A STUDY OF ATTITUDES HELD BY SUPERINTENDENTS AND PRINCIPALS TOWARD CAREER EDUCATION IN TEXAS

APPROVED:

Graduate Committee:

William A. Mullen Jr.
Major Professor

A. Frank Nelson
Minor Professor

Committee Member

Committee Member

Dean of the College of Education

Robert B. Toulouse
Dean of the Graduate School

Wade

Harrison, Denist D., A Study of Attitudes Held by Superintendents and Principals Toward Career Education in Texas. Doctor of Education (College Teaching), May, 1972, 114 pp., 24 tables, 2 illustrations, bibliography, 64 titles.

The problem with which this investigation is concerned is to identify attitudes held by superintendents and principals in Texas public schools toward career education. Particular attention is given to the nature of career education and the development of career education from the management structure point of view. The emphasis of this study is determining what would be desirable in the planning and establishing of new directions and structures for career education in Texas public schools.

The purposes of this study are the following:

1. Ascertain the attitudes held by the superintendents and principals about expanding vocational education.

2. Ascertain if superintendents and principals view career education as an important factor in helping create a unified school system.

3. Ascertain if the philosophy of vocational education should be a more structured or a broader concept of career education.

4. Ascertain the views held by the management structure in Texas toward the progression that career education should take from elementary through secondary grades.

A Likert-type attitude scale was developed into an instrument meeting the criterion to measure attitudes of superintendents and principals toward career education. The initial instrument was presented to a panel of jurors to establish the validity of the instrument. The reliability of the instrument was established by the split-half technique. Research hypotheses were tested with the t-test for two independent samples and the simple analysis of variance to determine if there were significant differences in the attitudes of superintendents and principals toward statements on the instrument. The hypotheses were either retained or rejected at the .05 level of significance.

Analysis of data compiled from the responses of superintendents and principals revealed that they held favorable attitudes toward career education. Superintendents and principals did indicate that more emphasis should be placed on training students for employment, that career education could play a significant part in Texas public schools, and that students have not been provided with exploratory experiences in vocational education early enough in their development. There was no significant difference found in the attitudes of superintendents and principals toward what should be involved in career education and the progression of career education in the public schools.

The major conclusions were that the superintendents and principals would support a career education curriculum if it

were introduced, that a career education curriculum could aid students in gaining skills and information about occupations that would enable them to seek employment or enter college after graduation from secondary schools, that career education would help create a unified school system, and that vocational education in Texas needs to be modified to enable more students to gain insight into the world of work.

The following recommendations were made:

1. A career education curriculum should be developed to help all students in Texas public schools gain insight into the world of work and include all levels of work from unskilled to professional.

2. The progression of a career education curriculum should involve three steps: orientation to career education in elementary school, exploration of specific clusters of occupations and selection of areas of specialization in junior high, and continuation of exploration of occupations and specialization in selected occupational areas in high school.

3. After the development of a career education curriculum, the present vocational education system should be replaced by the career education curriculum.

A STUDY OF ATTITUDES HELD BY SUPERINTENDENTS AND PRINCIPALS TOWARD CAREER EDUCATION IN TEXAS

DISSERTATION

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF EDUCATION

By

Denist Harrison, B.S., M.S.

Denton, Texas

May, 1972

TABLE OF CONTENTS

Page

LIST OF TABLES v

LIST OF ILLUSTRATIONS vii

Chapter

I. INTRODUCTION 1

Statement of the Problem
Purpose of the Study
Hypotheses
Limitations of the Study
Basic Assumptions
Definition of Terms
Background and Significance of the Study
Instrument
Procedures for Collecting Data
Procedures for the Analysis of Data
Organization of Remainder of Study

II. RELATED LITERATURE 19

Introduction
Career Education and the Public Schools
Related Research
Career Education in Arizona, Georgia, and Oregon
Involvement of the Federal Government
Essentials to the Present Approach to Attitudes

III. QUESTIONNAIRE CONSTRUCTION AND DATA COLLECTION 41

Introduction
Identification of Populations and Selection of Samples
Development of the Instrument
Validation of the Instrument
Administration of the Instrument for the Collection of Data

Page

IV. TREATMENT AND PRESENTATION OF DATA 56

Introduction
Treatment of the Data
Presentation of Descriptive Data
Compiled from the Questionnaire
Testing of Hypotheses

V. SUMMARY, FINDINGS, CONCLUSIONS, AND
RECOMMENDATIONS 90

Summary
Findings
Conclusions
Recommendations

APPENDIX 98

BIBLIOGRAPHY 109

LIST OF TABLES

Table		Page
I.	Percentages of Returns from the Data Producing Samples	55
II.	Percentage of Management Structure in Each Age Category According to School Size Classification	60
III.	Percentage of School Districts in Each Size Classification Offering Vocational Courses	63
IV.	Percentage of Students Enrolled in Vocational Education Programs in Each Size Classification as Reported by the Respondents	64
V.	Percentage of Students in Each School Classification Who Complete Vocational Education Courses and Work in that Vocation	65
VI.	Response to Statements on the Questionnaire Related to the Expansion of Vocational Education	68
VII.	Responses to Questionnaire Statements Related to the Philosophy of Vocational Education	70
VIII.	Reactions of Management Structure to Statements About the Progression of Career Education	71
IX.	Management Structure Attitudes Toward Statements on What Should be Involved In Career Education	73
X.	Attitudes of the Management Structure Toward Statements About the Present Vocational Education Programs in Texas Public Schools	74

