing, and accountability of the questionnaire surveys were closely monitored by the researcher throughout the course of the study.
6. The teachers respondents were able to effectively read, interpret, complete, and return the questionnaire surveys by mail.
7. The majority of secondary vocational marketing education respondents had similar or homogenous characteristics due to State Certification by coursework training and work experience and were representative.
8. The teacher respondents understood the terms and concepts mentioned on the survey questionnaire.

### Limitations of the Study

This research study was completed with the following limitations:

1. The findings and recommendations from this ex post facto study represented an extended effort towards a quasi-experimental design that can only be generalized to secondary vocational marketing education teachers in the public schools in the State of Michigan.
2. Individual teacher differences concerning variations in teaching practices, instruction methodologies, and classroom personalities were subjective in nature and did not lend themselves to accurate control, treatment, and measurement.
3. Training and instruction of basic academic skills encompassed many different competencies, subject areas, and classroom time constraints. Teachers were not expected to teach and emphasize all of these basic academic skill competencies within their individual classroom settings.
4. Not all of the teacher respondents who received the survey questionnaire responded to its questions and returned the completed instrument in a timely manner.
5. The amount, kind, and type of training vehicles used for delivering basic academic skills varied between the different vocational teachers involved

in the study. The definitions, perceptions, and opinions associated with what particular factors represented or constituted basic academic skills may differ between instructors.

6. The questionnaire completed by the respondents was the means by which personal information was collected.

### Definition of Terms

The following terms have been defined for the purpose of interpretation in this study:

1. Vocational Education: An educational program which teaches the skills, knowledge, and attitudes for entry-level jobs in chosen professions which, in many cases, require less than a four year college degree (specialized training for specific occupations).

2. Marketing Education (ME) and Distributive Education (DE) Teachers: (Used as interchangeable terms) Vocational teachers emphasizing instruction in marketing, sales, retailing, management, advertising, display, merchandising, salesmanship, and basic business principles.

3. Career Education: An educational system which delivers the skills and knowledge necessary to explore, understand, and perform their various life roles as student, worker, family member, and citizen.

4. Career Clustering: An educational program that attempts to furnish students with entry-level skills in a range

of related occupations, rather than in singular occupations.

5. Basic Academic Skills: A fundamental common core of knowledge that includes basic communication, computation, and inquiry skills that relate to reading and writing; writing and speaking; English grammar; mathematical computations, concepts, and operations; and critical thinking and problem solving.

6. Occupational Half-life: The time in which half of a worker's job skills would become obsolete through changes in technology.

7. Vocational Education Teachers: Teachers certified by the State of Michigan Department of Education to teach vocational education classes in their particular area of expertise as a direct result of their training, work experience, and coursework.

8. Vocational Advisory Committee: A group of individuals selected by vocational and school personnel to provide collective advice regarding vocational education efforts within the community and/or school district.

9. General Education: Education, knowledge, and attitudes that are needed by every student to better cope with one's environment in today's world.

10. Area Vocational Education Center: A centrally located facility in the State of Michigan designed and equipped to provide vocational education programs of a comprehensive nature for two or more schools.

11. Employability Skills: Those knowledges, skills, and judgments that are unique to all jobs, which are distinct from technical and general education skills and are needed by high school leavers to secure, maintain, and advance in a job (ie. demonstrating a knowledge of the sources of information concerning employment, processes for deciding job interests and determining employment opportunities, and the steps necessary to securing a job--application, interview, resume, etc.).

12. Teaching Basic Academic Skills: The imparting of knowledge, skills, attitudes, and attention to the learner by showing, demonstrating, or giving oral or written instruction on how to do something through the use of various teaching methods that involve the human senses (ie. lecture, discussion, demonstrations, textbooks, supplemental materials, speeches, tests, projects, assimilations, drill and repetition, memorization, panels, audio visual aids, etc.)

### Summary and Organization of the Study

This chapter included a description and outline of the research problem, purpose, background and significance, objectives, research questions, assumptions, limitations, and a definition of terms pertaining to the investigation at hand.

Chapter II presents a review of related and pertinent literature to the research problem under investigation. This review of the literature included the theoretical and historical framework from which the research study arises along with various legislation, philosophies, related studies or research,

and current events or issues that impact upon and effect the research problem.

Chapter III includes an in depth discussion of the research methodology used in the study. Included in the explanation were the seven research questions, the population and sample of the study, the development and pilot testing of the questionnaire instrument, and the mechanics for data collection, data presentation, and statistical analysis.

The presentation and statistical analysis of the data that were collected are included in Chapter IV. The seven research questions were stated and answered with the presentation and interpretation of the data on three different levels: Level I (Demographics; statistics for 43 individual survey items; and statistics for the six (6) scales related to the six research questions); Level II (Analyses of variance on the six scales for each of the six independent variables; tests of hypotheses); and Level III (Analyses of variance on individual survey items within any scale that was found to have significant differences).

Chapter V includes a synopsis of the study itself, the summary and conclusions drawn from the data related to the research questions, and the recommendations for further study or research pertaining to the research problem, along with implications for vocational education, are suggested.

## CHAPTER II

### REVIEW OF THE LITERATURE

The purpose of this chapter was to review selected and related literature that were considered pertinent to the research problem under investigation. This review of the literature was considered important to the development of the study and represents the theoretical and historical framework from which the study arises. More specifically, Chapter II presents the following areas of review: (1) Historical and Philosophical Background, (2) Objectives of Vocational Education, (3) Vocational Education Program Evaluation, (4) Related Research Studies, and (5) Summary.

#### Historical and Philosophical Background

The American system of schools, so vital and necessary to the health, safety, and welfare of society, have done remarkably well when one considers the fact that no specific mention or provision was made for a national system of education in the United States Constitution. As stated in the U.S. Constitution, "the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."<sup>10</sup> Furthermore, the "general welfare clause" of the federal

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<sup>10</sup>R. Campbell, L. Cunningham, R. McPhee, and R. Nystrand, The Organization and Control of American Schools, Merrill Publishing Co., 1970, p. 20.



Constitution was interpreted as giving Congress broad power to tax for general social purposes. While the federal government has always had some influence on public schools, it became the responsibility of individual states to devise, administer, and operate its own separate schools and educational systems.

While history showed that Congress used the general welfare clause several times as a basis for legislation pertaining to support for vocational education, the Vocational Education Act of 1963 stated the following salient purpose:

It is the purpose of this part to authorize Federal grants to States to assist them to maintain, extend, and improve existing programs of vocational education, to develop new programs of vocational education, and to provide part-time employment for youths who need earnings from such employment to continue their vocational training on a full-time basis, so that persons of all ages in all communities of the State--those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational handicaps--will have ready access to vocational training and retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.<sup>11</sup>

Furthermore, to highlight the importance of a clear set of national policies or guidelines for education in the United States, the Supreme Court expressed the following view in the famous 1954 case of *Brown v. Board of Education*:

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<sup>11</sup>Ibid., p. 33.

Today, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic responsibilities, even service in the armed forces. It is the foundation of good citizenship. Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment.<sup>12</sup>

Both vocational and general education have been complementary in nature to one another and necessarily so have reinforced one another. For the purposes of this study, vocational education was a program designed to prepare an individual learner for entrance into a chosen vocation or to upgrade employed workers' skills. It included all education which prepares an individual to be more competent in one group of occupations than in another and prepares the student for his or her life's work. General education, on the other hand, was education that was needed by every student. However, to insure the occupational success of students entering the labor market, the content of vocational education has often included components or subject matter related to general education.

If vocational education was to successfully accomplish and fulfill its noble goals of "meeting society's needs for workers, increasing the options available to each student, and serving as a motivating force to enhance all types of learning,"<sup>13</sup>

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<sup>12</sup>Ibid., p. 43.

<sup>13</sup>Rupert N. Evans, Edwin L. Herr, Foundations of Vocational Education, 2nd Edition, Merrill Publishing Co., 1978, p. 4.

then each individual associated with the learning process must insure that both general education and vocational education were complementary in nature and reinforced one another in achieving those goals. Again, while the instructional content of vocational education included parts of general education necessary for success, the opposite was also true. A unique "partnership" did indeed exist between business, industry, labor, and various disciplines within the field of education in successfully preparing students with the knowledge, skill, and attitudes necessary for entry-level jobs, job retraining, and career changes in a constantly changing workplace. In discussing critical issues facing vocational education today, the following statement was made pertaining to the role of public education in preparing students for the world of work:

A fundamental point professional educators need to understand is that today's industrial worker must never cease learning and growing. Regardless of what individuals have accomplished or learned up to a point in time, in five years their skills will be obsolete and they will have to be retrained.<sup>14</sup>

Historically, an uneasy and at times strained relationship has existed between general education and vocational education that has acted as a hindrance in the accomplishment of a common goal to both--namely, successful employees capable of meeting technological changes in the workplace, shifting employer needs and demands, and the diversified requirements of a growing competitive marketplace. For vocational education

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<sup>14</sup>P. J. Elliman, "Critical Issues in Vocational Education: An Industrialist's View," American Education, 20 (October 1984), p. 25.

to be effective, vocational and general educators alike must endeavor to view one another as "coequals" within the educational process. They shared responsibilities for insuring a genuine interest in the success of students, goals which offer a sense of relevance and represent the students' best interests, an atmosphere of responsible freedom characterized by "learning by doing" situations in a classroom setting, and instructional content that was truly viewed as a means to an end--namely, a "job" as a successful wage earner.

The comprehensive high school, which was designed to serve all youth by providing a variety of instructional paths and capitalized on individual differences, represented a positive step in the right direction in bringing together both vocational and general education instructors as partners offering "purposeful education." Vocational instruction represents a society which values the work ethic for such noble purposes as subsistence or livelihood, leisure time interests, and personal or professional pursuits. While it was true that vocational education was the shared responsibility of the nation, individual states, and various local communities, the "real action" took place at the local level in the way the relevant curriculum was taught. In addition, vocational teachers were required to possess special competencies in the way of coursework instruction and related work experience or expertise in the field of vocational education for which they had responsibilities for providing various classroom instruction that would transfer readily to realistic conditions in the world of work.

The legislature for the State of Michigan has annually appropriated funds through the State School Aid Act to financially support the State's public education programs. The State School Aid Act specified vocational education funds to be spent for various programs and educational services. The responsibility for the administration of both state and Federal legislation pertaining to public education rested with the State Board of Education. Finally, the vocational education administrative provisions of the state and Federal legislation were outlined and presented in the Michigan State Plan for Vocational Education. Vocational education planning with respect to curriculum and content should be based upon a systematic assessment of the various social, political, economic, and employment needs that impact upon the educational process. This long- and short-term planning should reflect and anticipate the changing attitudes and values of society, as well as, the changing demands or requirements of business and industry comprising the world of work.

If vocational education was to succeed in its efforts to provide options that benefit individuals entering the job market, upgrade their work skills, or prepare them for probable job retraining, then it should carefully plan and develop teaching strategies that emphasized certain saleable skills, work attitudes, and usable knowledge related to successful employment. One critical issue or focal point pertaining to vocational education and the changing world of work needing attention

by professional educators was the accusation or indictment that the vocational student and graduate lacked proficiency in important "basic academic skills" representing a common core of knowledge so necessary for an employee entering the labor force.

In The Unfinished Agenda, the National Commission on Secondary Vocational Education stated that "Secondary vocational education courses should provide instruction and practice in the basic skills of reading, writing, arithmetic, speaking, listening, and problem-solving. . . . Basic skills are critical to both both academic and vocational programs because our mission is to provide students not only with the tools of a trade, but with the tools of a productive, successful life. We must offer education with a vocational emphasis, and we must offer job training. If we omit either element, we are shortchanging our students."<sup>15</sup>

The recent proliferation and quick succession of literature, writings, media attention, and public outcries focusing on the growing problem of employees apparently entering the workplace deficient in basic academic survival skills has served as a unifying force in the creation of a new and much needed era of collaboration and cooperation between business, industry, and education. Professional educators, working in concert with business and industry, needed to play key roles in better serving students and graduates and our nation's employers who have a vested interest in the competitive abilities of employees comprising the labor force.

A recent article by P. Woodring in Phi Delta Kappan magazine emphasized an important point pertaining to the joint responsibility that exists between both educators and employers for providing vocational training and education:

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<sup>15</sup> McDonald, op. cit., p. 17.

Vocational education has never been and should not be the exclusive responsibility of the public schools. Whether the work is to be in a factory, the building trades, or a profession, employers as well as older and more experienced workers in the field have a responsibility for a substantial amount of on-the-job training. Unfortunately, some employers have found it profitable to let the schools do all the training so that new employees will already have been sorted out and taught all the details of their work. Some vocational educators have been eager to accept the full responsibility because this means more jobs for them, but educators who want to make the most of the time and resources available to the schools would be wise to pass some of the responsibility back to the employers, limiting the school's responsibility to teaching those things that are learned more effectively and more economically in a school than on the job.<sup>16</sup>

The place of vocational education in the public schools was enhanced by a new era of collaboration when Congress passed into law the Job Training Partnership Act (JTPA)--Public Law 97-300. The Act stimulated greater involvement of the community in vocational education through a series of programs governed and administered by the state and Local Private Industry Councils. This attempt to foster collaboration between vocational education and the private sector in providing job training and related services was emphasized in the following statement:

Most vocational educators have developed a strong working relationship with the private sector employer. Those vocational education institutions that continue to involve the private sector employer in a meaningful way in organizing programs and curriculum have recognized that the relationship is invaluable. This new law will now provide funding and an administrative mechanism for strengthening this partnership between vocational education and the private sector.<sup>17</sup>

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<sup>16</sup>Paul Woodring, "Vocational Education: How Much, What Kind, and When?," Phi Delta Kappan, 60 (May 1979), p. 646.

<sup>17</sup>Dean Griffin, "A New Partnership Becomes Law," Vocational Education, (January/February 1983), p. 34.

The origin for the various programs contained in the Job Training Partnership Act can be traced back to the Kennedy Administration's Manpower Development and Training Act of 1962 (MDTA); the Johnson Administration's Office of Economic Opportunity Act of 1964; and the Comprehensive Employment and Training Act of 1973 (CETA). However, JTPA allowed economically disadvantaged individuals and other persons in special need of training to begin actual employment.

Former Secretary of Education Terrel H. Bell believed that vocational education should not be overlooked in the national zeal to overhaul and improve public schools throughout the United States.

I see no conflict in our advocacy of excellence in academic education at the elementary and secondary levels and our commitment to a strong system of vocational education. . . . Vocational education is especially important at this time in our nation's history. First, it is a major, integral part of the American education system. Second, it is a major supplier of skilled workers to American businesses at a time when our nation faces a massive retraining task in order to recapture its preeminent position in the worldwide economy.<sup>18</sup>

Mr. Bell also stated that in the National Commission on Excellence in Education's report entitled, A Nation at Risk, the findings "emphasized all students' need for solid grounding in basic skills and specifically cited vocational education as enriching high school curricula."<sup>19</sup>

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<sup>18</sup>Terrel H. Bell, "Vocational Education and the Educational Reform Movement," Vocational Education, (October 1984), p. 33-34.

<sup>19</sup>National Commission on Excellence in Education, A Nation at Risk, The U.S. Department of Education, Washington, D.C., 1984.



To emphasize the importance of teaching basic academic skills in vocational education classes, William Reed made the following statement at the Annual Meeting of the National Association of State Advisory Councils on Vocational Education:

Some may say that teaching these fundamental skills is not the mission of programs in vocational education--that vocational education must concern itself only with training in specific workplace skills. . . . Reading, writing, addition, and subtraction are essential workplace skills. No vocational education program which hopes for success can ignore the need for these skills. No vocational program which neglects these skills can hope to establish a fruitful partnership with business.<sup>20</sup>

Faced with a tremendous diversity of ability levels, aptitudes, and interests among high school students, vocational educators need to play a significant role in assuring mastery of essential learning and thinking skills for all students. Vocational education "can make a vital contribution to an upgraded secondary school curriculum if it is improved and refocused so that the development of basic skills is a high priority. Vocational education must become a strong partner in the movement to produce high school graduates with the necessary skills to further their learning--on the job or in formal education."<sup>21</sup>

The argument has been made that it should justifiably be the primary responsibility and obligation of elementary and middle school level teachers and curriculum to insure that students master basic academic survival skills prior to entering

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<sup>20</sup>William B. Reed, "Three Key Words for Vocational Education--Rigor, Relevance, and Profit," Vital Speeches of the Day, June 15, 1983, p. 543.

<sup>21</sup>Spence, op. cit., p. 48.

senior high school. However, if students arrive at the high school level with major deficiencies in basic academic skill proficiency, then it was incumbent upon vocational educators to introduce and emphasize remedial training and exercises to deal with the problem upon which so much of both present and future learning, training, and employment success was so intrinsically rooted.

From a philosophical point of view, the mission of schools according to John Dewey, sometimes referred to as the Father of Progressive Education, was to provide interesting interactive experiences which promote the growth of each student.<sup>22</sup> Experience, undertaken in a democratic setting, was an interaction between the individual student and his/her environment. Experience and education worked together to promote "growth" on the part of the student. This experience generated certain "habits" that were available in and tempered the character of subsequent experience; hence, experience was "continuous." In other words, each learning experience both captured something from those which have gone before and modified in some way the quality of those experiences which came later.

Therefore, a student grows by securing from his present experiences certain sorts of habits that enable him or her to clarify and cope with the problems that the environment poses. Dewey's philosophy related directly to the research problem at hand whereby employers, representing the business and industrial community, were dissatisfied with the level of basic academic skill preparedness in vocational students and graduates.

<sup>22</sup>C. H. Patterson, Foundations for a Theory of Instruction and Educational Psychology, Harper & Row, Inc., 1977, p. 48-54.

The mastery of basic academic survival skills were indeed "habits" necessary for a student entering the world of work. Students without a solid foundation in basic academic skills have been incapable of procuring and holding an entry-level job, undergoing likely job retraining, and adapting to various future career changes. These work-related factors represented realistic problem situations that the work environment, on either a local, state, or national basis, was posing for the individual worker.

The objectives of vocational education for John Dewey were, then: to promote equality of opportunity, to teach the real meaning of work, to inculcate a sense of culture related to today's world, to develop a spirit of social cooperation, and to help students grow in industrial intelligence. . . . John Dewey would be proud; academic learning has been related to industry and real life. Communication skills are eminently vocational; they are essential for higher-level positions in any field. They also contribute to other objectives of education: the ability to be a well-informed citizen, to be involved in community affairs, and to know how to enjoy leisure time. . . . Ability in math and science is indispensable for higher education, for occupational advancement, and for understanding and appreciating the world we live in.<sup>23</sup>

Vocational educators then have an obligation to both employers and students to insure that students master certain "habits" associated to basic academic skills in order to insure an understanding and a capability of coping with present and future work-related problems.

Schools must continuously evaluate and appraise the changing social, economic, and political factors that impact upon the

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<sup>23</sup>Richard J. Becker, "What Are the Objectives of Vocational Education," Phi Delta Kappan, 61 (April 1980), p. 535-536.

work environment facing its citizenry. Furthermore, it has been the responsibility of our nation's schools to identify and have a knowledge of those particular problems that students will have to encounter and ultimately deal with in the future. The job of forecasting job related problems has been no easy task. However, it certainly represents a task that must be done.

The continuity of the educational experience, as John Dewey believed, has been critical in providing educative or worthwhile experiences that take something from those experiences which have gone before and modifies the quality of the experiences that come later. Giving vocational students instruction and training in remedial basic academic skills has been a way of nurturing certain survival "habits" necessary for coping with future work-related demands of the marketplace.

Jerome S. Bruner, another educational theorist, had a psychological orientation to learning whereby instruction attempts to assist or shape cognitive growth in the learner. He also viewed the educational process as a social invention necessary in a complex society for properly preparing students to participate successfully in the adult world. Bruner was mainly concerned with how people learn and the various influences on the process of learning:

Bruner views the individual as an active being engaged in the construction of a world through seeking and selecting the stimuli to which he or she will respond, organizing and giving meaning to the environment, and guided by intention--the desire to achieve certain results. Cognitive growth is the process by which one increases one's mastery of the world by achieving and using knowledge to reduce the world's complexity.<sup>24</sup>

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<sup>24</sup>Patterson, op. cit., p. 178-179.

Hence, securing a solid foundation in basic academic skills should serve to lay the proper foundation for a structured step-by-step approach to learning to cope with the adult world of work while understanding the nature of the complexities that it presents.

Jean Piaget, on the other hand, believed that the intellectual or cognitive development in an individual learner was the result of genetic or biological makeup of the person. Piaget believed in the concept of the intellectual development of an individual progressing through orderly "stages" and a "readiness notion" whereby individual learners adapt to their environment through two processes called "assimilation" and "accommodation."

Piaget's theory and research represent the individual as an active organism interacting with, rather than simply reacting to, his environment. Intelligence is an instance of biological adaption, in which the individual organizes and structures first the immediate environment and then the universe so that he can deal with them.<sup>25</sup>

Again, students possessing a mastery of basic academic skills should be able to react successfully with purpose to both their immediate environment, as well as, the future hurdles that the workplace may present.

Other noted educational theorists, that include Carl Roger's humanistic "self-actualization" model<sup>26</sup>; Maria Montessori's emphasis on prepared "materials" and freedom within limits; B. F. Skinner's theory of environmental interaction

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<sup>25</sup>Ibid., p. 127.

<sup>26</sup>Ibid., p. 282-333.

and "classical conditioning" (stimulus/response)--all pointed to and inferred a need to master basic academic skills in order to facilitate the student learner's ability to understand, cope, and adapt to the changing nature of the workplace.

### Objectives of Vocational Education

The common goals of vocational education, as stated earlier, were to prepare individuals for work, to help society meet its demand for workers, and to serve as a motivating force for all learning.<sup>27</sup> Vocational educators should strive to prepare students for the future by making decisions based upon the changing conditions of the workplace. In addition, they should provide learning experiences in conjunction with classroom instruction through which people will learn about the primary work roles of both today and the future.

To enable vocational students to enter and maintain themselves in useful, gainful employment, schools must provide both specialized occupational education and generalized occupational education for all students. Keeping in mind that general education and specialized vocational education reinforce each other, the goals of vocational education need to be clear to the student and related to the real world of work. This educational process needs to start early in life and emphasize the importance of vocations in life and the values of work to humanity and to society. Moreover, individual students should be encouraged to identify possible occupational goals at an early age so as to facilitate tentative planning and preparation.

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<sup>27</sup>Evans and Herr, op. cit., p. 4.