Table Page

XI. Significance of Attitudes Toward the Purposes of Career Education 76

XII. Significance of Attitudes Toward What Should be Involved in Career Education . . . 77

XIII. Significance of Attitudes Toward the Expansion of Vocational Education 79

XIV. Significance of Attitudes Toward Career Education's Creating a Unified School . . . 80

XV. Significance of Attitudes Toward the Progression of Career Education 82

XVI. Significance of the Relationship Between School Size and the Development of a Career Education Curriculum 83

XVII. Relationship Between the Length of Service and Attitudes Toward Statement 5 84

XVIII. Relationship Between the Length of Service and Attitudes Toward Statement 18 85

XIX. Relationship Between the Length of Service and Attitudes Toward Statement 23 86

XX. Relationship Between Length of Service and Attitudes Toward Statement 29 86

XXI. Relationship Between School Location and Attitudes Toward Statement 5 87

XXII. Relationship Between School Location and Attitudes Toward Statement 18 88

XXIII. Relationship Between School Location and Attitudes Toward Statement 23 89

XXIV. Relationship Between School Location and Attitudes Toward Statement 29 89

LIST OF ILLUSTRATIONS

Figure Page

1. Comparison of School District Classification and Student Population 61

2. Percentage of Teacher-Pupil Ratio for Each School District Size Classification 67

CHAPTER I

INTRODUCTION

Education in general today, as in the traditional education of the past, offers little and sometimes no opportunity for students to become acquainted with the world of work. Through the Vocational Education Act of 1963[1] and the Vocational Education Amendments of 1968[2] the federal government has been aiding education in an attempt to help students successfully engage in the world of work. Vocational education has become a great concern to many educators. "The essence of the question is: what is right and what is wrong with vocational education in America today, and what can be done to build on our strengths and eliminate our weaknesses."[3] Research has shown that the present vocational education programs are in serious need of reform. Just exactly what kind of reforms are necessary is the question being asked across the country. In many areas of the country the state education agencies are undertaking studies

---

[1]Douglas Kliever, Vocational Education Act of 1963 (Washington, D.C., 1965).

[2]National Advisory Council on Vocational Education, Vocational Education Amendments of 1968 (Washington, D.C., 1970).

[3]Sidney P. Marland, "Career Education Now," School Shop, XXX (May, 1971), 27.

to determine how the educational system should be changed to meet the needs and demands of students and society.

The vocational education curriculum has so far only reached a minority of the students involved in public education. In part the reason may be the stigma attached to being involved in the vocational program. Many parents, students, teachers, and administrators display this attitude. Many parents have the idea that vocational education is a worthwhile program as long as their child is not participating. Another reason may be that in the past two decades public schools and parents have placed much emphasis on college education. It has been established that vocational education is not meeting the needs of students and that public education needs to make reforms in its present structure to prepare students for meeting various life situations after they leave high school.

Not only has vocational education become a center of significant questioning, but the traditional system of academic preparation has also been an area of concern. The day of academic preparation being the sole product of the school system is past. Yet many schools seem to be operating on the basis that most students need to learn little about the world of work.[4]

---

[4]Sidney P. Marland, Career Education (Washington, D.C., 1971), p. 2.

In general the present system of education has established purposes for preparing youth for their adult years. It has been suggested that the youth of the nation should have a better opportunity to learn about what the United States' economic system and the world of work can mean and to help youth establish some meaningful directions. Sidney P. Marland, United States Commissioner of Education, indicated his concern for the nation's young people and their opportunities to prepare realistically for today's and tomorrow's worlds.

> Shall we persevere in the traditional practices that are obviously not properly equipping fully half or more of the young people or shall we immediately undertake the reformation of our entire secondary education in order to position it properly for maximum contribution in our individual and national life.[5]

Realistically, most of the students in the public schools are not equipped with any type of skills that are needed to successfully enter the labor force after high school. There have been in education two philosophic directions--the general or college preparatory and the vocational training programs. Both programs may need to combine their efforts to bring about a more realistic solution to remedy the present situation. Many students are being denied opportunities because most students do not enter college and of those who complete high school approximately 80 percent do

---

[5]Ibid., p. 10.

not obtain a college degree. The majority of high school graduates seek employment without any job skills.

Career education has been suggested in various educational surroundings by various people as a concept to help bring public education more parallel to the real life situation that will confront the student when he leaves the security of the public schools. This type of educational theory would not only help prepare students for employment upon completion of public education, but also it should help develop favorable attitudes toward all types of work. The attitudes about the psychological, social, and economic significance of work and the basic understanding of man's purpose in work would be affected.

Statement of the Problem

The problem was to identify the attitudes held by the management structure in the public schools of Texas in regard to career education. Particular attention was given to the nature of career education and the progressive development of career education from the public school management point of view.

Purpose of the Study

The emphasis of this study was on determining what would be desirable in the planning and establishing of new directions and structures for career education in the public

schools of Texas. The purpose of the study was to obtain information about how principals and superintendents of Texas viewed the career education concept. In order to do so, the following had to be accomplished:

1. Ascertain the attitudes held by the superintendents and principals about the expansion of vocational education.

2. Ascertain if superintendents and principals view career education as an important factor in helping to create a unified school system.

3. Acertain if the philosophy of vocational education should be a more structured view of education or a broader concept of career education from the management structure point of view in the public schools of Texas.

4. Ascertain the views held by the management structure in the state of Texas toward the progression that career education should take from the elementary through the secondary grades.

5. Ascertain the views of the management structure in the state of Texas toward what should be involved in career education.

6. Ascertain the attitudes of superintendents and principals to facilitate the Texas Education Agency's planning of the career education curriculum.

Hypotheses

To carry out the purposes of this study the following hypotheses were tested:

I. There is a significant difference between the attitudes of superintendents and principals about the purposes of career education.

II. There is a significant difference between the attitudes of superintendents and principals toward what should be involved in career education.

III. There is a significant difference between the attitudes of superintendents and principals on the proposal that expanded vocational education programs will better meet the needs of Texas youth.

IV. There is no significant difference between the attitudes of superintendents and principals on the question of career education creating a unified school.

In order to determine the extent of the attitudes of superintendents and principals toward career education in Texas, the following secondary hypotheses were stated:

A. There is a difference between the attitudes of superintendents and principals toward the progression of career education in the public schools.

B. There is a relationship between the size of the school system and the attitudes of the management structure toward the need to develop a career education curriculum.

C. There is a relationship between the length of service and the attitudes held by the management structure on what should be involved in career education.