Vocational teachers should strive to provide interesting, relevant, and purposeful instruction with practical learning experiences. This valuable training will enable the student to acquire technical competence for his/her first job and, at the same time, master those special intellectual, social, adaptive, and conceptual skills which will enable them to profit from a variety of on-the-job learning experiences necessary for growth and maturity as a worker. Vocational training and instruction, however, must attempt to prepare student enrollees to successfully cope with the demands for change and renewal which present and future occupational developments will require.

Traditionally, vocational education was designed to enable people to prepare for and ultimately succeed in certain occupations requiring less than a baccalaureate degree. The fact that "approximately 80% of the jobs in our country will require less than a college degree"<sup>28</sup> indicated that the needed for vocational education will be around for a very long time. Vocational education provided opportunities for individuals to discover and develop their vocational interests and abilities and to be assisted toward placement in the occupation for which they have been receiving instruction. Vocational programs were organized and designed either to prepare the individual learner for entrance into a chosen vocation or to upgrade the employed worker's skills.

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<sup>28</sup>Peter J. Elliman, "Critical Issues in Vocational Education: An Industrialist's View," American Education, 20 (October 1984), p. 25.

One of the more important key principles of vocational education has been to provide options that will benefit individuals entering, upgrading, or retraining for employment. While vocational education has been concerned with the total growth of individual students, flexible entry and exit for individuals has also been a characteristic of vocational education. With the advent of high technology and increased competition in the marketplace, more and more employers representing business and industry have called for increased emphasis on general education and basic academic skill proficiency rather than narrow specialized skill preparation.

The expansion of the lowest-skilled jobs in the American economy will vastly outstrip the growth of high-technology jobs. And the proliferation of high-technology industries and their products is far more likely to reduce the skill requirements in the U.S. economy than to upgrade them. Therefore, America's policy makers should revise their educational priorities and place greater emphasis on a strong general education than a narrow specialized one . . . . The best possible preparation for adapting to a lifetime of change will be a strong general education--a knowledge of different political, economic, social, and cultural tenets as well as acquisition of strong analytical, communication, and computational skills. These are essential to understand currents of change in society and adapt to it constructively. . . . In a high-tech future, a solid basic education will become more, not less, important.<sup>29</sup>

For vocational education to meet its goals, the training given its students often has been done in an environment that closely replicates or simulates the real working environment. Students need to receive training and instruction in the manipulative and thinking habits required in the occupation itself.

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<sup>29</sup>Henry Levin and R. Rumberger, "The Low-Skill Future of High Technology," Education Digest, 49 (February 1984), p. 22-23.



Classroom training should meet the market needs and demands for labor while providing for the unique needs, experiences, and varying abilities of individuals. Vocational education instructors need to be masters themselves in the skills and knowledge for which they were hired to teach in their quests to prepare students for both primary and secondary labor markets.

Finally, vocational education needs to be viewed as an identifiable integral component of quality comprehensive educational systems along with their academic teacher counterparts. In an article entitled "How Schools Can Meet Students' Employment-Related Needs," the following statement was made pertaining to the important ramifications for remedial basic academic skill training:

As developers of basic skills, the schools would seem to have an advantage in productivity-oriented programs aimed at preparing young people to obtain and hold jobs in which they produce goods and services of sufficient value in the marketplace to warrant their employment without a subsidy. . . . To help prepare for economic independence and adult life, schools should do what they can do best. Building on the most important advantages they possess--established institutional capability, universal access to the nation's youth, and experience in teaching basic educational skills--the schools can provide a wide range of preventive and productivity-oriented services to all of their clients.<sup>30</sup>

To add credence to the call for more basic academic skills training in vocational education, Evans and Herr, in their book entitled Foundations of Vocational Education offered the following

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<sup>30</sup>Robert L. Darcy, "How Schools Can Meet Students' Employment-Related Needs," Education Digest, 47 (March 1982), p. 46.

assertion:

Vocational education provides a reason for learning basic academic skills. It lets the student know that these skills are important in life and more particularly, are important in achieving occupational goals. Too often, however, the knowledge of the importance of basic academic skills comes late in a student's school life. Most vocational education begins at age sixteen, and many schools do not offer remedial instruction in basic academic skills to students of this age . . . . If the student could have learned earlier that basic academic skills are important or if remedial classes could be offered concurrently with vocational education, more effective results could be achieved.<sup>31</sup>

With the "educational excellence movement" well underway, emphasis is being placed on improvements in the quality of instruction and student performance stressing stronger academic preparation to meet the job market's demands for people with sophisticated educational skills:

By 1995, nearly one-third of all jobs will be technical, scientific, managerial, or professional. Another 15% to 20% of jobs will be significantly upgraded. . . . If we are serious about giving that many students the opportunity to obtain and retain these attractive and lucrative jobs, we must expand our bill of educational fare to include more sophisticated reading, writing, computing, speaking, and thinking. Only strong academic programs can develop these skills.<sup>32</sup>

### Vocational Education Program Evaluation

The philosophy of educational institutions sets the stage for the entire operation and administration of the learning process. The goals of vocational education, an integral part of any comprehensive educational system, have originated from this broad philosophical framework, and brought about the creation of certain specific objectives which most vocational educators

<sup>31</sup>Evans and Herr, op. cit., p. 51.

<sup>32</sup>Bill Honig, "The Educational Excellence Movement: Now Comes the Hard Part," Phi Delta Kappan, (June 1985), p. 676.

have attempted to accomplish through their instructional training.

From a philosophical point of view, America's educational institutions have existed for the purpose of educating its citizenry for the responsibilities of living, subsistence or work, and coping with life. Training in vocational education has contributed to the concept that the individual's occupation was a major cohesive force in the continuity of that individual's life. While developing work attitudes, saleable skills, and usable knowledge related to employment, vocational education also provided opportunities for individuals to discover and develop their vocational interests and abilities and to be assisted toward placement in the occupation for which they have received instruction.

A key principle of vocational education has been that programs must be held accountable and evaluated on the basis of objectives, processes, products, costs, and community acceptance. The "delivery systems," which focus on the kind, type, and extent of instructional training that will be used in accomplishing the objectives and getting the job done, has stemmed from those specific program objectives. Program evaluation has been an important on-going process in which outcomes were compared to various previously specified instructional objectives. They have asked the question, "Are various vocational programs successful in meeting their objectives?" Collecting various data that indicate either the success or failure of a particular program in vocational education has been an important factor in

the decision-making process inherent in any vocational education program.

Vocational program evaluation, whether done at the local, state, or Federal level, has helped various decision-makers in the important planning and implementation of needed changes to improve vocational programs and, at the same time, meet state and federal regulations or guidelines. The American taxpayers have been demanding more and more accountability for how appropriated funds fulfill specific goals and objectives in meeting intended or desired student outcomes. In a word, the public has been very much interested in whether or not they were getting a good return on their investment with respect to vocational education programs or services.

To highlight the magnitude of the problem that a changing workforce and demands for better basic academic skills preparation are having on education, the following statements were recently made:

The United States is preparing to enter a new age, an unprecedented period in which high technology products and processes will play an increasingly significant role in life of the individual, and affect the structure of society as a whole, to a degree at this point unknown. Certainly such a revolution will have profound effects on our entire educational system but especially in the area of higher education. . . . Accordingly, it is important to stress a broad array of fundamental skills in higher education for the vast majority of students, rather than narrow vocational preparation. These skills include written and oral expression, mathematics, sciences, fine and performing arts, analytical skills, social sciences, and foreign languages. These will provide a firm basis

for obtaining the applied training that will be needed at each stage of the career.<sup>33</sup>

Furthermore, to strengthen the role of vocational education, the following assertion was made:

The focus should be on developing skills essential to communication, learning, problem solving, and thinking. These are no more academic than they are vocational competencies. The difference lies in presentation and learning. Academic subjects tend to be taught and learned theoretically, abstractly, or symbolically. Vocational content tends to be taught concretely and learned in an applied manner. . . . It is important that we begin to view the essential skills as essential competencies that can be developed through both academic and vocational curricula. Development of these essential skills should be the goal of both academic and vocational programs.<sup>34</sup>

Again, effective vocational program evaluation needs to involve planning, decision-making, accountability, and program improvement. For vocational programs to benefit individuals in relation to economic necessity, personal satisfaction, and competence on the job, the programs need to insure that students have a solid foundation and mastery of basic academic math and communication skills. Vocational education programs, which have been developed, conducted, and evaluated in consultation with vocational teachers, administrators, advisory committees, employers, parents, and students can play a key role in assuring that the "process" or procedures by which students gain needed skills and knowledge are effective in helping students

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<sup>33</sup>Henry M. Levin, "Jobs: A Changing Workforce, A Changing Education?", Change, 16 (October 1984), pp. 32-37.

<sup>34</sup>Spence, op. cit., p. 49.

master basic academic math and communication skills. While proper planning certainly gives needed "direction" to the operation and administration of a vocational program, program evaluation can be a very important factor in assuring the effectiveness of local programs where the real "action" or learning takes place in the classroom.<sup>35</sup>

### Related Research Studies

A review of related research studies and doctoral dissertations concerning the research problem provided strong concern and support for the apparent magnitude of the problem and the need to conduct research pertaining to this growing educational issue. Cochran's dissertation study undertaken at the University of Tennessee in 1984 attempted to assess the adequacy of training in several secondary vocational education programs. The most frequent suggestions offered by employers for improving vocational education were to provide opportunities for more hands-on experience and place more emphasis on basic academic and employability skills.<sup>36</sup>

In a dissertation conducted by Elizabeth Walker at the University of Southern California, she evaluated the effectiveness of a career education program that was directed toward both the development of information to facilitate career choice and basic academic skills in English. The findings

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<sup>35</sup>The Annual and Long Range State Plan for Vocational Education in Michigan, Michigan Department of Education/VTES, 1979.

<sup>36</sup>Ruby B. Cochran, "Instructors' and Employers' Perceptions of the Adequacy of Training in Four Selected Secondary Vocational Programs (Skills, Academic, Employability)," (Ed.D. dissertation, The University of Tennessee, 1984).

showed that an individualized career education program that emphasized the acquisition of basic academic skills in English could be expected to be effective in helping secondary students gain competencies in reading and language usage, maintaining a favorable academic self-concept, and in developing constructive attitudes toward the world of work as would exposure to traditionally taught courses in English.<sup>37</sup>

Crowder focused on the research problem in her dissertation study that tried to determine the perceptions of selected employers regarding vocational high school graduates' acceptability as entry-level employees and the employers' accessibility to graduates to fill entry-level positions. Her findings indicated that employers supported continued and increased emphasis on the development of technical skills, work habits and attitudes, basic (academic) skills, and related work experiences.<sup>38</sup>

Larson wrote his doctoral dissertation revolving around the opinions of industrial-type employers concerning the characteristics, traits, and standards desired of entry-level employees in industrial-type occupations. His findings supported the need for cluster programming in high schools. Students were furnished with entry-level skills in a wide range of related

<sup>37</sup>Elizabeth M. Walker, "A Comparison of Two Groups of Career Education Students Exposed to Different Programs in the Teaching of the Basic English Skills," (Ed.D. dissertation, University of Southern California, 1981).

<sup>38</sup>Barbara N. Crowder, "Perceptions of Selected Employers of the Acceptability and Accessibility of Entry-level Employees Who Graduated from High School Vocational Education Programs in Southwestern Ohio," (Ed.D. dissertation, University of Cincinnati, 1980).

occupations. Mr. Larson's study reinforced the notion that high school students would benefit from expanding their instructional program to include several skill areas instead of concentrating on one specific skill.<sup>39</sup>

In another dissertation study undertaken by John Friedrich, an attempt was made to detect significant differences in the attitudes toward career education of selected community college administrators, faculty members, and students. Two conclusions based upon the findings of the study were worthy of notation: (1) too many students leave school with deficiencies in the basic academic skills, and (2) students should be equipped with a marketable skill when they leave school.<sup>40</sup>

Two important research studies proved to be of significant importance and relevance to this particular research problem: (1) Dr. James P. Greenan's study entitled "Identification of Generalizable Skills in Secondary Vocational Education," and a project entitled "ACTIVE: Academic Competency Taught in Vocational Education," which was researched and written by Dr. Barbara Rupp and Jean Sillers. Dr. Greenan's study examined the skills and skill areas that were considered

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<sup>39</sup>Victor C. Larson, "A Survey of Selected Metropolitan Omaha Manufacturers to Determine Characteristics, Traits, and Standards Desired of Entry-Level Employees in Industrial-Type Occupations," (Ed.D. dissertation, The University of Nebraska, 1981).

<sup>40</sup>John R. Friedrich, "Attitudes Toward Career Education as Exhibited by Selected Community-College Personnel and Students," (Ed.D. dissertation, East Texas State University, 1980).



generalizable within and across the secondary vocational training programs with respect to a common core of mathematics, communications, interpersonal relations, and reasoning skills.<sup>41</sup>

Dr. Greenan's study resulted in a User Manual and Resource Directory that summarized or listed certain basic skill competencies in five specific areas along with the degree of generalizability (high, medium, or low) for selected job titles.<sup>42</sup> The results of his study can be very helpful in assisting vocational educators in designing individualized program assessment, planning, and evaluation techniques (See Appendix E).

On the other hand, Dr. Barbara Rupp's study entitled "Project: ACTIVE," which was undertaken at the Calhoun Area Vocational Center along with several other area training centers and comprehensive high schools in southeastern Michigan, constructed a "bank" or profile of academic competencies that should be taught or emphasized in various occupational programs.<sup>43</sup> The goal of this curriculum process was to identify and document academic skills within vocational-technical education tasks in order that ultimate approval or credit was given to students' graduation requirements in math, science, and English. This form of curriculum strategy may help in increasing vocational

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<sup>41</sup>James P. Greenan, "Identification of Generalizable Skills in Secondary Vocational Education," University of Illinois, Urbana-Champaign: Department of Adult, Vocational and Technical Education, 1983.

<sup>42</sup>James P. Greenan, Generalizable Communication Skills Resource Directory and User Manual, Illinois State Board of Education, Department of Adult and Vocational/Technical Education, 1985 and 1986.

<sup>43</sup>Barbara Rupp and J. Sillers, Project ACTIVE: Academic Competency Taught in Vocational Education, Report, 1985.

education enrollments that have been on the decline due to modifications in high school graduation requirements.(Appendix F)

More than half of the states have raised academic graduation requirements in the last three years now allow students to substitute vocational education courses for the new requirements. . . . Of the 45 states and territories that have raised graduation requirements, 28 allow the substitution of vocational education courses for math, science, and English as long as similar skills are covered in the voc. ed. courses. However, in many of the states such substitution is permitted under a local school board option, rather than a state-wide mandate.<sup>44</sup>

Both of these research studies provided assistance as valuable resources in the development and design of the survey questionnaire instrument, as well as, specific research questions.

In another dissertation written by Minnie E. Black in 1981, efforts were made to supply information to business teachers pertaining to the personnel needs of metropolitan Atlanta employers. Results indicated that supervisors observed several problem areas related to attendance, checking work for accuracy, and dependability. Personnel directors rated employees lower in handwriting, vocabulary, and oral communications.<sup>45</sup>

A study done by Michael Crowe examined various characteristics of learning environments that promote or retard the development of basic skills proficiency. It was recommended

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<sup>44</sup>"States Share Successful Strategies for Increasing Vocational Education Enrollment," Phi Delta Kappan, 68 (February 1987), p. 483-484.

<sup>45</sup>Minnie E. Black, "An Analysis of Marketable Skills Needed by Entry-level Clerical Office Workers in the Metro-Atlanta Area With Implications for Improvement in Classroom Instruction," Ph.D. dissertation, Georgia State University, 1981.

that vocational programs increase (1) both the exposure to and the level of reading skills required for vocational students; (2) the demand for the level of mathematics skills that students use in completing tasks; (3) students' involvement and intensity with activities requiring the use of data; and (4) students' opportunities for autonomy, self-direction, and feedback.<sup>46</sup>

John Knold's study assessed the attitudes of some 702 Washington State employers toward vocational education at the secondary and postsecondary levels. Over 90 percent regarded having a strong background in basic skills as very important. The report's recommendations included: integration of basic and employability skills into vocational education; a strong core curriculum in English, mathematics, and science for all secondary students along with more school-business cooperation.<sup>47</sup>

In examining eleven recent reports related to excellence in education and their implications for vocational education, Gwen C. Cooke recommended improvement of instruction through incorporating basic academic skills in vocational education curricula, implementing competency-based instruction in the vocational classroom, and using time-on-task research.<sup>48</sup>

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<sup>46</sup>Michael R. Crowe, Analysis of Students's Basic Skills Performance in Selected Instructional Delivery Systems, Office of Vocational and Adult Education, Washington D.C., 1986.

<sup>47</sup>John A. Knold, Employee Training Needs as Expressed by Employers in Washington State, 1986.

<sup>48</sup>Gwen C. Cooke, Toward Excellence in Secondary Vocational Education: Improving Teaching, Office of Vocational and Adult Education, Washington D.C., 1985.

An article written by Ida Halasz summarized research on how time was used in vocational-technical classes and how teachers could increase time on task. Her findings indicated that secondary students spent less than three percent and postsecondary students less than one percent of class time on basic skills.<sup>49</sup>

Another study written by Linda S. Lotto examined current research on the proficiency of vocational students in basic skill areas and explored current practices for improving the basic skills of vocational students at the secondary and postsecondary levels. Based on current research, her findings indicated that vocational students, on an average, seemed to be less proficient in basic skills than were their academic track counterparts and made smaller gains in proficiency during their high school years. The study stated that because the research on basic skills and vocational students was not a rich literature, researchers needed to focus more attention on improving the methodological adequacy of available research and on filling in substantive gaps in existing research.<sup>50</sup>

Louise Vetter's exploratory study of vocational education teachers' preparation to improve students' basic skills was based on previous work conducted by the National Center for

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<sup>49</sup>Ida M. Halasz, "Finding Time to Teach Basic Skills," Journal of the American Vocational Association/Vocational Education, (August 1984), pp. 15-16.

<sup>50</sup>Linda S. Lotto, Building Basic Skills: Results from Vocational Education, Research & Development Series No. 237, Office of Vocational and Adult Education, Washington D.C., 1983.

Research in Vocational Education. Most vocational teacher education students interviewed felt they were prepared to teach basic skills to their secondary vocational students, by virtue of their personal preparation and grasp of the skills, rather than as a result of specific teacher training in teaching such skills. Most teacher education students generally thought that they had a responsibility to improve their students' basic skills, although the amount and type of such commitment varied widely. Again, the study suggested that further research was necessary to determine where basic skills should be taught, how vocational teachers were teaching such skills, and what inservice as compared to preservice teachers think about this topic.<sup>51</sup>

A study entitled Preparing Students to Adapt with the New Technology written for the Illinois State Board of Education suggested that new technology was forcing vocational education decision makers to establish policies that will influence the direction and focus of vocational education throughout the 1990's. Three alternatives that were suggested for adapting to the new technology were to focus on basic skills alone and on an approach that would present a balanced mix of basic, transferable, and change skills. Business and industry, according to the report, have expressed dissatisfaction with entry-level employees' competence in both basic and transferable

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<sup>51</sup>Louise Vetter, Vocational Education Teacher Preparation to Improve Secondary Students' Basic Skills: An Exploratory Study, Office of Vocational and Adult Education, Washington D.C., 1983.

skills. The report felt that vocational education has the potential to help students adapt to the new technology.<sup>52</sup>

In a research report conducted by Jean T. Hanson for the Minnesota State Advisory Council for Vocational Education, current studies on education seem to emphasize three themes: (1) there is a link between education and national survival, (2) improvement in the basic instructional program is essential, and (3) time is an extremely important resource in achieving education goals. Regarding the relationship among basic skills, advanced technology, and vocational education, research indicated that vocational educators and most of the American public recognized that improved levels of basic skills were needed for students to meet the technological and employment needs of the future.<sup>53</sup>

A position paper entitled A Statement on Vocational Education in the Schools was presented to the National Commission on Secondary Vocational Education in 1984. The findings indicated that the high school vocational education curriculum should not be isolated and reformed without considering the experiences of young people leading up to and following high school. At the elementary level a new emphasis was recommended on the acquisition and application of basic skills. In junior

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<sup>52</sup> Preparing Students to Adapt With the New Technology, Illinois State Board of Education, Department of Adult, Vocational and Technical Education, 1983.

<sup>53</sup> Jean T. Hanson, Focus on Excellence--Secondary Vocational Education, Minnesota State Advisory Council for Vocational Education, Minnesota State Department of Education, 1984.

high school, expectations for growth in the basic skills needs to be raised and student energies directed toward exploration of demands of the real world of adulthood and work. According to the report, vocational education in the senior high school should teach work habits and attitudes and provide a well-balanced foundation in technology. In addition, it was recommended that relationships between vocational education teachers and academic and general teachers need to be improved.<sup>54</sup>

Another investigative report prepared by the Committee on Science, Engineering, and Public Policy stated that the largest segment of the American work force consisted of high school graduates who have not attended college. The report stated that new graduates usually start in entry-level positions but then soon move into other occupations and organizations. According to the report, today's graduates should expect many changes that will affect their ability to succeed in the work force. Therefore, the worker of the future will prosper if he or she possesses a core of competencies that involve a command of the English language, reasoning problem solving abilities, reading, writing, and computation skills, oral communication, and positive interpersonal relationships.<sup>55</sup>

In a research report conducted by Harold Starr through Ohio State University and the National Center for Research in

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<sup>54</sup>Robert Worthington, A Statement on Vocational Education in the Schools, Position Paper presented to the National Commission on Secondary Vocational Education, Washington D.C., 1984.

<sup>55</sup>High Schools and the Changing Workplace, Institute of Medicine, National Academy of Science, National Research Council, Washington D.C., 1984.

Vocational education, data from the opinions of students, school personnel, community representatives, and policy-makers indicated that occupational skills development, work experience, and basic skills development are important to all students.<sup>56</sup>

Finally, in a position paper entitled Challenges of Educating Today's Youth: Entry--Retention--Graduation written by Hans Schieser, statements were made that a large percentage of American youth enters the job market ill-prepared and lacking in basic skills and inadequately prepared for the occupations in which they find themselves. The paper went on to say that too many job changes, dissatisfaction, and a lack of systematic preparatory and continuing education have led to the productivity crisis in American industry.<sup>57</sup>

### Summary

Chapter II has been a review of the related literature that has been both relevant and pertinent to the research problem under investigation in this study. The first portion of the chapter presented the historical and philosophical background from which the problem in this study arises. The second section attempted to show the important relationship and linkage between the research problem at hand and the basic objectives

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<sup>56</sup>Harold Starr, Opinions About the Roles of Secondary and Post-Secondary Vocational Education, Ohio State University, National Center for Research in Vocational Education, 1983.

<sup>57</sup>Hans Schieser, Challenges of Educating Today's Youth: Entry--Retention--Graduation, Position Paper, Society for Ethnic and Special Studies, 1979.



of vocational education that vocational educators base their teaching strategies upon. The third section dealt with the important role of vocational program evaluation in enabling vocational educators to successfully accomplish various critical objectives directly related to the research problem. Finally, the fourth and final section offered an examination of related studies, reports, position papers, and doctoral dissertations that provide strong concern and support for the needed research pertaining to this important educational issue.

## CHAPTER III

### RESEARCH METHODOLOGY

#### Introduction

Chapter III includes a discussion of the research methodology employed in the research study and includes: (1) the research questions and hypotheses, (2) the population and sample of the study, (3) the development and pilot testing of the survey (questionnaire) instrument, (4) data collection, and (5) data presentation and statistical analysis.

#### Research Questions and Hypotheses

The research methodology was designed to answer each of the research questions raised. The research questions were as follows:

1. Who (vocational or general education teachers) did Michigan secondary vocational marketing education teachers feel should be teaching basic academic skills at the high school level?
2. Did Michigan secondary vocational marketing education teachers perceive that there were deficiencies in secondary vocational marketing education students' basic academic skill training?
3. To what extent did Michigan secondary vocational marketing education teachers' perceptions and opinions

concur with various field authorities regarding the significance and mastery of basic academic skill training?

4. To what extent did Michigan secondary vocational marketing education teachers teach basic academic math and communication skills?
5. What effects did Michigan secondary vocational marketing education teachers perceive certain classroom activities had on heightening student awareness and acceptance of remedial basic academic skill training?
6. To what extent did Michigan secondary vocational marketing education teachers indicate that they engaged in certain classroom activities related to heightening student awareness and acceptance of remedial basic academic skill training?
7. Were any of the above research questions related to such demographic characteristics as age, sex, class size, years of teaching experience, educational degree, or present teaching position?

The purpose of this study was to investigate vocational secondary marketing education teachers' perceptions and opinions concerning the significance, extent, and implications of teaching basic academic skills as part of their classroom curricula. A descriptive approach was employed in collecting, analyzing, and interpreting data obtained from survey questionnaires mailed to participating respondents pertaining to the research problem under investigation.

Null hypotheses were tested to determine if any significant differences exist between the six measures (scales) for each of the six independent variables of age, sex, class size, years of teaching experience, educational degree, and present teaching position. The research hypotheses are presented below:

- $H_1$ : There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the three levels of teacher age being compared.

The hypothesis, stated in both its null and alternative statistical form, would be:

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- $H_2$ : There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- $H_3$ : There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- $H_4$ : There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>5</sub>: There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>6</sub>: There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>7</sub>: There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the three levels of teacher age being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>8</sub>: There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>9</sub>: There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>10</sub>: There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>11</sub>: There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>12</sub>: There will be a significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>13</sub>: There will be a significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the three levels of teacher age being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>14</sub>: There will be a significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>15</sub>: There will be a significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>16</sub>: There will be a significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>17</sub>: There will be a significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>18</sub>: There will be a significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>19</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the three levels of teacher age being measured.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>20</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>21</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>22</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>23</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>24</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$



- H<sub>25</sub>: There will be a significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the three levels of teacher age being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>26</sub>: There will be a significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>27</sub>: There will be a significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>28</sub>: There will be a significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>29</sub>: There will be a significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>30</sub>: There will be a significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>31</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the three levels of teacher age being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>32</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>33</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>34</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>35</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>36</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

### The Population and Sample of the Study

The population of this research study consisted of the Michigan public school secondary certified vocational marketing education teachers presently teaching in an approved State of Michigan classroom program. While there were approximately 370 teachers in 1987 instructing marketing education (distributive education) classes at the secondary level in the State of Michigan, only 248 of these teachers currently instruct classes that were state approved reimbursable programs. The 248 teachers who taught the related classroom instruction in one of these 248 state approved marketing education programs constituted the population and source of data for this research study.

An up-to-date official mailing list was procured from the State of Michigan Department of Education which contained the names and public school addresses of the 248 marketing education vocational teachers who taught and participated in state approved secondary vocational marketing education programs in the State of Michigan.

Using the EPISTAT computing algorithm (See Chapter IV) as a proportionate random sampling technique, a representative random sample of 151 marketing education teachers was selected from the mailing list containing the names and public school addresses of certified instructors teaching approved secondary vocational programs and classes in the State of Michigan. The sample size of 151 was based on achieving a 95% confidence interval, while only tolerating a maximum error of five percent. According to Borg and Gall, "State public school directories are more satisfactory for selection of subjects because they list all persons involved in public education in the state and are usually up to date."<sup>58</sup>

#### The Development and Pilot Testing of Survey Instrument

Prior to the development of the questionnaire (survey) instrument, the researcher listed specific objectives to be achieved by the questionnaire instrument which have been presented in Chapter I. Each item on the survey questionnaire

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<sup>58</sup>Walter Borg and M. Gall, Educational Research: An Introduction, 4th Edition, Longman, Inc., 1983, p. 417.

was developed to measure a specific aspect of one of the research study's objectives or hypotheses.

The instrument (See Appendix C) used to collect the data for this research study was a questionnaire constructed to gather information about the demographic characteristics of the participating respondents, as well as, their perceptions and opinions regarding the significance, extent, and implications for teaching basic academic skills as part of their class curricula. The questionnaire was constructed, designed, and developed after careful planning and research from a variety of educational resources which included:

1. Related doctoral dissertations which used questionnaire instruments to gather their data.
2. A review of the literature and research related to both general education and vocational education.
3. Communication with vocational teachers and administrators concerning the nature of the research problem.
4. Vocational education program evaluation forms and advisory committee questionnaires.

In an initial search of the related literature, the researcher located several questionnaire instruments developed by doctoral students and incorporated into previous research studies undertaken at Michigan State University in the field of education similar in nature for the purposes of data collection. As a result of valuable information gathered from the aforementioned sources, the researcher found the sample surveys

helpful and suitable for his needs in (1) the writing and construction of the individual questionnaire items; (2) the organization and effective layout of the survey sections and statements for facilitating clarity of instructions, brevity, ease of completion, logical sequence, attractiveness, and consistency; and (3) the incorporation of methods for increasing the response rate on the survey instrument. After a review of the literature concerning proper questionnaire survey development, careful examination of several completed doctoral dissertations that made use of the survey technique, and incorporation of suggestions and comments from vocational teachers and administrators, the researcher revised the questionnaire several times until the survey was deemed appropriate for the population and purposes of the study.

Finally, a personal interview with Dr. Barbara Rupp, Director of the Calhoun Area Vocational Center in Battle Creek, Michigan, concerning her research with basic academic skill competencies entitled Project ACTIVE proved to be very beneficial in helping define various basic academic skills on the questionnaire instrument with respect to marketing education programs. The researcher also obtained valuable information and advice from research personnel working in the Office of Research Consultation (ORC) at Michigan State University concerning the design and construction of the questionnaire and overall study.

The majority of the questionnaire statements were of the closed form in which the statement permits only certain responses. However, each of the four sections to the questionnaire also made use of an open form of statement that allowed the

subjects to make responses in her or her own words. The closed form of questionnaire statement allowed for more efficiency in the quantification and analysis of the results. The researcher also avoided constructing questionnaire items that might have seemed to be psychologically threatening in some way to the person answering the statement. Efforts were made to design and construct a questionnaire survey study (instrument and cover letter) patterned after the advice and recommendations given by Borg and Gall in their textbook entitled Educational Research: An Introduction.<sup>59</sup> Finally, in writing the questionnaire items, the researcher attempted to clarify item meanings and avoid ambiguities, use short concise statements, avoid negative statements or technical terms, and refrain from using biased or leading questions.

After preparation and refinements in the survey questionnaire, the instrument was reviewed and examined by a panel of vocational teachers and administrators for clarity, design, wording, form, appearance, and overall "face" validity. The panel's input provided further valuable information for additional changes and refinements. The questionnaire was then pilot tested and administered to a group of nine (9) secondary vocational marketing education teachers on two separate occasions two weeks apart from one another. This pilot test provided needed information and comparisons as to various inconsistencies and problems of interpretation relevant to the final questionnaire format itself. The researcher also insured that the selection of the sample of vocational marketing

<sup>59</sup>Borg and Gall, op. cit., pp. 415-435.

education teachers from the population under study participating in the pilot test of the questionnaire were teachers similar to and with characteristics comparable to those teachers who would eventually be involved in the final test survey.

The techniques for administering the questionnaire during the pretest were essentially the same as planned for the main study. Respondents participating in the pilot test were allowed to make comments about the questionnaire itself concerning how the questionnaire could be improved. The researcher also insured that the nine vocational teachers involved in the pilot test were not part of the final sample of 151 teachers used in the main study. Finally, a test-re-test reliability coefficient was computed on each of the 48 survey items on the questionnaire using a Pearson Product Moment Correlation. Any survey item producing a correlation lower than .80 was critiqued and rewritten based upon feedback from educators and experts in the field of measurement.

A forced-choice design was used for responses to the survey statements. Participants were instructed to select one response for each statement. Section I of the instrument was designed to obtain specific demographic data concerning the individual respondents completing the questionnaire and participating in the study. Specifically, the demographic data contained information about the age, sex, class size, years of teaching experience, highest educational degree, and



present teaching position. The following Likert-type scale was used for the possible responses to the statements which comprised Section II: 1-Strongly Disagree, 2-Disagree, 3-Agree, and 4-Strongly Agree. Sections III and IV asked for a "Yes" or "No" response to each statement.

In order to obtain a measure of the degree of internal consistency or reliability on the research survey for the present sample, a Cronbach Alpha was computed for both the overall instrument, as well as, each of the six (6) scales of interests relating to each of the six research questions (See Chapter IV).

#### Data Collection

During April of 1987, the questionnaire and cover letter of transmittal (See Appendices A and C), along with a return preaddressed-stamped envelope were mailed to each secondary vocational marketing education teacher selected as part of the random sample. After a three-week period of time, a second follow-up letter (See Appendix B), duplicate questionnaire, and return stamped envelope were sent to those participants who had failed to respond to the first mailing. Both the cover letter and follow-up letter described in detail the purpose and intent of the study and the reasons for completing the questionnaire and sending it back. An assurance of confidentiality and anonymity were included in the letters. At the time of the second mailing, telephone requests were made to the non-respondents at about the time that the participants

would receive their second copy of the questionnaire at their respective schools of employment designated on the Department of Education mailing list.

The researcher maintained close control, transportation, and responsibility for the care and accountability of the questionnaire instruments. A limited attempt to maintain anonymity of the respondents was undertaken by coding each questionnaire with a number in the corner so as to provide control and aid in identifying non-respondents to the initial mailing. This identification number was removed from the questionnaires when they were received by the researcher, thus assuring anonymity.

The initial mailing yielded a return rate of 59 percent. Subsequent follow-up attempts secured additional survey returns, bringing the total response rate after the second mailing to 87.4 percent. This rate of early returns eliminated any need to compare the results of early versus late-return responses to the questionnaire instrument.

#### Data Presentation and Statistical Analysis

The data obtained from the survey questionnaire instruments were then coded for computer tabulation and entered onto an IBM-AT microcomputing system and verified to insure proper accuracy of data entry. All of the analyses were computed using the Statistical Package for the Social Sciences (SPSS-PC+) and consisted primarily of frequency distributions, the calculation of individual and scale item statistics, and the computation of Univariate One-way Analyses of Variance to test

the study's various hypotheses.

In order to test the study's hypotheses, the analyses of variance was the inferential statistic technique used to determine whether mean scores on one or more factors differed significantly from each other. Following the findings of significant F-ratios in the analyses of variance, a Scheffé post hoc test was done to see where the differences lay on the three independent variables (age, years of teaching experience, and highest educational degree) that involved three or more levels. The Scheffé post hoc test was used to specify which of the three or more sample means differed significantly from one another. The remaining three independent variables (sex, class size, and present teaching position) only contained two levels of comparison and thus needed no post hoc test. A .05 level of significance was established.

### Summary of Chapter III

Chapter III included a description of the research methodology used in the study. Included in the explanation were the research questions, population and sample of the study, development and pilot testing of the survey instrument, data collection, data presentation and statistical analysis.

## CHAPTER IV

### DATA PRESENTATION AND ANALYSIS

#### Introduction

Chapter IV contains the results and presents an analysis of the data collected through the application of a survey questionnaire which was administered to examine Michigan secondary vocational marketing education teachers' perceptions and opinions concerning the significance, extent, and implications of teaching basic academic skills as part of their classroom curricula. The data were obtained from the synthesis of the responses from the survey questionnaire's four principle sections: Section I, Demographic Characteristics; Section II, Vocational Marketing Teachers' Perceptions Concerning Basic Academic Skill Training; Section III, Extent and Type of Basic Academic Skill Training Taught by Vocational Marketing Teachers; and Section IV, Vocational Marketing Teachers' Student Perceptions Concerning Basic Academic Skill Training.

The findings, in part, were derived from analyses of cumulative averages, computed for each of the study's research questions, namely secondary vocational marketing education teachers' perceptions regarding: who should be teaching basic academic skills; whether there were deficiencies in vocational

marketing education students' basic academic skill training; whether their perceptions and opinions concurred with field authorities regarding basic academic skill training; the extent and type of basic academic skill training that is being taught in marketing education classrooms; the effect certain classroom activities had on heightening student awareness and acceptance for basic academic skill training; the extent that teachers engage in classroom activities related to heightening student awareness and acceptance of basic academic skill training; and whether any of the above research questions related to such demographic characteristics as age, sex, class size, years of teaching experience, educational degree, and present teaching position.

The preceding chapter described in detail the methods and procedures used in the development of the survey instrument, as well as the collecting, processing, and analysis of the data, and a discussion of the specific research questions which the present study investigated. This chapter presents the findings according to the following sequence: (1) a descriptive analysis of the socio-demographic characteristics of the respondents and their responses to the survey's items and the cumulative averages of each scale; (2) a detailed analysis of the six scales as they related to and impacted upon the six (6) independent variables; and (3) a summary of analyses which were then computed on the individual items that comprised scales on which differences were found at Level II of this investigation.

In order to obtain a measure of the degree of internal consistency or reliability on the research survey for the present sample, a Cronbach Alpha was computed for both the overall instrument, as well as, each of the six (6) scales. As can be seen in Table 4.1, an Alpha of .78 was obtained for the overall survey questionnaire, while Alphas for the six scales ranged between .70 and .88 for the survey items scored on the Likert scale.

Table 4.1

Measures of Internal Consistency for Overall Survey  
and Each of Its Six (6) Scales

| Survey Questionnaire<br>and Scale | Alpha |
|-----------------------------------|-------|
| * <u>Overall Survey</u> . . . . . | .78   |
| Scale 1 . . . . .                 | .88   |
| Scale 2 . . . . .                 | .80   |
| Scale 3 . . . . .                 | .86   |
| Scale 4 . . . . .                 | .83   |
| Scale 5 . . . . .                 | .70   |
| Scale 6 . . . . .                 | .70   |

The respondents were asked to indicate the extent to which they agreed or disagreed to statements on the survey Questionnaire concerning their perceptions and opinions

with regard to the significance, extent, and implications of teaching basic academic skills as part of their classroom curricula. The following Likert scale was used to measure the intensity of respondents' opinions and perceptions, as well as, to compute the individual and cumulative mean scores for each survey item on the questionnaire and subscale respectfully:

| <u>(4-Choice Statements):</u> |   | <u>Researcher's<br/>Mean Cut-off Point Frames</u> |
|-------------------------------|---|---------------------------------------------------|
| Strongly Disagree . . . . .   | 1 | (1.00 - 1.49)                                     |
| Disagree . . . . .            | 2 | (1.50 - 2.49)                                     |
| Agree . . . . .               | 3 | (2.50 - 3.49)                                     |
| Strongly Agree . . . . .      | 4 | (3.50 - 4.00)                                     |
| <u>(2-Choice Statements):</u> |   |                                                   |
| Yes . . . . .                 | 1 | (1.00 - 1.49)                                     |
| No . . . . .                  | 2 | (1.50 - 2.00)                                     |

The survey instruments were then coded for computer tabulation and entered onto an IBM-AT microcomputing system and verified to insure proper accuracy of data entry. All of the analyses were computed using the Statistical Package for the Social Sciences (SPSS-PC+) and consisted primarily of frequency distributions, the calculation of individual and scale item statistics, and the computation of Univariate One-way Analyses of Variance to test the study's various hypotheses.

Weighted averages were used as cumulative averages for the scale statistics that took into account non-responses by the respondents to survey items. Weighted averages take into account the sum of the respondents' answers to a group of

questions divided by the number of items that were actually answered by the respondents.

In summary, the research findings derived from the data were synthesized in the following manner:

Level I:

1. Descriptive profile, frequencies, and percentages of the demographic characteristics of the survey respondents.
2. Frequencies, percentages, means, and standard deviations for the 43 individual survey items comprising Sections II, III, and IV of the questionnaire instrument.
3. Cumulative or weighted averages for mean and standard deviation statistics for the six scales pertaining to the six research questions.

Level II:

1. Analyses of variance on the six scales related to the research questions for each of the six (6) independent variables being measured; tests of research hypotheses.

Level III:

1. Analyses of variance on "Sex" and "Class Size" (significant independent variables) for those significant individual survey items which comprised Scale Number 4--the only scale showing a significant difference.



## Analysis of Data - Level I

### Descriptive Profile of Demographic Characteristics

Descriptive data in terms of the obtained frequencies and percentages of all responses, along with individual and cumulative mean score comparisons were embodied in the following analysis. Each analysis stemmed from and served to accomplish the research objectives directly related to the original purpose of the study.

The data collected and summarized in this study were compiled from the responses obtained when questionnaires were mailed to 146 secondary vocational marketing education teachers randomly selected from the State of Michigan's 248 approved reimbursed programs presently teaching vocational marketing or distributive education. Using an EPISTAT computing algorithm\*, a random sample of 151 vocational marketing education teachers was selected as a representative sample for the 248 vocational marketing education programs constituting the population under study. The sample size of 151 teachers was based on achieving a 95% confidence interval, while only tolerating a maximum error of five (5) percent. Five teachers who were randomly drawn as part of the sample of 151 were not sent a questionnaire instrument because they each had served as members of the nine (9) person pilot test-retest procedure carried out in pretesting the survey instrument.

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\*EPISTAT is a series of Freeware computing algorithms, written in BASICA by T. L. Gustafson, M.D., Round Rock, Texas.

One hundred thirty-two (132) respondents returned their questionnaire surveys in a timely manner directly following the first and second mailings. The first mailing of the questionnaire resulted in a return of 89 surveys (58.9%), the second mailing 43 (28.5%), for the total response rate achievement of 87.4%.

Six subject variables served as the independent variables for the present study and represented Section I of the survey questionnaire. The categories of age, sex, class size, years of teaching experience, highest educational degree, and present teaching position, as reported by the participating respondents, served to identify the specific levels of each independent variable considered in the analysis. Table 4.2 represents a profile summary of the characteristics of the participating teacher respondents from a demographic point of view in terms of frequency counts and percentage relationship for the six (6) independent variables.

In terms of age, the data in Table 4.2 indicates that the majority (105 or 79.5%) of the 132 respondents fell within the 31-50 middle-aged category. A smaller distribution characterized the two other age categories representing the younger and older teacher respondents: 14 or 10.6% in the younger 21-30 year old category and 13 or 9.8% in the older over-50 category.

The response pattern with respect to sex showed that the vast majority of the respondents were male teachers

Table 4.2  
Frequency Distributions of Respondents' Answers  
to  
Demographic Items  
(N = 132)

| Sample Item:               | Variable               | Frequency          | Percent     |
|----------------------------|------------------------|--------------------|-------------|
| Age                        |                        |                    |             |
|                            | 21-30                  | 14                 | 10.6        |
|                            | 31-50                  | 105                | 79.5        |
|                            | Over 50                | <u>13</u>          | <u>9.8</u>  |
|                            | Totals                 | 132                | 100.0       |
| Sex                        |                        |                    |             |
|                            | Male                   | 104                | 78.8        |
|                            | Female                 | <u>28</u>          | <u>21.2</u> |
|                            | Totals                 | 132                | 100.0       |
| Class Size                 |                        |                    |             |
|                            | 0-25                   | 57                 | 43.5        |
|                            | Over 25                | 74                 | 56.5        |
|                            |                        | <u>1</u> (missing) |             |
|                            | Totals                 | 132                | 100.0       |
| Years of Teaching          |                        |                    |             |
|                            | 0-10                   | 25                 | 18.9        |
|                            | 11-20                  | 76                 | 57.6        |
|                            | Over 20                | <u>31</u>          | <u>23.5</u> |
|                            | Totals                 | 132                | 100.0       |
| Highest Educational Degree |                        |                    |             |
|                            | BA or less             | 33                 | 25.0        |
|                            | MA                     | 88                 | 66.7        |
|                            | Specialist or Ph.D     | <u>11</u>          | <u>8.3</u>  |
|                            | Totals                 | 132                | 100.0       |
| Present Teaching Position  |                        |                    |             |
|                            | High School            | 114                | 86.4        |
|                            | Vocational Area or     |                    |             |
|                            | Technical/Skill Center | <u>18</u>          | <u>13.6</u> |
|                            | Totals                 | 132                | 100.0       |

(104 or 78.8%) as compared to a count of 28 or 21.2% for females.

When class size was considered, the questionnaire survey allowed the respondents to choose between three (3) categories: 0-10, 11-25, and over 25. Due to the fact that only one (1) respondent answered in the first category (0-10), the class size categories were combined into two: 0-25 and over 25. The data in Table 4.2 showed that the majority of the teacher respondents taught rather large classes with 57 or 43.5% indicating class size in the 0 to 25 range while the majority (74 or 56.5%) taught classes containing over 25 students.

The years of teaching experience variable indicated that the majority of teacher respondents (76 or 57.6%) had been teaching classes between 11 to 20 years. A fairly even number of teachers fell within the 0-10 frame (25 or 18.9%), as well as, the over 20 years of teaching group (31 or 23.5%).