D. There is a difference in the attitudes of the rural school management structure and the metropolitan school management structure on what should be involved in career education.

Limitations of the Study

This study was limited to random samples of superintendents and principals in the Texas public schools. One hundred superintendents and 100 principals were selected to participate in this study.

Basic Assumptions

It was assumed that the participants were familiar with the problems and would respond truthfully to the instrument used in this study. The data needed to help in the establishment of career education could best be obtained from superintendents and principals of Texas public schools through the medium of a questionnaire. It was further assumed that the sample was not significantly different from the population of superintendents and principals.

Definition of Terms

For the purpose of this study the following terms were formulated:

Career education is a process which encompasses all grades, multi-disciplines, and multiple approaches. The term is used in a broad sense to include unskilled, semi-skilled, technical, and professional work--the entire complex of the world of work. Career education includes a coordinated program integrated into the entire school curriculum, K-12, to assist the students in understanding work, its dignity, and man's purpose for working. The process would help to go beyond a state of awareness in the student to an opportunity for exploration, investigation, planning, and work experience. Upon the completion of the career education program, the student should be ready to engage in useful employment or in further preparation for employment.[6]

Vocational education embraces all the experiences an individual needs to prepare for some useful occupation. The purpose of vocational education is to provide training, to develop skills, abilities, understandings, attitudes, working habits, and appreciations, and to impart knowledge and information needed by workers to enter and make progress in employment on a useful and productive basis.[7]

---

[6]Texas Education Agency, "A Design for the Development of Occupational-Career Orientation," unpublished paper, Austin, Texas, p. 2.

[7]U.S. Office of Education, "Statement of Policies for the Administration of Vocational Education," Bulletin No. 1 (Washington, D.C., 1948), p. 1.

A career is a sequence of occupations and positions in which a person engages throughout his life. It is a series of positions occupied as a means of earning a living.[8]

An occupation is a group of similar tasks organized in similar ways in various establishments, an activity that has market value, and a type of work activity in which people are paid.[9]

Manpower has been used in much of the literature since the passage of the Manpower Act of 1962. This term has meant the relative measure of power in terms of men available for work and the matching of these men to the development of national progress in business and industry encompassing a large variety of employment opportunities.[10]

The world of work includes all fields of work in our national labor market. Broad fields such as unskilled, semi-skilled, technical, semi-professional, and professional are included. The Dictionary of Occupational Titles lists 22,000 occupations that are included in the world of work.[11]

---

[8]Seymour Wolfbein, Education and Training for Full Employment (New York, 1967), pp. 5-6.

[9]Donald Super and Martin Bohn, Occupational Psychology (Belmont, California, 1970), p. 113.

[10]Ibid., p. 113.

[11]Department of Labor, Dictionary of Occupational Titles (Washington, D.C., 1965).

Unskilled refers to the worker who is lacking in training or experience for a specific type of work.[12]

Semi-skilled refers to one who has been partially trained in an area of work.[13]

Skilled refers to one having training or experience in an area of work and to a worker's performance that requires some special training or experience.[14]

Technical pertains to a person who is connected with the mechanical, industrial, and applied science areas and who has specific skills in the various arts or sciences.[15]

Professional refers to a person engaged in a vocation that requires knowledge of some department of learning or science and especially one of the three vocations of theology, law, and medicine.[16]

Career theories are hypotheses about the way in which vocational plans or choices are made. The various theories explain occupational choice in terms of various internal and external forces.[17]

Management structure refers to the administrative personnel in the Texas public schools. In this study these

---

[12]C. L. Barnhart, editor, The American College Dictionary (New York, 1960), p. 1331.

[13]Ibid., p. 1101.

[14]Ibid., p. 1132.

[15]Ibid., p. 1243.

[16]Ibid., p. 967.

[17]Robert Hoppock, Occupational Information (New York, 1967), p. 84.

personnel will be randomly selected superintendents and principals employed by various school systems in Texas.

An attitude is "a relatively enduring system of evaluative, affective reactions based upon the reflecting of the evaluative concept or beliefs which have been learned about the characteristics of a social object or class of social objects."[18]

Background and Significance of the Study

The history of man reveals his struggle to meet the demands of work. From the time of the industrial revolution to the present computerized world, the demands on our country's labor force have changed from the need for man's power alone to the need for both his knowledge and his power. "The concept of 'vocation' is nothing new. People have always had to make certain career choices."[19] In the United States the tradition involving the son following his father's occupation is an outdated format in our technological society. In the past many young people could observe first-hand most of the occupational choices around them. The son usually learned alongside his father in his everyday occupation.

---

[18]Marvin Shaw and Jack Wright, Scales for the Measurement of Attitudes (New York, 1967), p. 31.

[19]Grant Venn, Man, Education and Work (Washington, D.C., 1964), p. 38.

Today, most of our youth have no real opportunity to gain insight into the world of work and an even smaller chance of any direct experience with it. "All youth, as a part of growing up, are entitled to experience the psychological meaning of work, and to test themselves in different work roles."[20] Youth are reaching adulthood without the benefit of training in the world of work and are being denied the experiences which would enable them to engage in the economic processes at the end of their high school education. The students are entangled in a web of education which is directed toward preparing most students to enroll in college, which is an artificial situation. Of the high school students who graduate, 20 percent involve themselves in completing a college education.[21] This leaves 80 percent to the mercy of the outside world, for which only a few of this number have had some skill training to enable them to take a job upon finishing high school. Even with those who are in vocational education, research has shown that much improvement is needed to help bring about a more unified program. "The National Education Association found that fifty percent of our students in vocational education drop

---

[20]Gene Bottoms and George O'Kelley, "Vocational Education as a Developmental Process," American Vocational Journal, CXLIV (March, 1971), 21.

[21]Venn, Man, Education and Work, p. 1.

out before graduating."[22] A study called Project Talent suggested that this may be true because these students are low achievers. All too often these students are barely able to read.[23] These students have very little reason to stay in school and the vocational program does not keep them there.