The majority of respondents (88 or 66.7%) designated that they held a Masters Degree. A smaller number (33 or 25%) had earned a Bachelors Degree or less and only 11 or 8.3% of the respondents held either a Specialist or Ph.D Degree.

Finally, when present teaching position was taken into consideration, the vast majority of teachers taught at a public high school (114 or 86.4%) while only 18 or 13.6% were employed with either a vocational area or technical skill center.

### Descriptive Statistics on Individual Survey Items

The data in Table 4.3 showed actual responses to individual items on the survey questionnaire in terms of the number and percent of respondents who selected each of the options available for the forty-three (43) items addressed on the survey instrument. In addition, the sample size (N), arithmetic means, and standard deviations which were calculated for each of the survey items are presented for the reader to observe.

The following summary of the individual item statistics on the 43 questionnaire statements were examined and reviewed in the order they appeared on the survey instrument itself: Section II, questionnaire items 1 through 17; Section III, items 1 through 19; and Section IV, items 1 through 7. (See Table 4.3)

Table 4.3

Descriptive Statistics on Individual Survey Items:  
Section II. Perceptions Concerning Basic Academic Skill Training

| Survey Item                                                                                                                          | <u>Frequency Distribution</u> |      |                 |      |                |      |              |      |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------|-----------------|------|----------------|------|--------------|------|
|                                                                                                                                      | Strongly Disagree             |      |                 |      | Strongly Agree |      |              |      |
|                                                                                                                                      | No.                           | %    | No.             | %    | No.            | %    | No.          | %    |
|                                                                                                                                      | <u>Disagree</u>               |      | <u>Disagree</u> |      | <u>Agree</u>   |      | <u>Agree</u> |      |
|                                                                                                                                      | No.                           | %    | No.             | %    | No.            | %    | No.          | %    |
| 1. Secondary ME/DE instructors should be teaching basic academic skills as part of their classroom curriculum content.               | 3                             | 2.3  | 19              | 14.6 | 77             | 59.2 | 31           | 23.8 |
|                                                                                                                                      |                               |      |                 |      |                |      |              |      |
| 2. Teaching basic academic skills should be the responsibility of general education classes only.                                    | 30                            | 23.1 | 78              | 60.0 | 18             | 13.8 | 4            | 3.1  |
|                                                                                                                                      |                               |      |                 |      |                |      |              |      |
| 3. ME/DE students' proficiency regarding basic academic skills are typically sufficient to meet employer job needs and requirements. | 4                             | 3.1  | 49              | 37.7 | 73             | 56.2 | 4            | 3.1  |
|                                                                                                                                      |                               |      |                 |      |                |      |              |      |
| 4. Employers are concerned that ME/DE student coops and graduates have academic basic skill deficiencies.                            | 2                             | 1.5  | 35              | 26.9 | 73             | 56.2 | 20           | 15.4 |
|                                                                                                                                      |                               |      |                 |      |                |      |              |      |

Table 4.3 -- Continued

| Survey Item                                                                                                                                                 | <u>Frequency Distribution</u> |     |     |      |          |      |     |     |                |      |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|------|----------|------|-----|-----|----------------|------|-----|
|                                                                                                                                                             | Strongly Disagree             |     |     |      | Disagree |      |     |     | Strongly Agree |      |     |
|                                                                                                                                                             | No.                           | %   | No. | %    | No.      | %    | No. | %   | No.            | %    |     |
|                                                                                                                                                             |                               |     |     |      |          |      |     |     |                |      |     |
| 5. Your local ME/DE advisory committee is satisfied with basic academic skill levels in student coops and graduates.                                        | 2                             | 1.8 | 33  | 28.9 | 78       | 68.4 | 1   | 0.9 | 2.684          | .521 | 114 |
| 6. Parents in your local school district are satisfied with the current basic academic skill levels in student coops and graduates.                         | 2                             | 1.6 | 27  | 21.8 | 94       | 75.8 | 1   | 0.8 | 2.758          | .483 | 124 |
| 7. Vocational education teachers and school administrators are satisfied with the current basic academic skill levels in ME/DE student coops and graduates. | 2                             | 1.5 | 56  | 42.7 | 70       | 53.4 | 3   | 2.3 | 2.565          | .570 | 131 |
| 8. Students in your ME/DE classes are satisfied with their current proficiency and preparation in basic academic skill levels.                              | 0                             | 0.0 | 18  | 14.1 | 104      | 81.3 | 6   | 4.7 | 2.906          | .424 | 128 |

Table 4.3 -- Continued

| Survey Item                                                                                                                                               | <u>Frequency Distribution</u> |     |                 |      |              |                 |    |              |       |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----------------|------|--------------|-----------------|----|--------------|-------|--------------|
|                                                                                                                                                           | Strongly Disagree             |     |                 |      |              | Strongly Agree  |    |              |       |              |
|                                                                                                                                                           | <u>Disagree</u>               |     | <u>Disagree</u> |      | <u>Agree</u> | <u>Disagree</u> |    | <u>Agree</u> |       | <u>Agree</u> |
|                                                                                                                                                           | No.                           | %   | No.             | %    |              | No.             | %  | No.          | %     |              |
|                                                                                                                                                           |                               |     |                 |      |              |                 |    |              |       |              |
| 9. The teaching of specific ME/DE skills required for entry-level jobs should be the key goal of ME/DE programs.                                          | 3                             | 2.3 | 23              | 17.8 | 64           | 49.6            | 39 | 30.2         | 3.078 | .756         |
| 10. Teaching basic academic skills should be at least as important an objective of ME/DE programs as is the training for specific job/skill requirements. | 4                             | 3.1 | 41              | 31.3 | 74           | 56.5            | 12 | 9.2          | 2.718 | .671         |
| 11. Current research (ie. journals/magazines) suggest that present levels of basic academic skills of ME/DE graduates are satisfactory.                   | 7                             | 5.9 | 68              | 57.1 | 44           | 37.0            | 0  | 0.0          | 2.311 | .579         |
| 12. The various media sources suggest that present levels of basic academic skills of ME/DE graduates are satisfactory.                                   | 6                             | 5.0 | 74              | 61.7 | 40           | 33.3            | 0  | 0.0          | 2.283 | .553         |



Table 4.3 -- Continued

| Survey Item                                                                                                                                                                                      | Frequency Distribution |      |          |      |       |      |                |      |       |      |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------|----------|------|-------|------|----------------|------|-------|------|-----|
|                                                                                                                                                                                                  | Strongly Disagree      |      | Disagree |      | Agree |      | Strongly Agree |      | Mean  | Sd   | N   |
|                                                                                                                                                                                                  | No.                    | %    | No.      | %    | No.   | %    | No.            | %    |       |      |     |
|                                                                                                                                                                                                  |                        |      |          |      |       |      |                |      |       |      |     |
| 13. ME/DE courses that emphasize the mastery of basic academic skills along with specific job training skills should receive academic approval/endorsement for graduation certification credits. | 1                      | 0.8  | 10       | 7.7  | 75    | 57.7 | 44             | 33.8 | 3.246 | .623 | 130 |
| 14. A sound basic academic skill foundation is important in helping ME/DE graduates successfully undergo future career changes and job retraining requirements.                                  | 0                      | 0.0  | 0        | 0.0  | 69    | 52.7 | 62             | 47.3 | 3.473 | .501 | 131 |
| 15. Advancements in technology lessen the need for students to attain mastery and proficiency of basic academic skills.                                                                          | 62                     | 48.1 | 58       | 45.0 | 7     | 5.4  | 2              | 1.6  | 1.605 | .666 | 129 |
| 16. Basic academic skill training should be taught to all high school students.                                                                                                                  | 0                      | 0.0  | 5        | 3.8  | 69    | 52.7 | 57             | 43.5 | 3.397 | .564 | 131 |



Section III. Extent and Type of Basic Academic Skill  
Training Taught by Vocational Marketing Teachers

Table 4.3 -- Continued

| Survey Item                                                                                                                                       | Frequency Distribution |      |           |      |       |      |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------|-----------|------|-------|------|-----|
|                                                                                                                                                   | <u>Yes</u>             |      | <u>No</u> |      | Mean  | Sd   | N   |
|                                                                                                                                                   | No.                    | %    | No.       | %    |       |      |     |
| 1. Basic academic math skills listed/<br>offered in the main course text-<br>book.                                                                | 96                     | 75.0 | 32        | 25.0 | 1.250 | .435 | 128 |
| 2. Basic academic math skills that are<br>separate drills or units of study<br>not found in the main course text-<br>book.                        | 110                    | 85.9 | 18        | 14.1 | 1.141 | .349 | 128 |
| 3. Basic remedial drills associated<br>with the four functions of math com-<br>putation (addition, subtraction,<br>multiplication, and division). | 100                    | 76.3 | 31        | 23.7 | 1.237 | .427 | 131 |
| 4. Mathematical fractions and their<br>application.                                                                                               | 104                    | 79.4 | 27        | 20.6 | 1.206 | .406 | 131 |
| 5. Mathematical percentages and their<br>application.                                                                                             | 123                    | 93.9 | 8         | 6.1  | 1.061 | .240 | 131 |
| 6. Mathematical decimal applications.                                                                                                             | 121                    | 92.4 | 10        | 7.6  | 1.076 | .267 | 131 |

Table 4.3 -- Continued

| Survey Item                                                                                                             | <u>Frequency Distribution</u> |      |     |           |       |      |     |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|------|-----|-----------|-------|------|-----|
|                                                                                                                         | <u>Yes</u>                    |      |     | <u>No</u> |       |      | N   |
|                                                                                                                         | No.                           | %    | No. | %         | Mean  | Sd   |     |
| 7. Metric measurement conversions.                                                                                      | 25                            | 19.2 | 105 | 80.8      | 1.808 | .396 | 130 |
| 8. Mathematical problem-solving exercises or drills (ie. analytical work related problem/situations).                   | 105                           | 80.8 | 25  | 19.2      | 1.192 | .396 | 130 |
| 9. Reading and writing exercises/drills that are found listed/offered in the main ME/DE textbook for the course.        | 94                            | 71.8 | 37  | 28.2      | 1.282 | .452 | 131 |
| 10. Reading and writing exercises/drills/projects that are separate units of study from the main ME/DE course textbook. | 92                            | 69.7 | 40  | 30.3      | 1.303 | .461 | 132 |
| 11. Basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement, etc.). | 42                            | 32.3 | 88  | 67.7      | 1.677 | .469 | 130 |
| 12. Basic spelling and word meaning skills.                                                                             | 80                            | 62.0 | 49  | 38.0      | 1.380 | .487 | 129 |
| 13. To follow written and verbal directions (ie. draw conclusions and inferences).                                      | 116                           | 88.5 | 15  | 11.5      | 1.115 | .320 | 131 |

Table 4.3 -- Continued

| Survey Item                                                                                                                                   | <u>Frequency Distribution</u> |      |     |           |       |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------|-----|-----------|-------|----------|
|                                                                                                                                               | <u>Yes</u>                    |      |     | <u>No</u> |       |          |
|                                                                                                                                               | No.                           | %    | No. | %         | Mean  | Sd N     |
| 14. Use of the dictionary for correct word choice, spelling, and meaning.                                                                     | 85                            | 64.4 | 47  | 35.6      | 1.356 | .481 132 |
| 15. Reading comprehension skills from specific written exercises, projects or drills.                                                         | 81                            | 61.8 | 50  | 38.2      | 1.382 | .488 131 |
| 16. Writing composition and coherency (ie. complete sentences, topic sentences, logical organization).                                        | 79                            | 60.3 | 52  | 39.7      | 1.397 | .491 131 |
| 17. Oral presentation, speaking effectively and fluently, and communication skills (ie. speeches, demonstrations, small group participation). | 116                           | 87.9 | 16  | 12.1      | 1.121 | .328 132 |
| 18. Handwriting and printing legibility.                                                                                                      | 61                            | 46.9 | 69  | 53.1      | 1.531 | .501 130 |
| 19. Critical thinking and problem-solving skills using both oral and written expression (ie. social/work related situations).                 | 118                           | 90.8 | 12  | 9.2       | 1.092 | .291 130 |

Section IV. Marketing Teachers' Student Perceptions and  
Awareness Concerning Basic Academic Skill Training

Table 4.3 -- Continued

| Survey Item                                                                                                                                  | Frequency Distribution |      |     |           |       |          |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------|-----|-----------|-------|----------|
|                                                                                                                                              | <u>Yes</u>             |      |     | <u>No</u> |       |          |
|                                                                                                                                              | No.                    | %    | No. | %         | Mean  | Sd N     |
| 1. I have discussions with my students regarding the importance of acquiring and mastering a solid basic academic foundation.                | 116                    | 88.5 | 15  | 11.5      | 1.115 | .320 131 |
| 2. My students appear to be aware of the concern associated with student deficiencies in basic academic skills.                              | 85                     | 64.4 | 47  | 35.6      | 1.356 | .481 132 |
| 3. I have attempted to demonstrate the linkage between a sound basic academic foundation and successful job performance to my students.      | 124                    | 96.1 | 5   | 3.9       | 1.039 | .194 129 |
| 4. I have attempted to demonstrate the connection between a basic academic foundation and possible future job retraining and career changes. | 123                    | 93.2 | 9   | 6.8       | 1.068 | .253 132 |
| 5. I believe that my students understand the reasons behind the instructional task of receiving remedial basic academic skill training.      | 95                     | 73.1 | 35  | 26.9      | 1.269 | .445 130 |

Table 4.3 -- Continued

| Survey Item                                                                                                                                                                               | <u>Frequency Distribution</u> |      |  |           |      |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------|--|-----------|------|-----|
|                                                                                                                                                                                           | <u>Yes</u>                    |      |  | <u>No</u> |      |     |
|                                                                                                                                                                                           | No.                           | %    |  | No.       | %    | N   |
| 6. I believe that my students are receptive to the instructional task of receiving remedial basic academic skill training.                                                                | 77                            | 60.2 |  | 51        | 39.8 | 128 |
| 7. I believe that my students understand the long-range implications of mastering basic academic skills and ease of adjustment to likely future career changes or job retraining demands. | 84                            | 67.2 |  | 41        | 32.8 | 125 |

Section II. (Items 1 - 17) Perceptions Concerning Basic Academic Skill Training. Survey items 1 and 2 from the questionnaire asked for vocational marketing education teachers' perceptions and opinions regarding who (general education or vocational education teachers) should be teaching basic academic skills. As shown in Table 4.3, the majority of the respondents (83.0%) agreed or strongly agreed ( $\bar{x} = 3.046$ ) that secondary vocational marketing education teachers should be teaching basic academic skills as part of their classroom curricula. Furthermore, the vast majority of teacher respondents (83.1%) disagreed or strongly disagreed ( $\bar{x} = 1.969$ ) that the teaching of basic academic skills should be the primary responsibility of general education classes only.

Survey items 3 through 8 asked for vocational marketing education teachers' perceptions and opinions regarding whether there were deficiencies in secondary vocational marketing education students' basic academic skill training. Several interesting observations coupled with an apparent mixture or divergence of opinions were associated with the data in these particular six questionnaire items. First, a small majority (59.2%) of the responding teachers agreed or strongly agreed ( $\bar{x} = 2.592$ ) that marketing education (ME) students' proficiency regarding basic academic skills were typically sufficient to meet employer job needs and requirements while a noticeable 40.8% disagreed or strongly disagreed with that contention (item 3).

In answering survey items 4, 5, 6, 7, and 8, the ME teacher respondents were asked to give their perceptions and



opinions that were acquired as a result of direct or indirect personal professional contact with employers, advisory committees, parents, vocational educators and administrators, and students concerning the level of basic academic skill proficiency with respect to ME students, coop students, and graduates. When asked if employers were concerned that ME student coops and graduates had basic academic skill deficiencies, a significant 71.6% of the respondents agreed or strongly agreed ( $\bar{x} = 2.85$ ) with that statement.

The majority of the respondents agreed or strongly agreed on both accounts that local advisory committees (69.3%;  $\bar{x} = 2.68$ ) and parents within local school districts (76.6%;  $\bar{x} = 2.76$ ) were satisfied with the current basic academic skill levels of students, coops, and graduates.

When the respondents were asked whether other vocational education teachers and school administrators were satisfied with the current basic academic skill levels in ME students, only 55.7% ( $\bar{x} = 2.57$ ) agreed or strongly agreed while a noticeable 44.2% disagreed or strongly disagreed with that contention. Finally, when the ME teachers were asked to respond as to whether students in their classrooms were satisfied with their current proficiency and preparation in basic academic skill levels, the vast majority (86.0%;  $\bar{x} = 2.91$ ) agreed or strongly agreed.

Survey items 9 through 17 attempted to measure the extent that secondary vocational ME teachers' perceptions and opinions

concurred with various field authorities (via literature, periodicals, media sources, educators, research, etc.) regarding the significance of basic academic skill training and mastery. A rather high percentage of teacher respondents (79.8%) agreed or strongly agreed ( $\bar{x} = 3.08$ ) that the teaching of specific ME skills required for entry-level jobs should be the key goal of ME programs while a somewhat smaller percentage (65.7%;  $\bar{x} = 2.72$ ) either agreed or strongly agreed that the teaching of basic academic skills should be at least as important an objective of ME programs as is the teaching and training for specific entry-level job or skill requirements.

When asked if current research from journals and magazines or various media sources suggested that present levels of basic academic skills of ME students were satisfactory, the majority of respondents either disagreed or strongly disagreed with both survey statements pertaining to items 11 and 12 (63.0%,  $\bar{x} = 2.31$ ; and 66.7%,  $\bar{x} = 2.28$ ), respectively. It was interesting to note that none of the teacher respondents answered either of these two particular survey statements in the "strongly agree" category.

On survey item 13, the vast majority of respondents (91.5%) agreed or strongly agreed ( $\bar{x} = 3.25$ ) that ME courses that emphasized the mastery of both basic academic skills, as well as, specific entry-level job training skills should receive academic approval or endorsement for graduation

certification for coursework credits of high school graduates.

The teacher respondents unanimously agreed or strongly agreed (100.0%;  $\bar{x} = 3.47$ ) that a sound basic academic skill foundation was important in helping ME graduates to successfully undergo future career changes and job retraining requirements. On the other hand, the vast majority (93.1%) answering item 15 either disagreed or strongly disagreed ( $\bar{x} = 1.61$ ) that advancements in technology lessen the need for students to attain mastery and proficiency of basic academic skills.

Finally, in answering survey item statements 16 and 17, a very high percentage of the respondents agreed or strongly agreed that basic academic skill training should be taught to all high school students and that many high school ME graduates will indeed change jobs or undergo job retraining several times during their working years (96.2%,  $\bar{x} = 3.40$ ; 97.7%,  $\bar{x} = 3.47$ ), respectively. None of the teacher respondents answered either of these two survey statements in the "strongly disagree" category.

Section III. (Items 1 - 19) Extent and Type of Basic Academic Math and Communication Skill Training. The teachers were asked to respond with either a "yes" or "no" answer to whether they taught each of the basic academic math and communication skills as part of their classroom curricula in order to measure the extent that vocational marketing education teachers currently teach these important survival skills. Refer to the data in Table 4.3 for a listing of the nineteen

(19) basic academic math and communication skills included in Section III of the survey questionnaire.

Survey items 1 and 2 were designed to examine and inquire as to whether basic academic math skills were taught primarily from offerings in the main course textbook itself or as separate drills or units of study found outside the main course textbook. In answering items 1 and 2, 75.0% of the respondents indicated that they taught basic academic math skills listed or offered in the main course textbook ( $x = 1.25$ ) while a noticeable larger percentage of respondents (85.9%) stated that they taught basic academic math skills that were separate drills or units of study not found in the main course textbook itself ( $\bar{x} = 1.14$ ).

In answering survey items 3, 4, 5, 6, and 8, the majority of respondents indicated that they taught basic remedial drills associated with the four (4) functions of math computation--addition, subtraction, multiplication, and division-- (76.3%;  $\bar{x} = 1.24$ ), mathematical fractions and their application (79.4%;  $\bar{x} = 1.21$ ), mathematical percentages and their application (93.9%;  $\bar{x} = 1.06$ ), mathematical decimal applications (92.4%;  $\bar{x} = 1.08$ ), and mathematical problem-solving exercises or drills (80.8%;  $\bar{x} = 1.19$ ). The only survey item receiving a majority of "no" responses pertaining to teaching basic academic math skills was item number 7 dealing with the teaching of metric-measurement conversions (80.8%;  $\bar{x} = 1.81$ ).

The majority of respondents indicated that they taught

reading and writing exercises/drills that were usually found listed or offered in the main ME course textbook (71.8%;  $\bar{x} = 1.28$ ). This compared to 69.7% who taught reading and writing exercises, drills, and/or projects as separate units of study from the main course textbook ( $\bar{x} = 1.30$ ) for survey items 9 and 10.

On item 11, the data showed that a high percentage of teachers (67.7%;  $\bar{x} = 1.68$ ) did not teach basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement) as part of their classroom content. While only 62.0% of the responding teachers taught basic spelling and word meaning skills ( $\bar{x} = 1.38$ ), a much higher percentage (88.5%) indicated that they taught students how to follow written and verbal directions while drawing conclusions and inferences ( $\bar{x} = 1.12$ ) on survey items 12 and 13.

The percentages found on survey items 14, 15, and 16 were very similar in nature indicating that the majority of the respondents taught the use of the dictionary for correct word choice, spelling, and meaning (64.4%;  $\bar{x} = 1.36$ ), reading comprehension skills from specific written exercises, projects, or drills (61.8%;  $\bar{x} = 1.38$ ), and writing composition and coherency (ie. complete sentences, topic sentences, and logical organization)--60.3%;  $\bar{x} = 1.40$ .

A very high percentage of respondents indicated on survey item number 17 that they taught oral presentation, speaking effectively and fluently, and communication skills through

the use of speeches, demonstrations, and small group activities (87.9%;  $\bar{x} = 1.12$ ). However, a rather small percentage of respondents (46.9%;  $\bar{x} = 1.53$ ) revealed that they taught handwriting and printing legibility skills while the majority of teachers (53.1%) specified that they did not teach these particular skills.

Finally, the last item listed in Section III of the questionnaire instrument (item 19) indicated that a very high percentage of responding teachers (90.8%;  $\bar{x} = 1.09$ ) taught or emphasized critical thinking and problem-solving skills that used both oral and written expression on the part of their students.

Section IV. (Items 1 - 7) Student Perceptions Concerning Basic Academic Skill Training. Survey items 1, 3, and 4 asked vocational marketing education teachers to indicate the extent they engaged in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training. Survey item number 1 indicated that a very high percentage of teachers (88.5%;  $\bar{x} = 1.12$ ) had frequent discussions with their students regarding the important implications of acquiring and mastering a solid basic academic skill foundation.

Furthermore, a very high percentage of respondents also indicated that they attempted to demonstrate both the linkage between a sound basic academic skill foundation and successful job performance (96.1%;  $\bar{x} = 1.04$ ), as well as, the

connection between a basic academic foundation and probable future job retraining and career changes (93.2%;  $\bar{x} = 1.07$ ).

Survey items 2, 5, 6, and 7 asked vocational marketing education teachers for their perceptions and opinions about the effects that those particular classroom activities stated in survey items 1, 3, and 4 have had on heightening student awareness and acceptance for basic academic skill training. Survey item number 2 disclosed that only 64.4% of the responding teachers' students appear to be aware of the concerns associated with and related to student deficiencies in basic academic skills ( $\bar{x} = 1.36$ ).

Survey items 5 and 6 indicated that 73.1% of the responding teachers believed that their students understood the reasons behind the instructional task of receiving remedial basic academic skill training ( $\bar{x} = .27$ ) while only 60.2% felt that their students were somewhat receptive to that particular instructional task ( $\bar{x} = 1.40$ ).

Finally, on the last survey item (number 7) in Section IV, the majority of the respondents (67.2%;  $\bar{x} = 1.33$ ) indicated that they believed that their students understood the long-range implications of mastering basic academic skills and the likely ease of adjustment to future career changes or probable job retraining demands due to technological changes.

(Research Questions 1 - 6)

Development of Mean and Standard Deviation Statistics for the Six Scales Representing Research Questions 1 through 6.

Cummulative averages were computed for each of the scales of interest to the present investigation. The scales were developed by computing averages of those questionnaire items of which each of the scales were composed. These cummulative averages were "weighted averages" based upon the number of non-blank responses emitted by the respondents.

Scale 1 - In order to measure secondary vocational marketing education teachers' perceptions and opinions regarding who should be teaching basic academic skills, teachers were asked to respond to two (2) survey statements:

1. Secondary ME/DE instructors should be teaching basic academic skills as part of their classroom curriculum.
2. Teaching basic academic skills should be the responsibility of general education classes only.

Using a four-point scale (strongly disagree, disagree, agree, and strongly agree) and inverting the scale where appropriate, cummulative averages were computed using each respondent's number of non-blank responses as a weighting factor for Scales 1, 2, and 3, respectively.

Scale 2 - In order to measure secondary vocational marketing education teachers' perceptions and opinions about whether there were deficiencies in vocational marketing education students' basic academic skill training, teachers were asked to respond to six (6) survey statements:



1. ME/DE students' proficiency regarding basic academic skills are typically sufficient to meet employer job needs and requirements.
2. Employers are concerned that ME/DE student coops and graduates have academic basic skill deficiencies.
3. Your local ME/DE advisory committee is satisfied with basic academic skill levels in student coops and graduates.
4. Parents in your local school district are satisfied with the current basic academic skill levels in student coops and graduates.
5. Vocational education teachers and school administrators are satisfied with the current basic academic skill levels in ME/DE student coops and graduates.
6. Students in your ME/DE classes are satisfied with their current proficiency and preparation in basic academic skill levels.

Scale 3 - In order to measure the extent that secondary vocational marketing education teachers' perceptions and opinions concur with field authorities regarding the significance of basic academic skill training and mastery, teachers were asked to respond to nine (9) survey statements:

1. The teaching of specific ME/DE skills required for entry-level jobs should be the key goal of ME/DE programs.
2. Teaching basic academic skills should be at least as important an objective of ME/DE programs as is the training for specific job/skill requirements.
3. Current research (ie. journals/magazines) suggest that present levels of basic academic skills of ME/DE graduates are satisfactory.
4. The various media sources suggest that present levels of basic academic skills of ME/DE graduates are satisfactory.
5. ME/DE courses that emphasize the mastery of basic academic skills along with specific job training skills should receive academic approval/endorsement for graduation certification credits.

6. A sound basic academic skill foundation is important in helping ME/DE graduates successfully undergo future career changes and job retraining requirements.
7. Advancements in technology lessen the need for students to attain mastery and proficiency of basic academic skills.
8. Basic academic skill training should be taught to all high school students.
9. Many high school ME/DE graduates will change jobs or undergo job retraining several times during their working years.

Scale 4 - In order to measure the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula, teachers were asked to respond to nineteen (19) survey statements inquiring whether they taught:

1. Basic academic math skills listed/offered in the main course textbook.
2. Basic academic math skills that are separate drills or units of study not found in the main course textbook.
3. Basic remedial drills associated with the four functions of math computation (addition, subtraction, multiplication, and division).
4. Mathematical fractions and their application.
5. Mathematical percentages and their application.
6. Mathematical decimal applications.
7. Metric-measurement conversions.
8. Mathematical problem-solving exercises or drills (ie. analytical work related problems/situations).
9. Reading and writing exercises/drills that are found listed/offered in the main ME/DE textbook for the course.
10. Reading and writing exercises/drills/projects that are separate units of study from the main ME/DE course textbook.

11. Basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement, etc.).
12. Basic spelling and word meaning skills.
13. To follow written and verbal directions (ie. draw conclusions and inferences).
14. Use of the dictionary for correct word choice, spelling, and meaning.
15. Reading comprehension skills from specific written exercises, projects, or drills.
16. Writing composition and coherency (ie. complete sentences, topic sentences, logical organization).
17. Oral presentation, speaking effectively and fluently, and communication skills (ie. speeches, demonstrations, small group participation).
18. Handwriting and printing legibility.
19. Critical thinking and problem-solving skills using both oral and written expression (ie. social/work related situations).

Using a two-point scale (yes and no) and inverting the scale where appropriate, cumulative averages were computed using each respondent's number of non-blank responses as a weighting factor for Scales 4, 5, and 6 respectfully.

Scale 5 - In order to measure the effects certain classroom activities had on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers, the teachers were asked to respond to four (4) survey statements:

1. My students appear to be aware of the concern associated with student deficiencies in basic academic skills.
2. I believe that my students understand the reasons behind the instructional task of receiving remedial basic academic skill training.

3. I believe that my students are receptive to the instructional task of receiving remedial basic academic skill training.
4. I believe that my students understand the long-range implications of mastering basic academic skills and ease of adjustment to likely future career changes or job retraining demands.

Scale 6 - In order to measure the extent that secondary vocational marketing education teachers indicated that they engaged in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training, teachers were asked to respond to three (3) survey statements:

1. I have discussions with my students regarding the importance of acquiring and mastering a solid basic academic skill foundation.
2. I have attempted to demonstrate the linkage between a sound basic academic foundation and successful job performance to my students.
3. I have attempted to demonstrate the connection between a basic academic foundation and possible future job retraining and career changes.

The data in Table 4.4 shows the means and standard deviations of the weighted averages for each of the research study's six (measures) scales representing the research questions.

The first scale, which measured secondary vocational marketing education teachers' perceptions and opinions regarding who (general or vocational education teachers) should be teaching basic academic skills, received the highest mean ( $\bar{x} = 3.038$ ), indicating that the subjects were in fairly solid

Table 4.4  
Means and Standard Deviations of Weighted Averages  
for Each of the Study's (Measures) Scales\*

| <u>(6) Scales</u> |                                                                                                                                                                                                    | <u>Mean</u> | <u>Sd</u> | <u>N</u> |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|----------|
| 1.                | Secondary vocational marketing education teachers' perceptions and opinions regarding who should be teaching basic academic skills.                                                                | 3.038       | .631      | 131      |
| 2.                | Secondary vocational marketing education teachers' perceptions and opinions about whether there are deficiencies in vocational marketing education students' basic academic skill training.        | 2.401       | .371      | 131      |
| 3.                | The extent that secondary vocational marketing education teachers' perceptions and opinions concur with field authorities regarding the significance and mastery of basic academic skill training. | 3.016       | .311      | 132      |
| 4.                | The extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curriculum.                              | 1.295       | .195      | 132      |

(4-Point Scales)

(2-Point Scales)

Means and Standard Deviations of Weighted Averages  
for Each of the Study's (Measures) Scales\*  
Table 4.4 -- Continued

| (6) Scales       |                                                                                                                                                                                                                          | Mean  | Sd   | N   |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|-----|
| (2-Point Scales) | 5. The effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers.                     | 1.338 | .331 | 132 |
|                  | 6. The extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training. | 1.075 | .201 | 132 |

\*Scales 1, 2, and 3 are computed on a four-point Likert Scale (Strongly Disagree, Disagree, Agree, and Strongly Agree); Scales 4, 5, and 6 on a two-point scale (Yes, No).

agreement that both secondary vocational marketing education teachers, as well as, secondary general education instructors should be teaching and emphasizing the mastery of basic academic survival skills as part of their classroom curricula and training. These findings reinforce the notion that both general education and vocational education share a joint responsibility to students in teaching basic academic skills.

The second scale, which measured secondary vocational marketing education teachers' perceptions and opinions about whether there were deficiencies in vocational ME students' basic academic skill training, received a slightly below average mean ( $\bar{x} = 2.401$ ), indicating that the teacher respondents were somewhat evenly divided between their responses in answering the "agree" and "disagree" categories regarding this particular research question. However, a mean of 2.401 falls below the 2.50 cutoff point on the Likert scale and thus demonstrated that a small majority of subjects disagree with this statement and felt that basic academic skill levels in vocational ME students were not deficient but satisfactory in meeting the needs of students.

The third scale, which measured the extent that secondary vocational marketing education teachers' perceptions and opinions concurred with field authorities regarding the significance and mastery of basic academic skill training, received a relatively high mean ( $\bar{x} = 3.016$ ), indicating that the subjects' perceptions and opinions agreed, by in large, or concurred with field authorities regarding the significance and mastery

of basic academic skill training.

The fourth scale, which measured the extent that secondary vocational marketing education teachers currently taught basic academic math and communication skills as part of their classroom curricula, received an average mean based upon a two-point (yes/no) scale ( $\bar{x} = 1.295$ ). This indicated that the subjects did attempt to teach the majority of basic academic math and communication skills listed on the survey questionnaire at sufficient levels.

The fifth scale, which measured the effects certain classroom activities had on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational ME teachers, received a somewhat lower average mean ( $\bar{x} = 1.338$ ). This indicated that respondents were having some success at heightening student awareness and acceptance of basic academic skill training through selected classroom discussions and teaching techniques.

The sixth scale, which measured the extent that secondary vocational marketing education teachers indicated that they engaged in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training, received one of the lower means ( $\bar{x} = 1.075$ ). This indicated that the subjects did indeed engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training.



Analysis of Data - Level II

Analyses of Variance on the Six (Research Questions) Scales

The following null hypotheses were also tested using the statistical methods of analyses described in Chapter III and are presented in both their descriptive and statistical form:

- H<sub>01</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the three levels of teacher age being compared.

The hypothesis, stated in both its null and alternative statistical form, would be:

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>02</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>03</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>04</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>05</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>06</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding who should be teaching basic academic skills between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>07</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the three levels of teacher age being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>08</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>09</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>010</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>011</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>012</sub>: There will be no significant main effect on a measure of Michigan secondary vocational marketing education teachers' perceptions regarding whether there are deficiencies in vocational marketing education students' basic academic skill training between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>013</sub>: There will be no significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the three levels of teacher age being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>014</sub>: There will be no significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- $H_{015}$ : There will be no significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- $H_{016}$ : There will be no significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- $H_{017}$ : There will be no significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- $H_{018}$ : There will be no significant main effect on a measure of whether Michigan secondary vocational marketing education teachers' perceptions regarding the significance and mastery of basic academic skill training concur with field authorities between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- $H_{019}$ : There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the three levels of teacher age being measured.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>020</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>021</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>022</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>023</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>024</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>025</sub>: There will be no significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the three levels of teacher age being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>026</sub>: There will be no significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>027</sub>: There will be no significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>028</sub>: There will be no significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>029</sub>: There will be no significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>030</sub>: There will be no significant main effect on a measure of the effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>031</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the three levels of teacher age being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

- H<sub>032</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the two levels of teacher sex being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>033</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the two levels of class size being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

- H<sub>034</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the three levels of years of teaching experience being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

H<sub>035</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the three levels of highest educational degree being compared.

$$H_0: \bar{x}_1 = \bar{x}_2 = \bar{x}_3$$

$$H_1: \bar{x}_1 \neq \bar{x}_2 \neq \bar{x}_3$$

H<sub>036</sub>: There will be no significant main effect on a measure of the extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training between the two levels of present teaching position being compared.

$$H_0: \bar{x}_1 = \bar{x}_2$$

$$H_1: \bar{x}_1 \neq \bar{x}_2$$

The data in Table 4.4 show the means and standard deviations which were computed on the first scale of interest in the present study, namely secondary vocational marketing education teachers' perceptions and opinions regarding who (vocational or general education teachers) should be teaching basic academic skills. The data in Table 4.5, in turn, show the results of the analyses of variance which were computed on that scale for each of the six independent variables of interest within the present investigation. These provided tests of hypotheses 1 through 6, respectively. No differences, as can be seen in Table 4.5, were found to be statistically significant at the .05 level. Thus, each of the first six null hypotheses failed to be rejected.



Table 4.5

Results of One-Way Analyses of Variance  
on the Cumulative Averages Measuring Teachers' Perceptions  
Regarding "Who Should be Teaching Basic Academic Skills"  
(Scale 1)

| <u>Independent Variable</u> | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-----------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| Age                         | .1731                                  | .4021                                 | .4306              | .6511              |
| Sex                         | .5785                                  | .3971                                 | 1.4567             | .2297              |
| Class Size                  | .0150                                  | .4046                                 | .0370              | .8478              |
| Years of Teaching           | .2329                                  | .4011                                 | .5805              | .5611              |
| Highest Educational Degree  | .1130                                  | .4030                                 | .2805              | .7559              |
| Present Teaching Position   | .8755                                  | .3948                                 | 2.2175             | .1389              |

The data in Table 4.4, as discussed earlier, showed the means and standard deviations which were computed on the second scale of interest in the present study, namely secondary vocational marketing education teachers' perceptions and opinions about whether there are deficiencies in vocational marketing education students' basic academic skill training. The data in Table 4.6, in turn, shows the results of the analyses of variance which were computed on that scale for each of the six independent variables of interest within the present investigation. These provided tests of hypotheses 7 through 12, respectively. No differences, as can be seen in Table 4.6, were found to be statistically significant at the .05 level; therefore, the researcher was unable to reject the null hypotheses 7 through 12.

The data in Table 4.4, as described earlier, showed the means and standard deviations which were computed on the third scale of interest in the present study, namely the extent that secondary vocational marketing education teachers' perceptions and opinions concurred with field authorities regarding the significance and mastery of basic academic skill training. The data in Table 4.7 shows the results of the analyses of variance which were computed on that scale for each of the six independent variables of interest within the present investigation. These provided tests of hypotheses 13 through 18, respectively. Again, no differences were found to be statistically significant at the .05 level thus failing to reject each of those particular null hypotheses (13 through 18).

Table 4.6

Results of One-Way Analyses of Variance  
on the Cumulative Averages Measuring Teachers' Perceptions  
Regarding "Whether There Are Deficiencies in Vocational  
Marketing Education Students' Basic Academic Skill Training"  
(Scale 2)

| <u>Independent Variable</u> | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-----------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| Age                         | .0829                                  | .1382                                 | .5999              | .5504              |
| Sex                         | .0110                                  | .1383                                 | .0798              | .7781              |
| Class Size                  | .0066                                  | .1380                                 | .0481              | .8268              |
| Years of Teaching           | .1095                                  | .1378                                 | .7951              | .4538              |
| Highest Educational Degree  | .1512                                  | .1371                                 | 1.1030             | .3350              |
| Present Teaching Position   | .0572                                  | .1380                                 | .4147              | .5207              |

Table 4.7

Results of One-Way Analyses of Variance  
on the Cumulative Averages Measuring "The Extent that Teachers'  
Perceptions Concur with Field Authorities Regarding the Significance  
and Mastery of Basic Academic Skill Training"  
(Scale 3)

| <u>Independent Variable</u> | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-----------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| Age                         | .1092                                  | .0967                                 | 1.1295             | .3264              |
| Sex                         | .0494                                  | .0972                                 | .5081              | .4773              |
| Class Size                  | .0055                                  | .0983                                 | .0558              | .8136              |
| Years of Teaching           | .0909                                  | .0970                                 | .9370              | .3944              |
| Highest Educational Degree  | .0210                                  | .0980                                 | .2143              | .8074              |
| Present Teaching Position   | .0064                                  | .0976                                 | .0652              | .7988              |

The data in Table 4.4, as outlined earlier, showed the means and standard deviations which were computed on the fourth scale of interest in the present study; the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula. The data in Table 4.8 shows the results of the analyses of variance which were computed on that scale for each of the six independent variables of interest within the present investigation. These provided tests of hypotheses 19 through 24, respectively. Two differences, as can be seen in the data in Table 4.8, were shown to be statistically significant. First, in analyzing the effects of the independent variable "sex" on this particular scale, female respondents indicated that they currently taught more basic academic math and communication skills than did male respondents ( $\bar{x}$ 's = 1.32 and 1.21, respectively;  $F(1, 130) = 6.5865, p = 0.01$ ). Second, in analyzing the effects of "class size" on this same scale, teachers with class size of 25 or fewer pupils taught more basic academic math and communication skills than did teachers with over 25 students within their classrooms ( $\bar{x}$ 's = 1.24 and 1.34, respectively;  $F(1, 129) = 8.7254, p = 0.00$ ).

Therefore, the null hypothesis was rejected for both hypotheses 20 and 21 which both produced an F-probability less than .05 pertaining to the independent variables of sex and class size. Thus, the alternative hypothesis was accepted for both hypotheses 20 and 21 pertaining to Scale 4:

Table 4.8

Results of One-Way Analyses of Variance  
 on the Cumulative Averages Measuring "The Extent that Teachers  
 Currently Teach Basic Academic Math and Communication Skills  
 as Part of Their Classroom Curricula"  
 (Scale 4)

| <u>Independent Variable</u> | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-----------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| Age                         | .0924                                  | .0371                                 | 2.4896             | .0869              |
| Sex                         | .2397                                  | .0364                                 | 6.5865             | .0114*             |
| Class Size                  | .3093                                  | .0354                                 | 8.7254             | .0037*             |
| Years of Teaching           | .0262                                  | .0381                                 | .6879              | .5045              |
| Highest Educational Degree  | .0266                                  | .0381                                 | .6984              | .4992              |
| Present Teaching Position   | .0267                                  | .0380                                 | .7017              | .4037              |

(Hypotheses stated in their alternative form)

H<sub>20</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of teacher sex being compared.

and

H<sub>21</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of class size being compared.

However, no differences, as can be seen in the data in Table 4.8, were found to be statistically significant at the .05 level on hypotheses 19, 22, 23, and 24. As a result, the null hypothesis failed to be rejected on hypotheses 19, 22, 23, and 24, respectively.

As stated earlier in Chapter III, the analyses of variance was the inferential technique used to determine whether mean scores on one or more factors differed significantly from each other. Following the findings of significant F-ratios in analyses of variance, Scheffé post hoc tests were done to see where the differences were on the three independent variables (age, years of teaching, and highest educational degree) that contained three or more levels. The Scheffé test was used to specify which of the three or more sample means differed significantly from one another. The remaining three independent variables of interest in the present study (sex, class size, and present teaching position) contained only two levels of

comparison respectively and thus needed no post hoc test analyses.

The data in Table 4.5 again showed the means and standard deviations which were computed on both the fifth and sixth scales of interest in the present study. The fifth scale pertained to the effects certain classroom activities had on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers. The data in Table 4.9 exhibits the results of the analyses of variance which were computed on that scale for each of the six independent variables of interest within the present investigation. These provided tests of hypotheses 25 through 30, respectively. No differences, as can be seen in the data in Table 4.9, were found to be statistically significant at the .05 level. Therefore, the researcher was unable to reject null hypotheses 25 through 30.

The sixth scale related to the extent that secondary vocational marketing education teachers indicated they engaged in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training. The data in Table 4.10 shows the results of the analyses of variance which were computed on that last scale for each of the six independent variables of interest within the present investigation. These provided tests of hypotheses 31 through 36, respectively. No differences, as can be seen in Table 4.10, were found to be statistically significant at the .05 level.



Table 4.9

Results of One-Way Analyses of Variance  
on the Cumulative Averages Measuring "The Effects Certain Classroom Activities  
Have on Heightening Student Awareness and Acceptance of Basic Academic Skill Training"  
(Scale 5)

| <u>Independent Variable</u> | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-----------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| Age                         | .2385                                  | .1075                                 | 2.2187             | .1129              |
| Sex                         | .0186                                  | .1102                                 | .1692              | .6815              |
| Class Size                  | .0001                                  | .1103                                 | .0012              | .9726              |
| Years of Teaching           | .0910                                  | .1098                                 | .8288              | .4389              |
| Highest Educational Degree  | .1401                                  | .1090                                 | 1.2849             | .2802              |
| Present Teaching Position   | .0653                                  | .1098                                 | .5946              | .4421              |

Table 4.10

## Results of One-Way Analyses of Variance

on the Cumulative Averages Measuring "The Extent that Teachers  
Indicate that They Engage in Certain Classroom Activities Related to  
Heightening Student Awareness and Acceptance of Basic Academic Skill Training"  
(Scale 6)

| <u>Independent Variable</u> | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-----------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| Age                         | .0497                                  | .0403                                 | 1.2349             | .2943              |
| Sex                         | .0257                                  | .0405                                 | .6333              | .4276              |
| Class Size                  | .1175                                  | .0401                                 | 2.9313             | .0893              |
| Years of Teaching           | .0537                                  | .0402                                 | 1.3352             | .2667              |
| Highest Educational Degree  | .0695                                  | .0400                                 | 1.7387             | .1798              |
| Present Teaching Position   | .0075                                  | .0407                                 | .1838              | .6688              |

Thus, the null hypothesis failed to be rejected on hypotheses 31 through 36, respectively.

Analysis of Data - Level IIIAnalyses of Variance on Sex and Class Size for Individual Survey Items Comprising Scale Number 4

The data in Table 4.8 indicated that Scale 4, which measured the extent that secondary vocational marketing education teachers currently taught basic academic math and communication skills as part of their classroom curricula, proved to be the only scale showing significant differences which appeared on only two measures: namely "sex" and "class size."