Throughout the nation many schools and states have begun to take a long, serious look at the present educational system. The educators are beginning to ask questions about how education can be more relevant to a life situation. "Educators . . . have too often answered the question of what we are educating our children for, have too often answered we simply are not sure."[24] To help answer this question, a much broader look is being taken in regard to education as it relates to the world of work.

Listed in the Dictionary of Occupational Titles[25] are some 22,000 job titles. Out of these 22,000 titles are 15 occupational clusters. Business and office occupations, marketing and distribution occupations, communications and media occupations, construction occupations, manufacturing occupations, transportation occupations, agri-business and

---

[22]James Rosenburg, editor, New Concepts in Technical-Vocational Education (New York, 1965), p. 12.

[23]Ibid.

[24]Marland, Career Education, p. 12.

[25]Department of Labor.

natural resources occupations, marine science occupations, public services occupations, health occupations, hospitality and recreation occupations, personal services occupations, fine arts and humanities occupations, and homemaking-related occupations are the clusters that represent the broad spectrum of our nation's occupations. Our present vocational education has some of these clusters represented, yet does not represent the entire world of work in its programs.

A career education curriculum has advantages by offering a comprehensive program that explores the fifteen occupational clusters. Students' performance in academic subjects should become more meaningful and improve as the entire curriculum is made more relevant to the world of the student. At present, career theorists emphasize that the choice of a career is a gradual process that involves knowledge of the world of work. An orientation process involving the different clusters of occupations might help the students gain a knowledge of the different occupations. One of the greatest advantages of the career education concept is that a much greater percentage of students would be able to gain knowledge of the world of work. This would enable students to make more meaningful decisions about an occupation.

In Texas the State Education Agency is involved in a two-year program to study the many aspects of career education. It is the aim of this program to determine what directions career education should take, to formulate

guidelines for curriculum, and to implement the program in the public schools of Texas.

Instrument

To gather information on the attitudes of selected superintendents and principals, a Likert-type attitude scale was used. The Likert-type scale is frequently used in the measurement of attitudes. Shaw and Wright[26] showed that the Likert-type scales are, for the most part, valid and reliable, but they should be treated as other scales. The interpretation of Likert scores is based upon the distribution of sample scores. The scale should always have the reliability and validity established on a sample.

Procedures for constructing the Likert-type attitude scale were those stated by Oppenheim.[27] An item pool was established that contained questions covering various points of view on career education and the present vocational education program. These questions were based upon information about career education and vocational education in books, periodicals, and publications from the Department of Health, Education and Welfare and the Texas Education Agency.

A panel of jurors were asked to evaluate the questionnaire. The jurors were persons competent in the area of

---

[26]Shaw and Wright, pp. 21-30.

[27]Abraham Oppenheim, Questionnaire Design and Attitude Measurement (New York, 1966), pp. 133-142.

educational administration. The pool of questions assembled was submitted to the panel. Items considered to have face validity by four of the six jurors were retained in the final form of the questionnaire that was administered to the samples.

To establish reliability, the completed questionnaire was administered to a sample of thirty administrators. The split-half method of determining reliability was used. This method involves a correlation of the total odd scores with the total even scores on the instrument. This correlation statistic was then corrected by the use of the Spearman-Brown correction formula.[28]

Procedures for Collecting Data

After the validity and reliability were established, the questionnaire was mailed to the samples of superintendents and principals in the state of Texas. Names and addresses of the management structure personnel were obtained from the Public School Directory.[29] Because of the large numbers of superintendents and principals, random samples of 100 were taken. A table of random numbers was used to facilitate selection of the sample.

---

[28]John Roscoe, Fundamental Research Statistics (Dallas, 1969), p. 105.

[29]Texas Education Agency, Public School Directory (Austin, 1970).

There was a two-week period between the mailing of the questionnaire and a follow-up letter to all those individuals who did not return the questionnaire. After another two-week period a telephone call was made in an attempt to obtain questionnaires from all participants. In addition to questions on career education, other data were gathered. These data included information about the school district, the school population, and the person who responded to the questionnaire.

Procedures for the Analysis of Data

All computations on the data compiled from the questionnaires were made at the computer center at North Texas State University, Denton, Texas. Rejection or retention of the hypotheses was based on the results of applying the t-test for independent samples to the data. Each hypothesis was tested and the retention or rejection of the individual hypotheses was the .05 level of significance. Hypotheses were restated in the null form for the purpose of testing their significance. A detailed description of the data is in Chapter IV.

Organization of the Remainder of the Study

The remainder of this paper is organized as follows: Chapter II contains a review of related literature and research; Chapter III describes procedures used in the

collection of the data; Chapter IV is a presentation of the data; and Chapter V contains summary, findings, conclusions, implications, and recommendations.

CHAPTER II

RELATED LITERATURE

Introduction

An individual passing through life must try to make some basic decisions about himself. These decisions are separate, yet still connected by their enduring relationships. Three of the most important aspects of an individual's life are the setting of values, the selecting of a life partner, and the choosing of a career.

The career chosen by the individual will affect every aspect of his and his family's lives. Where the family will live, where the children will go to school, and, more subtly, values, ideals, standards, and character will be affected by the choice of a career.[1] In the process of choosing a career, career theories express that the process involves self-understanding and a knowledge of the world of work. "The choosing is, in fact, a process rather than an event, the term should denote a whole series of choices generally resulting in the elimination of some alternatives and the retention of others."[2]

---

[1]Robert Hoppock, Occupational Information (New York, 1967), p. 3.

[2]Donald Super, "A Theory of Vocational Development," American Psychologist, VIII (May, 1953), 185.

In certain areas of this nation where career education has been started, some projections have been stated in terms of students' achievements; these general predictions involve the development of the skills needed by students to follow the steps necessary for living and earning that living. Students should acquire favorable attitudes about work, the reasons for working, and the valuable part that workers play in society. Students should become more aware of the many areas of occupations and careers and involve themselves in becoming acquainted with the requirements for these occupations and careers.

Career Education and the Public Schools

In previous years and even today, schools, parents, and community have been, and may still be, victims of the college degree syndrome. In the past and present, vocational education has been looked upon as being the part of public education that is for students who are inferior to those in the traditional general education or college preparatory education. This attitude about vocational education may have been an inordinate factor in helping polarize impressions about vocational education and general academic education in this country. "Last year some seventy percent of all eleventh and twelfth grade students were enrolled in general academic

education courses."[3] The remaining 30 percent of the students are enrolled in vocational education, yet research has indicated that only 20 percent will complete four years of college. Even with these statistics, society still looks upon the college degree as essential to job success, job security, and status. Today, more than at any other time since the advent of modern technology, many skilled individuals with professional degrees have been unemployed, while many non-degree persons remain employed.

Too often vocational education has been looked upon as being a place for the second-best student or "losers." This leaves the "winners" in the general academic education. The stigma of being second best will not be an easy obstacle for vocational education to overcome. Like it or not, the present educational structure from elementary school to college is geared to producing "winners" and "losers."[4]

The United States Commissioner of Education, Sidney Marland, and other prominent educators have begun to promote the career education theory in the public schools. To be given an even start, career education must first begin to change the attitudes that presently accompany vocational education. Another significant part of the success formula for career education is the involvement of the teachers and

---

[3]William Loomis, "Career Education," American Education, VII (March, 1971), 3.

[4]Ibid., p. 5.

administrators. Most authorities agree that of all the variables in the public schools, the teacher is by far the most important one. Performance is the key in the relationship between student and teacher. For reforms in vocational education to become effective, teachers must support the development of career education with healthy attitudes and a willingness to gain skills and knowledge required to provide youth with the best possible preparation for future occupations.

Developing career education may have the potential to involve the 80 percent of the public school population that will never obtain a college degree and give them the opportunity to gain knowledge about the world of work. Public education in several states has been affected at all levels from elementary through high school by the development of career education. In some present educational systems, students entering vocational education are making decisions without the benefit of previous orientation to the world of work. Students are finding themselves ill-equipped to make decisions regarding the curriculum. Some students find information regarding the different aspects of the world of work in industrial arts, home economics, and business courses, yet there are many other occupations that are not covered in these three subjects.

C. P. Snow, a humanist and physical scientist, has stated a problem that public education has faced in the eyes

of many--the relevance of today's education to meet the needs of students.[5] Those students who are preparing for further post-high school education need not participate in the more extensive occupational preparation. Most of these students' time would be spent in academic pursuits that would help them in their acquisition of a higher education. Involvement with career education for the majority of the public school students would become more relevant by helping these students make more realistic decisions about occupational choice.

Related Research

In a study by Martin[6] the main purpose was to develop a technique for determining which occupational areas should be considered when planning education programs for high school age youth. A second purpose was to apply the technique and identify the occupational areas that should be taught in a sample area. After administering the instrument, an analysis of the data revealed that a number of occupational areas were in need of trained personnel. Based upon the manpower needs of the sample community, it was determined that a wide curriculum range would be needed to satisfy these demands.

---

[5]William Stanton, "The Middle School Years and Career Development," The Clearing House, XLIV (May, 1970), 531.

[6]Waldo Martin, "The Identification of Occupational Areas for Emphasis in Vocational Education Program Planning," unpublished doctoral dissertation, University of Illinois, Urbana, Illinois, 1970.

In the past, the planning of programs in vocational education was conducted at the local level. The review of literature indicated that many variables were relevant to educational planning. Some of these variables were manpower demands, student needs, teacher availability, existing educational offerings, financial base, and local activities such as the policies, businesses, industries, and unions in the community.

Several categories were related to highly needed areas based on manpower demands and student needs. These areas included office practices and business related occupations.

There are many variables in the development of local public education. Schools are affected by the superintendents' philosophies and this is one of the more important of these variables. Bugher,[7] in a study to evaluate the superintendents' concepts of vocational programs, attempted to arrive at conclusions related to several questions on their programs. The sample for this study was drawn from the population of superintendents of three selected groups from Indiana public schools. The sample was composed of seventy-five superintendents. Of the sixty-six superintendents participating in the study, most accepted the general goals of vocational education. An instrument was constructed

---

[7]Wilmer Bugher, "An Evaluation of the Superintendent's Concept of and Impact on Selected Aspects of Vocational Education," unpublished doctoral dissertation, Purdue University, Indianapolis, Indiana, 1960.

and administered to each superintendent. The instrument contained twenty-three purposes of industrial education and twenty-five purposes of vocational education. Although most superintendents accepted the goals of vocational education, they were generally agreed that the current nature of vocational education was in a critical position and its primary role was in need of revision. There was a basic lack of agreement between urban and rural superintendents in regard to the accepted importance of the vocational education programs. Superintendents and teachers disagreed on the acceptance of the purposes of vocational programs. Superintendents were not in agreement with the present clientele of vocational education, the present importance of vocational education, and the primary role of the public school in a democratic society.

In his study of high school principals, McNeil[8] was interested in determining the principals' perceptions concerning programs in vocational education in the secondary school. Specifically, McNeil identified what type of programs were being offered in thirty-two high schools and the principals' perceptions of these programs. According to the findings, the principals thought that the programs did not have an adequate budget or facilities to teach the skills

---

[8]Jackson McNeil, "A Study of Vocational Education as Perceived by Principals in Thirty-Two High Schools," unpublished doctoral dissertation, Auburn University, Auburn, Alabama, 1968.

needed and to handle the numbers of students desirous of enrolling in the vocational education programs. Eight recommendations were made for the improvement of vocational education in the thirty-two high schools. The basis for these recommendations was the principals' responses to the evaluative instrument used and observations made by the writer through personal visits to each school and each vocational facility.