The data in Table 4.11 shows the means and standard deviations which were computed on the 19 individual survey items that comprised the scale which measured Research Question #4 and how those items differentially affected (males and females) the independent variable of "sex." The data in Table 4.12 shows the effects of the independent variable of "sex" on those particular 19 survey items. Both tables pertain to Research Question #4 and how that particular research question related to the independent variable of "sex." Three differences, as can be seen in Table 4.12, were shown to be statistically significant on individual survey items. First, a significant difference was found on survey item number 14 which indicated that female respondents taught and emphasized the use of the dictionary for correct word choice, spelling, and meaning more so than did male respondents ( $\bar{x}$ 's = 1.40 and 1.18, respectively;  $F(1, 130) = 4.9936, p = 0.02$ ). Second, another significant difference was discovered on survey item 16 which indicated

Table 4.11

Means and Standard Deviations of Individual Survey Items  
Comprising Scale #4 Relevant to the Independent Variable  
of Sex

| Survey Item                                                                                                                           | <u>Mean</u> |               | <u>Sd</u>   |               |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|---------------|
|                                                                                                                                       | <u>Male</u> | <u>Female</u> | <u>Male</u> | <u>Female</u> |
| 1. Basic academic math skills listed/offered in the main course textbook.                                                             | 1.25        | 1.24          | .437        | .436          |
| 2. Basic academic math skills that are separate drills or units of study not found in the main course textbook.                       | 1.15        | 1.12          | .355        | .332          |
| 3. Basic remedial drills associated with the four functions of math computation (addition, subtraction, multiplication and division). | 1.26        | 1.15          | .441        | .362          |
| 4. Mathematical fractions and their application.                                                                                      | 1.23        | 1.11          | .423        | .320          |
| 5. Mathematical percentages and their application.                                                                                    | 1.08        | 1.00          | .268        | .000          |
| 6. Mathematical decimal applications.                                                                                                 | 1.10        | 1.00          | .296        | .000          |
| 7. Metric-measurement conversions.                                                                                                    | 1.83        | 1.74          | .382        | .447          |
| 8. Mathematical problem-solving exercises or drills (ie. analytical work related problems/situations).                                | 1.21        | 1.11          | .412        | .320          |
| 9. Reading and writing exercises/drills that are found listed/offered in the main ME/DE textbook for the course.                      | 1.30        | 1.22          | .460        | .424          |

Table 4.11 -- Continued

| Survey Item                                                                                                                                   | <u>Mean</u> |               | <u>Sd</u>   |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|-------------|---------------|
|                                                                                                                                               | <u>Male</u> | <u>Female</u> | <u>Male</u> | <u>Female</u> |
| 10. Reading and writing exercises/drills/projects that are <del>separate</del> units of study from the main ME/DE course textbook.            | 1.31        | 1.29          | .464        | .460          |
| 11. Basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement, etc.).                       | 1.70        | 1.61          | .462        | .497          |
| 12. Basic spelling and word meaning skills.                                                                                                   | 1.40        | 1.30          | .493        | .465          |
| 13. To follow written and verbal directions (ie. draw conclusions and inferences).                                                            | 1.13        | 1.07          | .334        | .262          |
| 14. Use of the dictionary for correct word choice, spelling, and meaning.                                                                     | 1.40        | 1.18          | .493        | .390          |
| 15. Reading comprehension skills from specific written exercises, projects, or drills.                                                        | 1.42        | 1.25          | .496        | .441          |
| 16. Writing composition and coherency (ie. complete sentences, topic sentences, logical organization).                                        | 1.45        | 1.21          | .500        | .418          |
| 17. Oral presentation, speaking effectively and fluently, and communication skills (ie. speeches, demonstrations, small group participation). | 1.15        | 1.00          | .363        | .000          |
| 18. Handwriting and printing legibility.                                                                                                      | 1.57        | 1.37          | .497        | .492          |
| 19. Critical thinking and problem-solving skills using both oral and written expression (ie. social/work related situations).                 | 1.11        | 1.04          | .310        | .193          |

Table 4.12

Results of One-Way Analyses of Variance on the Individual Survey Items  
Comprising Scale #4 Relevant to the Independent Variable of Sex

| <u>Survey Item</u>                                                                                                                                | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| <u>Section III. Extent and Type of Basic<br/>Academic Skill Training Taught by<br/>Vocational Marketing Teachers.</u>                             |                                        |                                       |                    |                    |
| 1. Basic academic math skills listed/<br>offered in the main course text-<br>book.                                                                | .0031                                  | .1905                                 | .0163              | .8986              |
| 2. Basic academic math skills that are<br>separate drills or units of study<br>not found in the main course text-<br>book.                        | .0132                                  | .1227                                 | .1077              | .7433              |
| 3. Basic remedial drills associated<br>with the four functions of math com-<br>putation (addition, subtraction,<br>multiplication, and division). | .2663                                  | .1814                                 | 1.4684             | .2278              |
| 4. Mathematical fractions and their<br>application.                                                                                               | .3069                                  | .1638                                 | 1.8739             | .1734              |
| 5. Mathematical percentages and their<br>application.                                                                                             | .1268                                  | .0572                                 | 2.2156             | .1391              |
| 6. Mathematical decimal applications.                                                                                                             | .1982                                  | .0701                                 | 2.8285             | .0950              |

Table 4.12 -- Continued

| <u>Survey Item</u>                                                                                                      | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| 7. Metric measurement conversions.                                                                                      | .1528                                  | .1566                                 | .9757              | .3251              |
| 8. Mathematical problem-solving exercises or drills (ie. analytical work related problem/situations).                   | .2247                                  | .1560                                 | 1.4402             | .2323              |
| 9. Reading and writing exercises/drills that are found listed/offered in the main ME/DE textbook for the course.        | .1233                                  | .2049                                 | .6021              | .4392              |
| 10. Reading and writing exercises/drills/projects that are separate units of study from the main ME/DE course textbook. | .0107                                  | .2144                                 | .0497              | .8239              |
| 11. basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement, etc.). | .1738                                  | .2208                                 | .7871              | .3766              |
| 12. Basic spelling and word meaning skills.                                                                             | .2384                                  | .2374                                 | 1.0041             | .3182              |
| 13. To follow written and verbal directions (ie. draw conclusions and inferences).                                      | .0661                                  | .1025                                 | .6449              | .4234              |



Table 4.12 -- Continued

| <u>Survey Item</u>                                                                                                                            | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| 14. Use of the dictionary for correct word choice, spelling, and meaning.                                                                     | 1.1195                                 | .2242                                 | 4.9936             | .0271*             |
| 15. Reading comprehension skills from specific written exercises, projects or drills.                                                         | .6175                                  | .2349                                 | 2.6290             | .1074              |
| 16. Writing composition and coherency (ie. complete sentences, topic sentences, logical organization).                                        | 1.1882                                 | .2339                                 | 5.0803             | .0259*             |
| 17. Oral presentation, speaking effectively and fluently, and communication skills (ie. speeches, demonstrations, small group participation). | .5221                                  | .1041                                 | 5.0138             | .0268*             |
| 18. Handwriting and printing legibility.                                                                                                      | .8767                                  | .2461                                 | 3.5626             | .0614              |
| 19. Critical thinking and problem-solving skills using both oral and written expression (ie. social/work related situations).                 | .1041                                  | .0843                                 | 1.2352             | .2685              |

that females taught more writing composition and coherency skills (ie. complete sentences, topic sentences, and logical organization) than did male respondents ( $\bar{x}$ 's = 1.45 and 1.21, respectively;  $F(1, 130) = 5.0803$ ,  $p = 0.02$ ). Finally, a third significant difference was found on survey item 17 which indicated that female respondents taught more oral presentation, speaking effectively and fluently, and communication skills (ie. speeches, demonstrations, small group participation) than did male respondents ( $\bar{x}$ 's = 1.15 and 1.00, respectively;  $F(1, 130) = 5.0138$ ,  $p = 0.02$ ).

The data in Table 4.13 shows the means and standard deviations which were computed on the 19 individual survey items that comprised the scale which also went into measuring Research Question #4 and how those individual items differentially affected class size on each of its two levels: 25 or fewer students and over 25 students. The data in Table 4.14, in turn, shows the results of the analyses of variance which show the effects of the independent variable of "class size" on those particular 19 individual survey items. Five differences, as can be seen in Table 4.14, were shown to be statistically significant on certain individual survey items. First, a significant difference was found on survey item 11 which indicated that respondents teaching classes with 25 or fewer pupils taught more basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement, etc.) than did respondents with over 25 students in their classroom

Table 4.13

Means and Standard Deviations of Individual Survey Items  
Comprising Scale #4 Relevant to the Independent Variable  
of Class Size

| Survey Item                                                                                                                           | <u>Mean</u>    |            | <u>Sd</u>      |            |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------|------------|----------------|------------|
|                                                                                                                                       | 25<br>or fewer | Over<br>25 | 25<br>or fewer | Over<br>25 |
| 1. Basic academic math skills listed/offered in the main course textbook.                                                             | 1.25           | 1.25       | .440           | .436       |
| 2. Basic academic math skills that are separate drills or units of study not found in the main course textbook.                       | 1.07           | 1.19       | .262           | .399       |
| 3. Basic remedial drills associated with the four functions of math computation (addition, subtraction, multiplication and division). | 1.16           | 1.30       | .368           | .462       |
| 4. Mathematical fractions and their application.                                                                                      | 1.19           | 1.22       | .398           | .417       |
| 5. Mathematical percentages and their application.                                                                                    | 1.04           | 1.08       | .186           | .277       |
| 6. Mathematical decimal applications.                                                                                                 | 1.05           | 1.10       | .225           | .297       |
| 7. Metric-measurement conversions.                                                                                                    | 1.75           | 1.86       | .434           | .348       |
| 8. Mathematical problem-solving exercises or drills (ie. analytical work related problems/situations).                                | 1.14           | 1.24       | .350           | .428       |
| 9. Reading and writing exercises/drills that are found listed/offered in the main ME/DE textbook for the course.                      | 1.27           | 1.30       | .447           | .460       |

Table 4.13 -- Continued

| Survey Item                                                                                                                                   | <u>Mean</u>                  |                          | <u>Sd</u>                    |                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------|------------------------------|--------------------------|
|                                                                                                                                               | <u>25</u><br><u>or fewer</u> | <u>Over</u><br><u>25</u> | <u>25</u><br><u>or fewer</u> | <u>Over</u><br><u>25</u> |
| 10. Reading and writing exercises/drills/projects that are <del>separate</del> units of study from the main ME/DE course textbook.            | 1.26                         | 1.34                     | .444                         | .476                     |
| 11. Basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement, etc.).                       | 1.56                         | 1.78                     | .501                         | .419                     |
| 12. Basic spelling and word meaning skills.                                                                                                   | 1.30                         | 1.45                     | .462                         | .501                     |
| 13. To follow written and verbal directions (ie. draw conclusions and inferences).                                                            | 1.05                         | 1.16                     | .225                         | .373                     |
| 14. Use of the dictionary for correct word choice, spelling, and meaning.                                                                     | 1.26                         | 1.13                     | .444                         | .499                     |
| 15. Reading comprehension skills from specific written exercises, projects, or drills.                                                        | 1.29                         | 1.46                     | .456                         | .502                     |
| 16. Writing composition and coherency (ie. complete sentences, topic sentences, logical organization).                                        | 1.34                         | 1.45                     | .478                         | .501                     |
| 17. Oral presentation, speaking effectively and fluently, and communication skills (ie. speeches, demonstrations, small group participation). | 1.11                         | 1.14                     | .310                         | .344                     |
| 18. Handwriting and printing legibility.                                                                                                      | 1.43                         | 1.62                     | .499                         | .490                     |
| 19. Critical thinking and problem-solving skills using both oral and written expression (ie. social/work related situations).                 | 1.07                         | 1.11                     | .260                         | .315                     |

Table 4.14

Results of One-Way Analyses of Variance on the Individual Survey Items  
Comprising Scale #4 Relevant to the Independent Variable of Class Size

| <u>Survey Item</u>                                                                                                                                | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| <u>Section III. Extent and Type of Basic<br/>Academic Skill Training Taught by<br/>Vocational Marketing Teachers.</u>                             |                                        |                                       |                    |                    |
| 1. Basic academic math skills listed/<br>offered in the main course text-<br>book.                                                                | .0006                                  | .1915                                 | .0034              | .9538              |
| 2. Basic academic math skills that are<br>separate drills or units of study<br>not found in the main course text-<br>book.                        | .4620                                  | .1199                                 | 3.8530             | .0519              |
| 3. Basic remedial drills associated<br>with the four functions of math com-<br>putation (addition, subtraction,<br>multiplication, and division). | .6589                                  | .1793                                 | 3.6750             | .0575              |
| 4. Mathematical fractions and their<br>application.                                                                                               | .0220                                  | .1670                                 | .1316              | .7174              |
| 5. Mathematical percentages and their<br>application.                                                                                             | .0710                                  | .0581                                 | 1.2224             | .2710              |
| 6. Mathematical decimal applications.                                                                                                             | .0599                                  | .0716                                 | .8360              | .3623              |

Table 4.14 -- Continued

| <u>Survey Item</u>                                                                                                      | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| 7. Metric measurement conversions.                                                                                      | .3624                                  | .1510                                 | 2.4004             | .1238              |
| 8. Mathematical problem-solving exercises or drills (ie. analytical work related problem/situations).                   | .2917                                  | .1564                                 | 1.8653             | .1744              |
| 9. Reading and writing exercises/drills that are found listed/offered in the main ME/DE textbook for the course.        | .0276                                  | .2066                                 | .1337              | .7152              |
| 10. Reading and writing exercises/drills/projects that are separate units of study from the main ME/DE course textbook. | .1796                                  | .2140                                 | .8391              | .3614              |
| 11. Basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement, etc.). | 1.4895                                 | .2085                                 | 7.1437             | .0085*             |
| 12. Basic spelling and word meaning skills.                                                                             | .7349                                  | .2342                                 | 3.1381             | .0789              |
| 13. To follow written and verbal directions (ie. draw conclusions and inferences).                                      | .3997                                  | .1005                                 | 3.9757             | .0483*             |

Table 4.14 -- Continued

| <u>Survey Item</u>                                                                                                                            | <u>Mean Squares<br/>Between Groups</u> | <u>Mean Squares<br/>Within Groups</u> | <u>F<br/>Ratio</u> | <u>F<br/>Prob.</u> |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------|--------------------|--------------------|
| 14. Use of the dictionary for correct word choice, spelling, and meaning.                                                                     | .9226                                  | .2265                                 | 4.0739             | .0456*             |
| 15. Reading comprehension skills from specific written exercises, projects or drills.                                                         | .9623                                  | .2329                                 | 4.1323             | .0441*             |
| 16. Writing composition and coherency (ie. complete sentences, topic sentences, logical organization).                                        | .3626                                  | .2409                                 | 1.5053             | .2221              |
| 17. Oral presentation, speaking effectively and fluently, and communication skills (ie. speeches, demonstrations, small group participation). | .0287                                  | .1087                                 | .2644              | .6080              |
| 18. Handwriting and printing legibility.                                                                                                      | 1.1185                                 | .2439                                 | 4.5859             | .0341*             |
| 19. Critical thinking and problem-solving skills using both oral and written expression (ie. social/work related situations).                 | .0461                                  | .0853                                 | .5408              | .4635              |

enrollments ( $\bar{x}$ 's = 1.56 and 1.78, respectively;  $F(1, 127) = 7.1437$ ,  $p = 0.00$ ). Second, a further significant difference was indicated on survey item 13 which indicated that respondents teaching classes with 25 or fewer students in them taught their students to follow written and verbal directions (ie. draw conclusions and make inferences) more so than did teacher respondents teaching classes containing over 25 students ( $\bar{x}$ 's = 1.05 and 1.16, respectively;  $F(1, 128) = 3.9757$ ,  $p = 0.04$ ).

A third significant difference was noted on survey item 14 which also indicated that respondents teaching classes of 25 or fewer students taught greater use of the dictionary for correct word choice, spelling, and meaning than did teacher respondents teaching classes with over 25 students in enrollment ( $\bar{x}$ 's = 1.26 and 1.43, respectively;  $F(1, 129) = 4.0739$ ,  $p = 0.04$ ). The fourth significant difference was indicated on survey item 15 which indicated that respondents teaching classes with 25 or fewer pupil enrollments taught more reading comprehension skills from specific written exercises, projects, or drills than did respondents teaching classes with over 25 students in them ( $\bar{x}$ 's = 1.29 and 1.46, respectively;  $F(1, 128) = 4.1323$ ,  $p = 0.04$ ).

The fifth and final significant difference was revealed on survey item 18 which again indicated that respondents teaching classes with 25 or fewer student enrollments taught more handwriting and printing legibility skills than did respondents



teaching classes containing over 25 students ( $\bar{x}$ 's = 1.43 and 1.62, respectively;  $F(1, 127) = 4.5859, p = 0.03$ ).

## CHAPTER V

### INTRODUCTION, SUMMARY AND CONCLUSIONS, RECOMMENDATIONS, AND OPINIONS

#### Introduction

The purpose of this research study was to analyze or examine, through the use of a mail-out questionnaire, secondary vocational marketing education teachers' perceptions and opinions regarding the significance, extent, and implications of teaching basic academic skills as part of their classroom curricula. The researcher attempted to collect, analyze, and interpret data pertaining to the current educational problem associated with a lack of preparedness and basic academic skill deficiencies in vocational students making the transition from school to the world of work.

The study was designed to both investigate and examine vocational marketing education teachers' perceptions and opinions concerning:

1. The proper role of vocational education versus general education with respect to who should be teaching and emphasizing basic academic skill training at the high school level.
2. The present level of preparedness of vocational marketing education students relevant to basic

academic math and communication skills.

3. The level of awareness, agreement, and concurrence between vocational marketing education teachers and various field authorities concerning the significance and mastery of basic academic skills.
4. The extent and type of basic academic skill instruction currently being taught in the classrooms by secondary vocational marketing education teachers as part of their classroom curricula.
5. The extent that vocational marketing education teachers engage in certain classroom activities related to heightening student awareness and acceptance of remedial basic academic skill training.
6. The effects that these classroom activities had on heightening student awareness and acceptance of remedial basic academic skill training.

A mail-out questionnaire was developed and tested prior to the official mailing of the survey instrument and cover letter to the random sample of 151 respondents representing the population under investigation in the study. The population of the research study consisted of the 248 Michigan secondary certified vocational marketing education teachers presently teaching an approved State of Michigan classroom program. The questionnaire instrument was divided into four sections: Section I, Demographic Characteristics; Section II,

Teachers' Perceptions and Opinions Concerning Basic Academic Skill Training; Section III, Extent and Type of Basic Academic Skill Training Currently Taught in the Classroom; and Section IV, Student Awareness and Acceptance of Basic Academic Skill Training.

Upon completion of the first and second mailing of the questionnaire, 132 of the surveys were returned representing an 87 percent rate of return. The data from the questionnaires were then coded for computer tabulation and entered onto an IBM-AT microcomputing system and verified to insure proper accuracy of data entry. All of the analyses were computed using the Statistical Package for the Social Sciences (SPSS-PC+) program. Various descriptive statistics, frequency distributions, calculations of individual and scale item statistics, and one-way analyses of variance were computed to test the study's various hypotheses. If significant differences were found on analyses of variance, Scheffé post hoc tests were done to show where the differences lay.

Seven research questions were listed in Chapter I and III that are compatible with and basic to the design of the study. The seven research questions include the following:

1. Who (vocational or general education teachers) did Michigan secondary vocational marketing education teachers feel should be teaching basic academic skills at the high school level?
2. Did Michigan secondary vocational marketing education teachers perceive that there were deficiencies in

secondary vocational marketing education students' basic academic skill training?

3. To what extent did Michigan secondary vocational marketing education teachers' perceptions and opinions concur with various field authorities regarding the significance and mastery of basic academic skill training?
4. To what extent did Michigan secondary vocational marketing education teachers currently teach basic academic math and communication skills?
5. What effects did Michigan secondary vocational marketing education teachers perceive certain classroom activities had on heightening student awareness and acceptance of remedial basic academic skill training?
6. To what extent did Michigan secondary vocational marketing education teachers indicate that they engaged in certain classroom activities related to heightening student awareness and acceptance of remedial basic academic skill training?
7. Were any of the above research questions related to such demographic characteristics as age, sex, class size, years of teaching experience, educational degree, or present teaching position?

Chapter II included a review of the literature relating to the research problem. The related literature demonstrated the apparent magnitude of the problem and importance of mastery

of basic academic skills in allowing vocational education programs to successfully achieve their goals.

The research methodology used in the study was described in Chapter III. Included in the discussion were the seven research questions, the population and sample of the study, the development and pilot testing of the survey instrument, data collection, and data presentation and statistical analysis.

The presentation and statistical analysis of the data that were collected were included in Chapter IV. The seven research questions were stated and answered with the presentation and interpretation of the data.

#### Summary and Conclusions

The following section represents the summary and conclusions related to each of the specific research questions posed in this descriptive study.

Research Question 1 - Who did Michigan secondary vocational marketing education teachers feel should be teaching basic academic skills at the high school level--vocational education or general education teachers?

Summary - Level I of the analysis clearly indicated that a distinct majority (83%) of respondents agreed that secondary vocational marketing education teachers should be teaching basic academic math and communication skills as part of their classroom curricula. In addition, a clear majority disagreed that the teaching of basic academic skills should be the primary responsibility of general education classroom teachers.

The first scale (Level II of the Analysis), representing a cumulative average for the first research question, produced a relatively high mean demonstrating that the subjects were in fairly strong agreement that both secondary vocational education teachers, as well as, secondary general education teachers should be teaching and emphasizing the mastery of basic academic survival skills as part of their classroom curricula and training. (See Table 4.4)

Conclusions - There seems to be a rather strong consensus among respondents that not only should basic academic skills be taught in vocational marketing education classrooms, but that the training in basic academic skills should be accomplished in a responsible manner through a joint-coordinated effort between both general and vocational education classroom teachers. The survey data indicated that the teaching of basic academic skills was being accomplished through a combination of teaching strategies and methodologies that used the main course textbook offerings, as well as, separate drills, projects, and units of study to supplement the course textbook. Teaching techniques would include lecture, discussion, demonstration, oral and written drills, role playing, memorization, audio visual aids, projects, small group participation, panels and speeches, and assimilation education materials. Thus, both general education and vocational education had a shared responsibility in providing crucial remedial training in basic academic skill acquisition so necessary for employment opportunity and success on the job.