Most research dealing with vocational education in the nation has been structured in a more narrow concept to allow an evaluation to be made of only one or two selected aspects. The Department of Health, Education and Welfare[9] thoroughly investigated the varying programs of public school education. This investigation was directed toward seeking information on vocational education today and tomorrow, the present effectiveness of structure, patterns of evaluation, and the future of schools. This study included a large varied sample of students, teachers, parents, employees, employers, principals, superintendents. In general, most persons contacted felt that new directions were needed in vocational education. Students felt that they were gaining information to help them get and keep jobs after graduation. Some of the recommendations were more

---

[9]Department of Health, Education and Welfare, Evaluation of Vocational Education Now and Tomorrow (Washington, D.C., 1969), p. 34.

on-the-job training, more equipment, and more previous orientation to work before the last two years of high school. The Department of Health, Education and Welfare recommended overall planning and supervision of vocational education, frequent evaluative reviews of the programs, diversified programs, and a closer contact with the counselor.

Haynes,[10] in her study of the role of Texas secondary schools, analyzed vocational education enrollment, teacher units, expenditures, and placement of students. The study involved the effectiveness of vocational education in meeting the manpower needs in Texas. It was concluded that public school education, in particular vocational education, has the potential to become a most influential aspect in the future of Texas youth, and that Texas vocational education was failing to do the job necessary to fill the needs of 1,000 high school students surveyed. An important conclusion relating to the structure of vocational education was that it should be changed to provide a wider opportunity for students to gain employment after high school education.

Attitudes and principles toward vocational education in Ohio were determined in a study by Parks.[11] The major purpose of the study was to ascertain attitudes of superintendents, supervisors of vocational education, and teacher

---

[10]Suzanne Haynes, "The Role of Texas Secondary Schools in the Preparation of Youth for Employment," unpublished master's thesis, University of Texas, Austin, Texas, 1970.

educators regarding vocational education in the state of Ohio. In this study an effort was made to determine to what extent (1) vocational education principles were accepted, (2) superintendents, supervisors, and teacher educators held favorable attitudes toward vocational education, and (3) there were different attitudes between superintendents, supervisors, and teacher educators toward vocational education. Selected principles of vocational education were generally accepted, although supervisors and teacher educators were slightly more receptive to the principles than were superintendents. School size did not significantly influence the degree of acceptance of the various vocational education principles.

Factors that significantly affected attitudes toward vocational education were position held and area of public school certification. However, factors such as age, number of years experience in administering a vocational program, credit hours completed beyond the baccalaureate degree, non-educational occupational experience, and parents' occupational status had no significant effect on attitudes.

There were ten common suggestions made for improving vocational education in Ohio. Included were area vocational

---

[11]Darrell Parks, "Attitudes and Principles Regarding Vocational Education in Ohio," unpublished doctoral dissertation, Ohio State University, Columbus, Ohio, 1968.

schools, increase in state and federal aid, less specialization, more student orientation, program expansion, improvement of guidance services, improvement of existing programs, and improvement of teacher education centers.

In a study by Englebart,[12] the purpose was to develop a vocational education curriculum model which would help students become employable and productive workers when they left the secondary school. The model development was centered on training workers in the field of automobile mechanics.

The procedures were the determination of job title, competencies, performance criteria, the extent of in-service training programs in industry, development of the instructional model, and the development of a plan for implementing the model. In this study the model was related to one aspect, automobile mechanics, providing a practical guidance for the school system. The program would allow a student to develop, with guidance, a program which is sufficiently flexible that he may start and finish at different levels within the program. Instruction in this model, as in other similar areas of industrial education, was mainly individualized and it was concluded that it was possible to develop

---

[12]Leon Englebart, "Developing a Vocational Education Curriculum Model," unpublished doctoral dissertation, University of Nebraska, Lincoln, Nebraska, 1970.

programs by extending the model into other areas of vocational education.

To determine the attitudes of school board members toward occupational education, Spengler[13] designed a three-part survey questionnaire to measure the relationship between understanding, attitudes, and social variables toward occupational education. The analysis of the data revealed that more positive attitudes were held by members of urban districts and members of cooperative education systems than those in suburban or rural districts. Older board members and those with a number of years of service tended to have a more positive attitude toward occupational education.

Career Education in Arizona, Georgia, and Oregon

Arizona

Comprehensive information in the field of occupational education was a recent objective of the Arizona Occupational Research Coordinating Unit.[14] Research and development were the main purposes of the annual state project in 1970 for career education programs. There were several phases

---

[13]James Spengler, Attitudes of School Board Members Toward Occupational Education in Western New York (Williamsburg, New York, 1970).

[14]Arthur Lee and Doris Fitzgerald, Career Education in Arizona (Phoenix, Arizona, 1970).

in the development of career education in Arizona--evaluation, projections for future occupational areas, necessity of the program in the state, available information on careers, implementation, and budgeting. All available information about career education in the state was compiled and published in the board's report and plans were made for the revision of the career education curriculum. Arizona's coordinating unit by mid-1970 had compiled research and was in the process of showing the potential of the educational system of the state for preparing students for careers in the state. In this report an overview of the current programs at all levels was given. In connection with the report, it was concluded that the manpower training and private programs in vocational education should be reviewed and models for helping the students of Arizona determine career choices should be developed. Program planning, budgeting, and research were among the first priorities established for beginning career education in Arizona public schools. Materials in the development and planning of career education were reviewed by the state's department of education and other agencies. The department of education is attempting to finalize the plans for career education in Arizona and make recommendations with the necessary materials

for implementation of the career education program in the public schools of Arizona.

Oregon

Oregon has embarked upon a new approach to public education from elementary through secondary. Involved in the new approach called the Oregon Way,[14] general academic and vocational education were affected. The career education concept in Oregon is based upon the following two assumptions:

1. Secondary schools should be institutions helping to prepare all of the students to become useful, productive citizens. For years public education has been informing students that if they wish to go to college there are certain courses that should be taken in secondary school. If a student wanted to enter any career that had a prerequisite of a baccalaureate degree, there were certain preparatory courses that this person would need to complete in high school. The educational system failed to look at the student enrolled in public education as an individual in his educational needs. Usually, both counseling and curriculum have not been structured to give guidance to the

---

[14]Dale Parnell, "State Plan for Applying Relevance to Education," American Vocational Journal, XLIV (December, 1969), 15.

students who propose to enter fields that do not require a baccalaureate degree.

2. A secondary school program should make an attempt to relate the curriculum to the goals that students set. The personal motivations and needs of the students should better equip them to choose from a variety of alternatives. The adequate preparation of students for an exit from the secondary schools into work, apprenticeship, community college, or four-year college should be the primary function of public education.

In Oregon the career education approach was aimed at the development of skills and understanding of various occupational clusters. A student entering the occupational clusters could move from occupation to occupation within the cluster and still be using similar skills and knowledge.

High schools must make a definite commitment to move from the present curricular systems with one-tracked terms such as college preparatory, general, or basic education to a career education program. Instead of the student in the public schools being classified according to college preparatory or general, the student would relate his high school experiences in one of the fifteen career clusters.

A massive influx of information and illustrations from the world of work into general education was recommended. Reasons for doing this were to relate the students' educational experiences to the real life situations outside the

school and to bring into the teaching process examples of how concepts, symbols, and language of particular disciplines can be used in everyday life and in a career.

High schools would need to rebuild their curricula around careers or families of careers that relate to occupational clusters. This would not necessitate numerous changes in the facilities and guidance programs. What the career education concept in Oregon was really calling for was the change in educational thinking so that students could prepare realistically for a career.

Students in the high schools of Oregon should not be expected to choose a single specific career goal, but to select one of the clusters of occupations. Guidance would be a most important process in helping the students select areas of concentration. Although many students may wish to change goals, and often do, the appeal of this career education approach is that the student need not set a specific career goal, but a general goal. Thus, the student would not find himself in an aimless state that possesses many secondary school students.

Georgia

Georgia's Cobb County Public Schools[15] are presently preparing and developing a model for career education.

---

[15]Alton Crews, "Career-Oriented Curriculum--Cobb County Model," American Vocational Journal, XLIV (December, 1969), 17.

Basic to its development are the two following convictions:

1. Vocational education is a mainstream instructional program that should complement and be complemented by all regular instructional programs.

2. Programs for vocational understanding must be an essential ingredient in the educational experiences of every student, if he is to make a wise career choice.

From kindergarten through secondary a framework to use as a basis for the creation of programs was brought about in cooperation with the Georgia Department of Education. The developmental patterns start in the elementary school, giving information and orientation about careers to students. Middle schools would be responsible for orienting and giving the students some exploratory experiences in diversified aspects of the world of work. Senior high schools would be concerned with exploration and preparation in the different career clusters. A basic reason for establishing specific program goals at each educational level in the career education curriculum was to establish orientation into the world of work.

Developing the educational model involved a diversified group of concerned people who were interested in education in Georgia. The project was a joint endeavor of the Cobb County school system and the Georgia Department of Education. A committee composed of people from education, industry, and

various occupations were used in an advisory capacity. These persons were asked to make first-hand observations in the school system and submit propositions on the curriculum reorganization which had taken place.

The director of the Education Professional Development Program in Georgia declared "that the cluster approach in career education has proven to be successful in the education of disadvantaged students."[16] The program in the forty schools indicated a marked improvement in interest in the students involved in the cluster approach to education. Career education that involved academic and occupational training for all students has helped reduce the absenteeism rate by 48 percent in these schools that previously had a higher dropout rate than the state average. Georgia's project, directed by Gene Bottoms, had the major function of helping train teachers to initiate the cluster approach to career education in these forty schools.

Involvement of the Federal Government

"United States Commissioner of Education Sidney Marland has affirmed that one of the eight major emphases of the Office of Education will be career education."[17] Career education has been a much pursued objective in the Office

---

[16]William Loomis, "Career Education," p. 5.

[17]Sidney Marland, "Marland Reasserts USOE Thrust," Phi Delta Kappan, LIII (November, 1971), 204.

of Education. The federal government and the Office of Education are in agreement that the present system of vocational education is in need of revision. Marland emphasized to the National Association of Secondary School Principals that "it is my firm intention that career education will be one of the very few major emphases of the U.S. Office of Education, a priority area in which we intend to place the maximum weight of our resources."[18] Marland had the following to say of career education:

> The Office of Education is committed to giving people of all ages more choices of and better preparation for careers. This means extending and improving elementary and secondary school programs so that all those who finish high school will be prepared for meaningful work or for college. It means developing new and positive attitudes toward the whole range of occupations in society. And it means extending the range and improving the quality of career development opportunities for people beyond high school age.[19]

Career education should contribute significantly toward preparing students either to become usefully employed citizens upon their completion of high school or to continue further formal education leading to their becoming employable. To do this, one must realize that the United States Office of Education and the state education agencies cannot succeed overnight. Involvement in the development of career education

---

[18]Marland, "Career Education Now," p. 27.

[19]Marland, "Marland Reasserts USOE Thrust," p. 204.

in the United States will include some three million students. An interim strategy is being developed utilizing four major actions.

First, the vocational education programs of the Office of Education are to be improved. In this program nearly five hundred million dollars annually will become available to make administrative and program changes to allow education to become relevant to students in the public schools. There will be new leadership and technical support to help states move programs toward filling national manpower shortages in critical areas.

Second, in all agencies of government and education aid must be given to high school students by giving them opportunities to gain knowledge of career clusters and not ask that the student place great emphasis on one occupation, realistic attitudes toward the world of work, and a broad concept relating to the occupational fields.

Third, to bring the efforts of current industries, businesses, and related labor sources in closer contact with the schools, efforts should be made by people in public schools to obtain the help of nearby businesses and industries to help in the training of young people. This would aid both the students in need of experience and the industries by providing employers with trained personnel through the years.