Research Question 2 - Did Michigan secondary vocational marketing education teachers perceive that there were deficiencies in secondary vocational marketing education students' basic academic skill training?

Summary - Several interesting observations, coupled with an apparent mixture or divergence of opinions, were evident in the data for Level I of the analysis on this research question. First, a slight majority of respondents (59%) agreed that marketing education students' proficiency regarding basic academic skills were typically sufficient to meet employer job needs and requirements. However, a noticeable 41% of the teacher respondents either disagreed or strongly disagreed with that contention.

When the teachers were asked if employers were concerned that marketing education students have basic academic skill deficiencies, a significant 72% of the respondents either agreed or strongly agreed with that statement. Thus, while a small majority of marketing education teachers believe that ME student proficiencies in basic academic skills were sufficient to meet employer needs, a significantly larger percentage of these same respondents admitted, on the other hand, that employers had expressed concerns that these same ME students, coops, and graduates did indeed have basic academic skill deficiencies.

The majority of teacher respondents agreed that their local advisory committees and parents within their respective school districts were somewhat satisfied with the current basic academic skill levels of students. Local vocational education teachers and school administrators, according to the respondents, only slightly agreed (56%) that current basic academic skill



levels in ME students were satisfactory. A noticeable 44% of the respondents disagreed with that contention.

Finally, the vast majority of respondents (86%) agreed that ME students within their classrooms were satisfied with their current proficiency and preparation in basic academic skill levels. Thus, while a rather large percentage of ME students were seemingly satisfied with their current proficiency and preparation in basic academic skills, a large and highly significant percentage of vocational education teachers and school administrators who were conducting and managing the actual classroom training and instruction, were somewhat less satisfied. In addition, employers who hired and trained vocational students, graduates, and employees were obviously not satisfied with the present levels and preparation of basic academic skills in students and hired employees. Many young people may not recognize or admit to deficiencies in their basic academic skill levels or recognize the need for further training.

The second scale (Level II of the Analysis), representing the second research question, produced a slightly below average mean which demonstrated that the teacher respondents were somewhat evenly divided between their responses in answering the "agree" and "disagree" categories regarding this particular research question. However, a mean of 2.40 falls below the 2.50 cutoff point on the Likert scale and thus demonstrates that a small majority of subjects feel that the basic academic skill levels in vocational marketing education students were not deficient but somewhat satisfactory in meeting the needs of the

the students themselves and employers in business and industry.  
(See Table 4.4)

Conclusions - While Michigan secondary vocational marketing teachers seem to be somewhat divided on this research question and exhibit an apparent mixture of opinions on the subject, the data indicated that a slight majority of the teacher respondents believe that secondary vocational marketing education students do not have major deficiencies in their basic academic skill training. While the teacher respondents believed that their advisory committees, fellow vocational teachers and administrators, and students within their classrooms were somewhat satisfied with the academic skill levels exhibited, a high percentage of employers in business and industry were not satisfied with these same basic academic skill levels. Students who enroll in a vocational ME program may have adequate foundations in basic academic skills because they are aware beforehand that ME programs require or expect the use of many math and communication skills for the many varied and complex transactions involved with sales and business activities.<sup>60</sup>

Research Question 3 - To what extent did Michigan secondary vocational marketing education teachers' perceptions and opinions concur with various field authorities regarding the significance and mastery of basic academic skill training?

Summary - With respect to individual survey items (Level I), a rather high percentage of teacher respondents (80%) agreed that the teaching of specific ME skills required for entry-level jobs should be the key goal of marketing education programs while a smaller percentage (66%) agreed that the teaching

<sup>60</sup>Rupp and Sillers, op. cit., Project ACTIVE competencies.

of basic academic skills should be at least as important an objective of ME programs as was the training for specific entry-level job or skill requirements.

The majority of respondents disagreed that research and literature from journals and magazines, as well as, the media suggested that present levels of basic academic skills of ME students were satisfactory. A high percentage of the respondents (91%) agreed that ME courses that emphasized the mastery of both basic academic skills along with specific entry-level job training skills should receive academic approval or endorsement for graduation certification of credits for high school graduation requirements.

Teacher respondents almost unanimously agreed that a sound basic academic skill foundation was important in helping ME students and graduates successfully undergo future career changes and job retraining requirements. The respondents also strongly disagreed that advancements in technology lessen the need for students to attain mastery and proficiency of basic academic skills.

Finally, a clear majority of the respondents strongly agreed that not only should all high school students be taught basic academic skills, but that most ME students will change jobs or undergo job retraining several times during their working years.

The third scale (Level II of the Analysis), representing the third research question, received a relatively high mean

which indicated that the subjects' perceptions and opinions did indeed agree, by in large, or concur with the various field authorities regarding the significance and importance associated with the mastery of basic academic skills. (Table 4.4)

Conclusions - A good portion of the literature written by field authorities from business, industry, and education in the area of vocational education and job training believed that the teaching of basic academic skills should be as equally important a task as was the teaching of specific entry-level job skills ultimately required for success on the job. The respondents ranked the teaching of specific ME skills required for entry-level jobs slightly higher than the teaching of basic academic skills. However, both types of skills were considered important enough issues or factors with respect to student learning outcomes to warrant incorporation into the instructional content of vocational teachers' classroom curricula.

A large portion of the literature, research, and the media sources have suggested that basic academic skill deficiencies exist in vocational graduates and was a major problem that should be addressed by vocational instructors through increased remedial training or emphasis. The literature, research, and media reports making claims about academic deficiencies in vocational education students were usually making reference to vocational programs, in general, without singling out marketing education specifically. The response

rates to most of the survey items demonstrated that vocational marketing education teachers were indeed aware of and concerned about the magnitude of the problem. Many vocational marketing education teachers obviously feel that marketing education students may possess a better grasp or solid footing in basic academic math and communication skills than maybe given credit for by field authorities. It was interesting to note that none of the teacher respondents answered in the "strongly agree" category to the statements that research, literature, and various media sources suggested that present levels of basic academic skills of ME students were satisfactory in nature.

Therefore, Michigan secondary vocational marketing education teachers' perceptions and opinions do, indeed, concur with various field authorities regarding the significance and important ramifications associated with the mastery of basic academic skills.

Research Question 4 - To what extent did Michigan secondary vocational marketing education teachers teach basic academic math and communication skills?

Summary - Survey responses from Level I indicated that the majority of teachers taught basic academic skills as offerings, drills, or units of study found outside the main course textbook as opposed to offerings in the main course textbook issued to the students within their respective classrooms.

The majority of respondents indicated that they did indeed teach basic remedial drills associated with the four functions

of math computation, fraction applications, percentages and their application, decimal applications, and mathematical problem-solving exercises. The only survey item pertaining to mathematics receiving a majority of "no" responses was the statement dealing with the teaching of metric-measurement conversions.

The data indicated that the majority of respondents' teaching materials pertaining to basic communication skills came primarily from drills or exercises found in the main ME course textbook itself rather than from separate units of study or drills that would supplement the main course textbook offerings. A high percentage of teacher respondents (68%) indicated that they did not teach basic English rules of grammar as part of their classroom content. While only 62% of the respondents indicated that they taught basic spelling and word meaning skills, a much higher percentage (89%) indicated that they taught students how to follow both written and oral directions while drawing conclusions and making inferences.

In addition, the majority of respondents indicated that they taught the use of the dictionary, reading comprehension skills, and writing composition and coherency. A very high percentage (88%) specified that they taught oral presentation and public speaking skills through the use of speeches, demonstrations, and small group activities. Only a small percentage (47%) of the respondents indicated that they taught handwriting

and printing legibility skills thereby leaving a small majority of teachers who do not teach those particular skills at all. Finally, a high percentage of responding teachers (91%) revealed that they taught or emphasized critical thinking and problem-solving skills using both oral and written expression.

The fourth scale (Level II of the Analysis), measuring the fourth research question, received an average mean indicating that the teacher respondents did teach and emphasize the majority of basic academic math and communication skills listed on the survey instrument at sufficient levels with respect to the extent and type of instruction necessary for the world of work. (See Table 4.4)

Conclusions - The data indicated that a high percentage of vocational marketing education teachers make extra efforts as teaching professionals to supplement the main course textbook with more specific, substantive, and concrete learning materials associated with the task of improving basic academic math and communication skills in students that undoubtedly would not be found offered in the average classroom ME/DE textbook itself. However, a slightly below average mean of 1.29 demonstrates that, while ME teachers are making efforts at teaching these skills, more emphasis/training is needed and justified.

Research Question 5 - What effects did Michigan secondary vocational marketing education teachers perceive certain classroom activities have on heightening student awareness and acceptance of remedial basic academic skill training?

Summary - In terms of student awareness and acceptance of basic academic skill training, Level I of the analysis indicated that the majority of respondents (64%) believed that their students appeared to be aware of the concern associated with student deficiencies in basic academic skills preparedness. Some 73% of the respondents indicated that their students understood the reasons or logic behind the instructional tasks of receiving remedial basic academic skill training while only 60% of the teachers felt that their students were receptive to or approving of that particular kind of instruction. However, the majority of respondents specified (67%) that they believed that their students understood the long-range implications of mastering basic academic skills and likely ease of adjustment to future career changes or job retraining demands.

The fifth scale (Level II of the Analysis), measuring the fifth research question, received a somewhat higher average mean indicating that the teacher respondents were having some limited success at heightening student awareness and acceptance of basic academic skill training as a result of selected classroom activities and various teaching techniques. (Table 4.4)

Conclusions - The data demonstrated that, while vocational marketing education teachers believed that their classroom activities were having some success at heightening student awareness and acceptance of remedial basic academic skill training or instruction, additional efforts should be made to



heighten student awareness and acceptance of remedial basic academic skill training and the resulting benefits that accompany the mastery of such important survival skills.

Research Question 6 - To what extent did Michigan secondary vocational marketing education teachers indicate that they engaged in certain classroom activities related to heightening student awareness and acceptance of remedial basic academic skill training?

Summary - Survey responses from Level I of the analysis revealed that a very high percentage of the respondents (89%) indicated that they had discussions in their respective classrooms with their students regarding the importance and implications of acquiring and mastering a solid basic academic skill foundation. Likewise, a very high percentage of teachers (96%) indicated that they attempted to demonstrate both the linkage between a sound basic academic skill foundation and successful job performance or opportunities, as well as, the important implications for probable future job retraining requirements and career changes (93%).

The sixth scale (Level II of the Analysis), measuring the sixth research question, received one of the lowest means indicating that the subjects did indeed engage in classroom activities related to or directed at heightening student awareness and acceptance of basic academic skill training.

Conclusions - The data indicated that secondary vocational marketing education teachers, by producing a relatively high mean of 1.07, do an adequate job in conducting activities and teaching

strategies designed to heighten student awareness and acceptance of remedial basic academic skill training.

Research Question 7 - Were any of the above research questions related to such demographic characteristics as age, sex, class size, years of teaching experience, educational degree, and present teaching position?

Null hypotheses were tested to determine if any significant differences existed between the six scales (measures) for each of the six independent variables of age, sex, class size, years of teaching experience, educational degree, and present teaching position. Level II of the analysis involved analyses of variance on the six scales of interest related to the six research questions for each of the six (6) independent variables being measured. Consequently, thirty-six (36) null hypotheses were tested with respect to the six (6) scales of interest.

No differences were found to be statistically significant at the .05 level on Scales 1, 2, 3, 5, and 6:

Scale 1 - Secondary vocational marketing education teachers' perceptions and opinions regarding who should be teaching basic academic skills--vocational or general education teachers.

Scale 2 - Secondary vocational marketing education teachers' perceptions and opinions about whether there are deficiencies in vocational marketing education students' basic academic skill training.

Scale 3 - The extent that secondary vocational marketing education teachers' perceptions and opinions concur with field authorities regarding the significance and mastery of basic academic skill training.

Scale 5 - The effects certain classroom activities have on heightening student awareness and acceptance of basic academic skill training as perceived by secondary vocational marketing education teachers.

Scale 6 - The extent that secondary vocational marketing education teachers indicate that they engage in certain classroom activities related to heightening student awareness and acceptance of basic academic skill training.

Scale 4, which measured the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula, proved to be the only scale showing significant differences which appeared only on two measures: namely "sex" and "class size." Thus, the only two (2) differences that proved to be significant at the .05 level with respect to the group of 36 hypotheses were found on hypotheses 20 and 21, respectively:

H<sub>20</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of teacher sex being compared.

and

H<sub>21</sub>: There will be a significant main effect on a measure of the extent that secondary vocational marketing education teachers currently teach basic academic math and communication skills as part of their classroom curricula between the two levels of class size being compared.

Two differences were shown to be statistically significant. First, in analyzing the effects of the independent variable of "sex" on Scale 4, female respondents indicated that they taught more basic academic math and communication skills than did male respondents ( $x$ 's = 1.32 and 1.21, respectively;  $F(1, 130) = 6.5865, p = 0.01$ ). Second, in analyzing the effects

of "class size" on this same scale, teachers with class size of 25 or fewer students taught more basic academic math and communication skills than did teachers with over 25 students within their classrooms ( $\bar{x}$ 's = 1.24 and 1.34, respectively;  $F(1, 129) = 8.7254, p = 0.00$ ).

Summary - The null hypothesis was rejected for both hypotheses 20 and 21 which both produced an F-probability less than .05 pertaining to the independent variables of sex and class size that proved to be differences that were statistically significant. Thus, the alternative hypothesis was accepted for both hypotheses 20 and 21 pertaining to Scale 4. However, no differences were found to be statistically significant at the .05 level on the remaining thirty-four (34) hypotheses. Therefore, the null hypotheses failed to be rejected on each of the other 34 hypotheses.

Conclusions - The data clearly indicated that female secondary vocational marketing education teachers currently teach more basic academic math and communication skills as part of their classroom curricula than do their male counterparts. In addition, the data demonstrated that secondary vocational marketing education teachers instructing classes of 25 or fewer students taught more basic academic math and communication skills than do teachers having over 25 students within their classrooms. Studies completed by Professor Gene Glass demonstrated class size was related to academic achievement and that pupils in smaller classes learn more and are more productive due to more individualization and interpersonal regard.<sup>61</sup>

<sup>61</sup>"Yes, the Smaller the Better," Times Education Supplement, (September 1978), Glass's "Meta-Analysis," p. 28.

### Analysis of Data - Level III

#### Analyses of Variance on "Sex" and "Class Size"

Summary - Level III of the analysis involved analyses of variance on the significant independent variables of "sex" and "class size" for those individual survey items comprising Scale 4 which proved to have differences that were statistically significant. Three differences were shown to be statistically significant on individual survey items with respect to "sex." First, a significant difference indicated that female respondents taught and emphasized the use of the dictionary for correct word choice, spelling, and meaning more so than did male respondents. Second, another significant difference indicated that female respondents taught more writing composition and coherency skills (ie. complete sentences, topic sentences, and logical organization) than did male respondents. A third difference indicated that female respondents taught more oral presentation, speaking effectively and fluently, and communication skills (ie. speeches, demonstrations, and small group participation) than did male respondents.

On the other hand, five differences were shown to be statistically significant on certain individual survey items with respect to "class size." First, a significant difference indicated that respondents teaching classes with 25 or fewer students taught more basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb

agreement, etc.) than did respondents with over 25 pupils in their classroom enrollments. Second, respondents teaching classes with 25 or fewer students in them taught their students to follow written and verbal directions (ie. draw conclusions and make inferences) more so than did teachers who taught classes containing over 25 students in them.

A third significant difference indicated that respondents teaching classes of 25 or fewer students taught greater use of the dictionary for correct word choice, spelling, and meaning than did teacher respondents teaching classes with over 25 students enrolled in them. The fourth significant difference indicated that respondents teaching classes with 25 or fewer pupil enrollments taught more reading comprehension skills than did respondents teaching classes with over 25 students in them.

The fifth and final significant difference revealed that respondents teaching classes with 25 or fewer student enrollments taught more handwriting and printing legibility skills than did respondents teaching classes with over 25 student enrollments.

Conclusions - The data indicated that female secondary vocational marketing education teachers taught and emphasized the following specific basic academic skills more so than did their male counterparts:

1. The use of the dictionary for correct word choice, spelling, and meaning.

2. Writing composition and coherency skills (ie. complete sentences, topic sentences, and logical organization).
3. Oral presentation, speaking effectively and fluently, and communication skills (ie. speeches, demonstrations, and small group participation).

Furthermore, the data demonstrated that secondary vocational marketing education teachers instructing classes with 25 or fewer students in them taught and emphasized the following specific basic academic skills more so than did teachers instructing classes containing enrollments of over 25 students:

1. Basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement, etc.).
2. To follow written and verbal directions (ie. drawing conclusions and making inferences).
3. Greater use of the dictionary for correct word choice, spelling, and meaning.
4. More reading and comprehension skills.
5. More handwriting and printing legibility skills.

### Recommendations

The following recommendations are made which relate to the purposes of the study:

1. Teacher educators in vocational education and general education programs could use the study's findings to aid in analyzing needs for pre-service and in-service instruction.

Vocational education teachers, who do not have a major or minor in English and mathematics or any previous experience in teaching basic academic skills, could benefit from teacher in-service training to develop effective teaching methods and strategies in terms of "processes" for providing the instruction.

2. Efforts should be made to reduce class size so as to enhance the opportunities for the teaching and emphasis of basic academic skill training. Studies, using "meta-analysis," conducted by Dr. Gene Glass and Dr. Mary Smith for the Laboratory of Educational Research at the University of Colorado, discovered many student achievement gains when class size is reduced to 15 and below.<sup>62</sup> Student achievement increases as class size decreases. Reducing class size could increase learning gains on the part of students by enabling instructors to improve and intensify the instructional program, enhance the capabilities of teachers, provide individualized instruction, and create a more productive learning environment with respect to basic academic skill training on the part of both student and teacher.

3. Male vocational education teachers could begin to place more emphasis and a greater portion of their instructional time on the teaching of basic academic skills as part of their curriculum content that can be so critical to their students' future successes in the labor market.

4. This study could be replicated in other states or regions of the country using other populations.

5. Additional experimental or descriptive research could be undertaken to compare Project ACTIVE profile characteristics

<sup>62</sup>Glass and Smith, ibid., p. 28.



pertaining to basic academic math and communications skills required of various occupations with actual instructional competencies being taught within the classroom.

6. Vocational students could be helped or instructed to look more broadly and critically at the ways technology and work-related changes will affect their future working lives, careers, and communities.

### Opinions

The findings of this study will also have specific implications for a variety of individuals and groups within the educational community. The following "opinions" are made related to implications for:

#### Teachers and Curriculum Specialist

1. Cooperative education programs, on-the-job training, guidance and counseling departments, and experience-based career education personnel can complement classroom learning not simply by putting young people to work, but by placing or nurturing these students in a dual role as both workers and "academic learners."

2. Educators who are committed to excellence for all students could capitalize on the current "educational reform movement" by enlisting employers and non-profit organizations to provide opportunities for learning strategies designed to motivate students for the acquisition of basic academic skill competencies.

3. Efforts could be made to bridge the gap between vocational education and general education by building close work-

ing relationships that promote commonality of purpose and link their respective programs in terms of both philosophy and practice.

4. The State of Michigan Vocational Education Department and Vocational Technical Education Services could analyze the findings of this study as a resource for planning in-service training for teachers and fund allocation functions.

5. Secondary vocational education curriculums could change in purpose and structure to become more responsive to contemporary and future worker needs.

6. Additional money, effort, and curriculum preparation could be implemented at both the elementary and middle-school levels to insure the mastery of basic academic math and communication skills prior to entering high school.

7. Vocational exploration programs could be offered for middle-school students designed to give students knowledge of and appreciation for transferable skills that are coordinated with academic courses in order that students gain an appreciation for the academic skills and knowledge required in different vocational fields.

8. Vocational education teachers could benefit by taking advantage of the benefits associated with and afforded by smaller class size settings with respect to opportunities for individualized instruction and certain teaching procedures or practices that are done easier and more efficiently in smaller classes than in larger class size situations.

### Business and Industry

1. Business and industry could become more involved with the educational community in accepting and acknowledging the joint responsibility that exists for training and educating today's workforce. Traditionally, business and industry thought and behaved at times as though it was not their responsibility, domain, or problem. Times have changed and they are finding that they too must begin to care and take a more active role in helping the educational profession prepare workers for the world of work through better communication, cooperation, and rapport.

2. Local employers and advisory committees may need to collaborate actively with teacher educators in designing educational programs that integrate conceptual learning with hands-on training that assimilate actual working conditions in the labor market.

3. More attention could be paid to the needs of small firms for workers with specialized skills that employ nearly half of the nation's workforce and provide about 86% of the new jobs in the private sector.<sup>63</sup>

4. A foundation in basic academic skills is a very important fundamental factor in improving our nation's educational system that is so intrinsically linked to the future success of our nation's social, political, and economic structures (productivity and standard of living) in a changing global competitive marketplace.

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<sup>63</sup>Wellford W. Wilms, "Vocational Education and Job Success: The Employer's View," Phi Delta Kappan, 65 (January 1984), p. 350.

## APPENDICES

APPENDIX A

LETTER OF TRANSMITTAL

SENT TO VOCATIONAL MARKETING EDUCATION TEACHERS

INVITING PARTICIPATION IN THE STUDY

## MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION  
DEPARTMENT OF SECONDARY EDUCATION AND CURRICULUM  
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824

April 6, 1987

Dear Colleague:

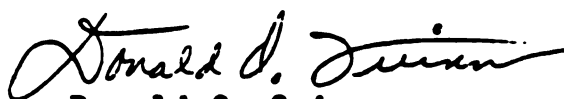
Would you be kind enough to assist me in completing the enclosed questionnaire surveying vocational marketing education teachers' perceptions and opinions concerning instruction of basic academic skills within the classroom setting. Due to your education, experience, and teaching capacity, I would very much like your opinions and comments regarding basic academic skills and their relevance in preparing students for the world of work.

This doctoral survey is being conducted as part of a statewide study through the College of Education at Michigan State University. It would be greatly appreciated if you would complete the enclosed questionnaire, prior to April 20, and return it in the enclosed stamped preaddressed envelope. Other phases of this research study cannot be carried out until I receive and complete an analysis of the questionnaire data.

The number shown on the upper right-hand corner of the survey is there merely as an aid in helping me keep a record of which teacher in the sample have answered and returned it. Immediately upon receipt of a questionnaire, the number will be removed thereby assuring complete anonymity. Your answers will remain absolutely confidential in that they will not be shared with anyone including you supervisors. While I would certainly appreciate your help and participation, you are of course under no obligation or penalty for declining to participate in this voluntary research study.

Thank you for your time and consideration.

Sincerely yours,

  
Donald O. Quinn  
Dr. Frank Bobbitt  
College of Education  
Michigan State University

**APPENDIX B**

**FOLLOW-UP LETTER SENT TO NONRESPONDENT  
VOCATIONAL MARKETING EDUCATION TEACHERS**

## MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION  
DEPARTMENT OF SECONDARY EDUCATION AND CURRICULUM  
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824

May 1, 1987

Dear Colleague:

Several weeks ago I sent to you a letter along with a survey questionnaire that is being utilized in my doctoral research study relevant to basic academic skills and their importance in properly preparing vocational marketing students for success on the job.

Will you please consider giving a few moments of your time to read and respond to the questionnaire. You have been chosen because of your education, expertise in the field of education, and present teaching capacity as part of the random sample under study for the State of Michigan.

If you have already completed and returned the questionnaire to me, please accept this oversight and may I thank you. If not, would you please be kind enough to do so today. Since the survey was sent to only a small, but representative, sample of vocational marketing education teachers, it is extremely important that your survey be included in the study findings. You will find a duplicate copy of the questionnaire along with a stamped preaddressed envelope for your convenience. Your immediate response would be deeply appreciated.

Sincerely yours,



Donald O. Quinn



APPENDIX C

SURVEY QUESTIONNAIRE

**INSTRUCTIONS:** Please answer all of the following questions and upon completion, return the survey questionnaire in the enclosed pre-addressed manila envelope.

**DEFINITION:** Basic Academic Skills = Mathematics (four functions, decimals, fractions, analytical problem solving); Writing (English, grammar, spelling); Reading (vocabulary and comprehension); and Problem Solving (analytical decision making).

# Marketing Education/ME and Distributive Education/DE - Interchangeable Terms

## SECTION I. DEMOGRAPHIC CHARACTERISTICS:

(Check the appropriate response for each item)

| Age: 21-30 | Sex: M | Class Size: 0-10 | Years of Teaching: 0-10 |
|------------|--------|------------------|-------------------------|
| 31-50      | F      | 11-25            | 11-20                   |
| Over 50    |        | Over 25          | Over 20                 |

Highest Educational Degree: Less than BA \_\_\_ ; BA \_\_\_ ; MA \_\_\_ ; Specialist \_\_\_ ; Ph.D. \_\_\_

**Present Teaching Position:** High School Vocational Area Center/Technical/Skill Center

Please circle the response you feel most accurately reflects your opinion regarding all remaining questions on this survey.

## **SECTION II. PERCEPTIONS CONCERNING BASIC ACADEMIC SKILL TRAINING:**

- |   |                                                                                                                                   |    |   |   |    |
|---|-----------------------------------------------------------------------------------------------------------------------------------|----|---|---|----|
| 1 | Secondary ME/DE instructors should be teaching basic academic skills as part of their classroom curriculum content.               | 20 | D | A | 2A |
| 2 | Teaching basic academic skills should be the responsibility of general education classes only.                                    | 20 | D | A | 2A |
| 3 | ME/DE students' proficiency regarding basic academic skills are typically sufficient to meet employer job needs and requirements. | 20 | D | A | 2A |
| 4 | Employers are concerned that ME/DE student coops and graduates have academic basic skill deficiencies.                            | 20 | D | A | 2A |
| 5 | Your local ME/DE advisory committee is satisfied with basic academic skill levels in student coops and graduates.                 | 20 | D | A | 2A |

- 6 Parents in your local school district are satisfied with the current basic academic skill levels in student groups and graduates. 2D D A 2A
  - 7 Vocational education teachers and school administrators are satisfied with the current basic academic skill levels in NE/DE student groups and graduates. 2D D A 2A
  - 8 Students in your NE/DE classes are satisfied with their current proficiency and preparation in basic academic skill levels. 2D D A 2A
  - 9 The teaching of specific NE/DE skills required for entry-level jobs should be the key goal of NE/DE programs. 2D D A 2A
  - 10 Teaching basic academic skills should be at least as important an objective of NE/DE programs as in the training for specific job/skill requirements. 2D D A 2A
  - 11 Current research (ie. journals/magazines) suggest that present levels of basic academic skills of NE/DE graduates are satisfactory. 2D D A 2A
  - 12 The various media sources suggest that present levels of basic academic skills of NE/DE graduates are satisfactory. 2D D A 2A
  - 13 NE/DE courses that emphasize the mastery of basic academic skills along with specific job training skills should receive academic approval/endorsement for graduation certification credits. 2D D A 2A
  - 14 A sound basic academic skill foundation is important in helping NE/DE graduates successfully undergo future career changes and job retraining requirements. 2D D A 2A
  - 15 Advancements in technology lessen the need for students to attain mastery and proficiency of basic academic skills. 2D D A 2A
  - 16 Basic academic skill training should be taught to all high school students. 2D D A 2A
  - 17 Many high school NE/DE graduates will change jobs or undergo job retraining several times during their working years. 2D D A 2A
- no suggestions or comments regarding vocational NE/DE teachers' roles in basic academic skill training:

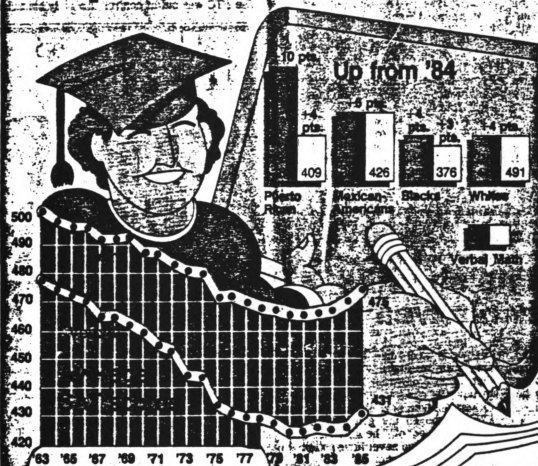
**Suggestions or comments regarding vocational MS/DE teachers' roles in basic academic skill training:**

| SECTION III. Please indicate whether you teach each of the following. (Yes/No)                                                                  | SECTION IV. Please answer each of the following statements about your (Yes) classroom students.                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Basic academic math skills listed/offered in the main course textbook.                                                                        | 1 I have discussions with my students regarding the importance of acquiring and mastering a solid basic academic foundation.                                                             |
| 2 Basic academic math skills that are separate drills or units of study not found in the main course textbook.                                  | 2 My students appear to be aware of the concern associated with student deficiencies in basic academic skills.                                                                           |
| 3 Basic remedial drills associated with the four functions of math computation (addition, subtraction, multiplication, and division).           | 3 I have attempted to demonstrate the linkage between a sound basic academic foundation and successful job performance to my students.                                                   |
| 4 Mathematical fractions and their application.                                                                                                 | 4 I have attempted to demonstrate the connection between a basic academic foundation and possible future job retraining and career changes.                                              |
| 5 Mathematical percentages and their application.                                                                                               | 5 I believe that my students understand the reasons behind the instructional task of receiving remedial basic academic skill training.                                                   |
| 6 Mathematical decimal applications.                                                                                                            | 6 I believe that my students are receptive to the instructional task of receiving remedial basic academic skill training.                                                                |
| 7 Metric-measurement conversions.                                                                                                               | 7 I believe that my students understand the long-range implications of mastering basic academic skills and ease of adjustment to likely future career changes or job retraining demands. |
| 8 Mathematical problem-solving exercises or drills (ie. analytical work related problems/situations).                                           | 8 Suggestions or comments regarding vocational MR/DE student awareness, opinion and perceptions concerning basic academic skill deficiencies.                                            |
| 9 Reading and writing exercises/drills that are found listed/offered in the main MR/DE textbook for the course.                                 |                                                                                                                                                                                          |
| 10 Reading and writing exercises/drills/projects that are separate units of study from the main MR/DE course textbook.                          |                                                                                                                                                                                          |
| 11 Basic English rules of grammar (ie. sentence structure, punctuation, capitalization, subject/verb agreement, etc.)                           |                                                                                                                                                                                          |
| 12 Basic spelling and word meaning skills.                                                                                                      |                                                                                                                                                                                          |
| 13 To follow written and verbal directions (ie. draw conclusions and inferences).                                                               |                                                                                                                                                                                          |
| 14 Use of the dictionary for correct word choice, spelling, and meaning.                                                                        |                                                                                                                                                                                          |
| 15 Reading comprehension skills from specific written exercises, projects, or drills.                                                           |                                                                                                                                                                                          |
| 16 Writing composition and coherency (ie. complete sentences, topic sentences, logical organization).                                           |                                                                                                                                                                                          |
| 17 Oral presentation, speaking effectively and fluently, and communication skills (ie. speaker, demonstrations, small group participation).     |                                                                                                                                                                                          |
| 18 Handwriting and printing legibility.                                                                                                         |                                                                                                                                                                                          |
| 19 Critical thinking and problem-solving skills using both oral and written expression (ie. social/work related situations).                    |                                                                                                                                                                                          |
| Suggestions or comments regarding vocational MR/DE teachers' instructional practices and methodologies regarding basic academic skill training. |                                                                                                                                                                                          |

APPENDIX D

CHART OF 1985 SAT SCORES

# Hispanics boost SATs



## Science students high scorers (state by state, '84)

Average scores of Scholastic Aptitude Test by 1984 students intended field of study.

|                      |      |                       |     |                       |     |
|----------------------|------|-----------------------|-----|-----------------------|-----|
| Physical sciences    | 1075 | Library sciences      | 829 | Theater arts          | 888 |
| Mathematics          | 1025 | Military sciences     | 915 | Forestry/conservation | 875 |
| English/literature   | 1025 | Architecture          | 910 | Business              | 862 |
| Earth/sciences       | 998  | Public administration | 908 | Art/design            | 838 |
| Biological sciences  | 998  | Communications        | 906 | Education             | 836 |
| Foreign languages    | 985  | Mass media            | 906 | Agriculture           | 833 |
| History              | 981  | USA average           | 906 | Home economics        | 793 |
| Philosophy/political | 970  | Computer science      | 901 | Ethnic studies        | 769 |
| Social sciences      | 947  | Psychology            | 895 | Trade/vocational      | 737 |
| Undeclared           | 934  | Geography             | 891 |                       |     |

Source: The College Board

APPENDIX E

(SAMPLE)

GENERALIZABLE COMMUNICATION SKILLS



**APPENDIX F**

**(SAMPLE)**

**PROJECT ACTIVE PROFILE**







| MARKETING / DISTRIBUTIVE EDUCATION |  | VOCATIONAL / TECHNICAL |  | OBJECTIVES / TASKS      |  | 1 |  | 2 |  | 3 |  | 4 |  | 5 |  | 6 |  | 7 |  | 8 |  | 9 |  | 10 |  | 11 |  | 12 |  | 13 |  | 14 |  | 15 |  | 16 |  | 17 |  | 18 |  | 19 |  | 20 |  | 21 |  | 22 |  | 23 |  | 24 |  | 25 |  | 26 |  | 27 |  | 28 |  | 29 |  | 30 |  | 31 |  | 32 |  | 33 |  | 34 |  | 35 |  | 36 |  | 37 |  | 38 |  | 39 |  | 40 |  | 41 |  | 42 |  | 43 |  | 44 |  | 45 |  | 46 |  | 47 |  | 48 |  | 49 |  | 50 |  | 51 |  | 52 |  | 53 |  | 54 |  | 55 |  | 56 |  | 57 |  | 58 |  | 59 |  | 60 |  | 61 |  | 62 |  | 63 |  | 64 |  | 65 |  | 66 |  | 67 |  | 68 |  | 69 |  | 70 |  | 71 |  | 72 |  | 73 |  | 74 |  | 75 |  | 76 |  | 77 |  | 78 |  | 79 |  | 80 |  | 81 |  | 82 |  | 83 |  | 84 |  | 85 |  | 86 |  | 87 |  | 88 |  | 89 |  | 90 |  | 91 |  | 92 |  | 93 |  | 94 |  | 95 |  | 96 |  | 97 |  | 98 |  | 99 |  | 100 |  | 101 |  | 102 |  | 103 |  | 104 |  | 105 |  | 106 |  | 107 |  | 108 |  | 109 |  | 110 |  | 111 |  | 112 |  | 113 |  | 114 |  | 115 |  | 116 |  | 117 |  | 118 |  | 119 |  | 120 |  | 121 |  | 122 |  | 123 |  | 124 |  | 125 |  | 126 |  | 127 |  | 128 |  | 129 |  | 130 |  | 131 |  | 132 |  | 133 |  | 134 |  | 135 |  | 136 |  | 137 |  | 138 |  | 139 |  | 140 |  | 141 |  | 142 |  | 143 |  | 144 |  | 145 |  | 146 |  | 147 |  | 148 |  | 149 |  | 150 |  | 151 |  | 152 |  | 153 |  | 154 |  | 155 |  | 156 |  | 157 |  | 158 |  | 159 |  | 160 |  | 161 |  | 162 |  | 163 |  | 164 |  | 165 |  | 166 |  | 167 |  | 168 |  | 169 |  | 170 |  | 171 |  | 172 |  | 173 |  | 174 |  | 175 |  | 176 |  | 177 |  | 178 |  | 179 |  | 180 |  | 181 |  | 182 |  | 183 |  | 184 |  | 185 |  | 186 |  | 187 |  | 188 |  | 189 |  | 190 |  | 191 |  | 192 |  | 193 |  | 194 |  | 195 |  | 196 |  | 197 |  | 198 |  | 199 |  | 200 |  | 201 |  | 202 |  | 203 |  | 204 |  | 205 |  | 206 |  | 207 |  | 208 |  | 209 |  | 210 |  | 211 |  | 212 |  | 213 |  | 214 |  | 215 |  | 216 |  | 217 |  | 218 |  | 219 |  | 220 |  | 221 |  | 222 |  | 223 |  | 224 |  | 225 |  | 226 |  | 227 |  | 228 |  | 229 |  | 230 |  | 231 |  | 232 |  | 233 |  | 234 |  | 235 |  | 236 |  | 237 |  | 238 |  | 239 |  | 240 |  | 241 |  | 242 |  | 243 |  | 244 |  | 245 |  | 246 |  | 247 |  | 248 |  | 249 |  | 250 |  | 251 |  | 252 |  | 253 |  | 254 |  | 255 |  | 256 |  | 257 |  | 258 |  | 259 |  | 260 |  | 261 |  | 262 |  | 263 |  | 264 |  | 265 |  | 266 |  | 267 |  | 268 |  | 269 |  | 270 |  | 271 |  | 272 |  | 273 |  | 274 |  | 275 |  | 276 |  | 277 |  | 278 |  | 279 |  | 280 |  | 281 |  | 282 |  | 283 |  | 284 |  | 285 |  | 286 |  | 287 |  | 288 |  | 289 |  | 290 |  | 291 |  | 292 |  | 293 |  | 294 |  | 295 |  | 296 |  | 297 |  | 298 |  | 299 |  | 300 |  | 301 |  | 302 |  | 303 |  | 304 |  | 305 |  | 306 |  | 307 |  | 308 |  | 309 |  | 310 |  | 311 |  | 312 |  | 313 |  | 314 |  | 315 |  | 316 |  | 317 |  | 318 |  | 319 |  | 320 |  | 321 |  | 322 |  | 323 |  | 324 |  | 325 |  | 326 |  | 327 |  | 328 |  | 329 |  | 330 |  | 331 |  | 332 |  | 333 |  | 334 |  | 335 |  | 336 |  | 337 |  | 338 |  | 339 |  | 340 |  | 341 |  | 342 |  | 343 |  | 344 |  | 345 |  | 346 |  | 347 |  | 348 |  | 349 |  | 350 |  | 351 |  | 352 |  | 353 |  | 354 |  | 355 |  | 356 |  | 357 |  | 358 |  | 359 |  | 360 |  | 361 |  | 362 |  | 363 |  | 364 |  | 365 |  | 366 |  | 367 |  | 368 |  | 369 |  | 370 |  | 371 |  | 372 |  | 373 |  | 374 |  | 375 |  | 376 |  | 377 |  | 378 |  | 379 |  | 380 |  | 381 |  | 382 |  | 383 |  | 384 |  | 385 |  | 386 |  | 387 |  | 388 |  | 389 |  | 390 |  | 391 |  | 392 |  | 393 |  | 394 |  | 395 |  | 396 |  | 397 |  | 398 |  | 399 |  | 400 |  | 401 |  | 402 |  | 403 |  | 404 |  | 405 |  | 406 |  | 407 |  | 408 |  | 409 |  | 410 |  | 411 |  | 412 |  | 413 |  | 414 |  | 415 |  | 416 |  | 417 |  | 418 |  | 419 |  | 420 |  | 421 |  | 422 |  | 423 |  | 424 |  | 425 |  | 426 |  | 427 |  | 428 |  | 429 |  | 430 |  | 431 |  | 432 |  | 433 |  | 434 |  | 435 |  | 436 |  | 437 |  | 438 |  | 439 |  | 440 |  | 441 |  | 442 |  | 443 |  | 444 |  | 445 |  | 446 |  | 447 |  | 448 |  | 449 |  | 450 |  | 451 |  | 452 |  | 453 |  | 454 |  | 455 |  | 456 |  | 457 |  | 458 |  | 459 |  | 460 |  | 461 |  | 462 |  | 463 |  | 464 |  | 465 |  | 466 |  | 467 |  | 468 |  | 469 |  | 470 |  | 471 |  | 472 |  | 473 |  | 474 |  | 475 |  |
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| A. RECOMMENDATIONS:                |  |                        |  | JOB TITLE: SALES PERSON |  |   |  |   |  |   |  |   |  |   |  |   |  |   |  |   |  |   |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |    |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  | </  |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |     |  |

APPENDIX G

EDITED COMMENTS OF SURVEY RESPONDENTS  
TO QUESTIONNAIRE ITEMS

Edited Comments to Open-ended Response Sections on Survey:

"Students do not seem to be concerned about the future."

"We need smaller class sizes; we currently have an on-going battle between vocational education and academic education."

"We get the students that are given us and do the best we can--there is hardly time to start from scratch."

"Students must be sold on the idea; employers come in as speakers and tell the true picture."

"It is part of the territory; you must teach it if you have a vocational class. We don't have a main textbook--we always use source books. Students that I get (as a rule) are not the motivated kind. They learn to get by."

"I am not going to screen-out students who have deficiencies as we may not have enrollment for the program. The students have already decided that they are poor in math; hence attitudes curtail motivation to review and learn business marketing math."

"I feel ME/DE teachers should review and reteach if needed. All curriculum areas should work together to insure that all students are grounded in the basic skills."

"It is important that we give students a blend of both basic and advanced academic skills. We should support what is being taught in students' regular academic classes. I stress to my students that there is a positive correlation between grades, what they learn in school, and the amount of income they will acquire in their lifetime."

"English is time consuming for my course content; won't get my material covered. Students not receptive to it; have very wide range of students in the same classes."

"We have resource centers that provide needed help to reinforce basic academic skills."

"DECA activities and projects are an excellent way to bring this type of training in a ME/DE classroom. Students to often cannot see a need until the need arises. This is one reason I make heavy use of DECA activities. It puts them in competitive situations in which they need these basic academic skills."

"I feel basics are important and should be mastered by all students. I don't have time to teach all skills."

Continued--

"At times some academic skills must be taught in the vocational class. This is mostly review work, however."

"Basic skills in career areas can only be raised and maintained by proper skills levels in math, writing, reading and problem-solving."

"Students who don't have good basic skills speed through their assignments just to get the lesson over with. Spelling is a much needed requirement. It is very difficult to teach basic skills to the slower students when others are much more advanced. Our clientele are stretched over a wide spectrum of abilities. It's difficult to teach marketing and economic concepts which are abstract when students are struggling with basic reading skills."

"They should have these skills/knowledges before they get to our level. Unfortunately, most do not."

"Students have a difficult time with fractions and their applications. Students lack basic English grammar rules."

"I feel that students need to be proficient in their basic academic skills in order to achieve the best possible job training. If a student can't read, write, or do math, they will do poorly in technical training."

"Our students have basic academic skills before entering the marketing program."

"Teach some basic skills when needed. Work world will require skills. They know this. Will the students do anything about it is another matter."

"Students find it difficult to think six months down the road--let alone several years."

"Incorporate math, language, and science into vocational education programs."

"Many of our students are in the lower third of their class. Therefore, basics are an important part of our curriculum."

"Sometimes it is necessary to help with basic skills. I have a difficult time dealing with basic skills with juniors and seniors."

"Basic skills are best taught in general ed. classes. ME/DE subject matter is so vast that responsibility for basic skills only further aggravates curriculum and instructional problems."

Continued--

"Students have problems planning their long-term goals. Long range plans are out of view."

"Must teach basic skills encountered in the marketplace."

"The work place requires less--not more basic skills. Students depend on machines to do their math."

"Students are required to do a research merchandise manual and five minute presentations."

"I feel strongly that DE teachers should teach problem-solving, as well as, math skills. Reading should be taught by people who have expertise in that area. I feel that DE teachers should only teach material covered within their DE degree. Most students understand why I feel they need more basic English/reading skills but lack the drive to take the steps necessary to pursue remedial academic coursework."

"Most of my students still believe that they don't have to master learning in my course because they will be able to get a well-paying job without knowing a great deal."

"I don't feel that area is our responsibility--nor should it be. We have important areas to cover. Kids receive enough repetition that leads to boredom. Make English teachers accountable for what is learned. If I wanted to teach English, I would have. Don't teach printing and legibility--they have a computer and keyboard and printer to do that."

"Seems to be a Catch-22 situation--We shouldn't have to teach basic academics but the skill levels are so weak that we almost have to."

"I think our role should be to review basic skills and not to teach them! I am appalled when juniors and seniors can't multiply and divide. Students still believe that once they graduate, they will never have to use the math, reading, and writing skills they've learned."

"If we teach basics, we lose the better students who become bored. Basic skills should be taught/learned before entering vocational education. We do have an obligation to fill-in the holes and provide what each needs, but not to become English and math teachers. Most of the time should be spent in the specialty area, not basics. Students need practical applications to show the need for these skills."

"Should build on it but not be responsible for teaching it. Many do not believe that basics matter."

"Many kids know they should work harder but are too lazy." Many are indifferent and unconcerned; many show a lack of interest and concern for being properly prepared for the world of work."

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