Fourth, the United States Office of Education will become engaged in a commitment to establish leadership in the new concept of a career education system. A reason for this new leadership is to help move our schools into a more direct relationship with society's demands. In endeavoring to change both vocational and general education will need to become partners in the promotion of the career education program.[20]

Essentials of the Present Approach to Attitudes

In the areas of the social sciences, the attempt to devise techniques and procedures for the direct or indirect measurement of attitudes is continuing. At the present time, approaches are based upon the premise that an individual's "position toward other people, groups, or social issues is not adequately reflected by a single alternative or position among those available."[21]

In the procedure of adequately assessing the attitudes held by the individual, there should be alternatives to which the individual may express a favorable or unfavorable position under given circumstances. An individual who has an attitude can then be no longer neutral toward the issue

---

[20]Marland, "Career Education Now," pp. 27-28.

[21]Carolyn Sherif and others, Attitude and Attitude Change (Philadelphia, 1965), p. 3.

to which he is responding. An individual may have varying degrees of agreement or disagreement to a particular issue. His perception of the issue in question becomes, at the point of decision, his evaluation of that issue under consideration.[22]

"It is generally held that attitudes are the end product of the socialization process and significantly influence man's responses to cultural products or processes, to other persons, and to groups of persons."[23] An existing attitude is perceived, it is expressed in speech and other overt behavior. "Attitudes are usually classified into three general components: (1) cognitive (beliefs), (2) emotions (feelings), and (3) action-taking (behavior)."[24] Others combine the first two components into one cognitive component influencing the third action-taking component, which they call the affective component.[25]

---

[22] Ibid., p. 3.

[23] Robert Krech, The Individual in Society (New York, 1962), p. 177.

[24] Oppenheim, p. 4.

[25] Shaw and Wright, p. 4.

CHAPTER III

QUESTIONNAIRE CONSTRUCTION AND DATA COLLECTION

Introduction

It was the aim of this study to survey randomly selected groups of superintendents and principals in the state of Texas to determine their attitudes toward career education. Serving as a small part of the planning process of career education in Texas, this study was conducted in an attempt to gain some knowledge about how the management structure in Texas public schools viewed career education. The Texas Education Agency was beginning, at the same time, a process to determine the development of and pilot projects concerned with career education. In consideration of the planning being done by the Texas Education Agency, this study was conducted to ascertain the attitudes of superintendents and principals toward career education and vocational education.

Information had to be collected about the career education concept. Literature about career education was surveyed and information was gathered from several sources. There were several ideas concerning the career education concept that reoccurred in the literature researched. Although little research has been done on career education to date,

there was much research relating to the need for a better method of educating the nation's youth. This research dealt mainly with the failure of vocational education to accomplish desirable outcomes--the failure of vocational education to achieve relevance to actual work situations.

During the review of related literature, several points were found that dealt with the relationship between vocational education and general academic education. Vocational education needed reform because of a failure of a large number of students to participate in its programs. In particular, vocational education in Texas was failing to do the job necessary to fill the needs of many students surveyed by Haynes.[1] The extent of the curriculum was not broad enough to satisfy the manpower needs. The percentage of students engaged in general academic education was much greater than that of vocational education programs. Training, skills, and knowledge for the world of work and the opportunities in it have been topics of increasing importance to this country's educators.

Identification of Populations and Selection of Samples

Populations in this study were identified as the personnel in the management structure in the public schools of

---

[1]Haynes, "The Role of Texas Secondary Schools in the Preparation of Youth for Employment."

Texas. Therefore, the two populations included the superintendents and principals engaged in public education in Texas. Superintendents were classified as one population and principals were classified as a second population. From these two populations, samples were drawn through the technique of random sampling. Sax states that "representative samples are ones which have been drawn in a random, unbiased manner."[2] "A random selection procedure is one in which every element of the population has an equal chance to be selected for the sample and, therefore, every possible sample of a certain size is equally probable."[3] Considering the sample being drawn or any sample that may be drawn has an equal chance of being selected as the sample to be used in a study, then the process of random selection is bias free.[4]

The random selection technique is widely known and was publicized by the selective service in 1939. At that time the popular name referring to the procedure was the "fishbowl technique." A technique more commonly used in research is a table of random numbers. A table of random numbers allows the selection of a sample on the same basis as the

---

[2]Gilbert Sax, Empirical Foundations of Educational Research (Englewood Cliffs, New Jersey, 1968), p. 129.

[3]David Fox, The Research Process in Education (New York, 1969), p. 332.

[4]Ibid., p. 332.

"fishbowl technique," but is a much faster method of selecting a random sample. For the selection of the sample to be truly random, there must be no attempt to exclude any element of the population.

Determining sample size is always of prime importance in a research study. Among the various aspects of sample size to be considered are the statistical procedures--homogeneity, heterogeneity, generalizability, and attrition of the sample--and the data gathering process. "One such point is the fact that the statistical dividing line between small and large samples is a sample of thirty."[5] The samples in this study were drawn from the populations with the use of a table of random numbers. Characteristics of the two populations, superintendents and principals, should be equally allowable by chance because of the sampling procedures; the characteristics of superintendents and principals should be about the same in the sample as in the population. Each sample contained 100 members from each population under study.

If the group under investigation is homogeneous, then a smaller sample may be used. If the group under study is heterogeneous, a larger sample will be required. Superintendents and principals in Texas under investigation in this study were considered as not being extremely homogeneous in

---

[5] Ibid.

their attitudes on the issue of career education and aspects of vocational education to the extent that there would be no real threat of complete agreement. It was felt from an intuitive point of view that the two populations within themselves would not be widely diversified populations on the issues in question. Determining the generalizability of the sample to the population is an important consideration when deciding upon sample size. It is necessary to obtain a sample that will include the attributes of the population to which generalizations are to be made. Characteristics of the population should be proportionally represented.[6] In the samples, one of the more important assumptions underlying the random selection procedures is that this process will give every element of the population an equal chance to be included. Any sample that is drawn by the random procedure would, therefore, include all elements of the population and that sample would be representative of that population.

Further investigation into sample size indicated that there is no real answer to what size a sample should be. "The question of how large a sample should be is basically unanswerable, other than to say that it should be large enough to achieve representativeness."[7] "Samples smaller than thirty are to be avoided, especially with the parametric

---

[6]Sax, p. 129.

[7]Fox, p. 346.

statistics. The use of samples of size thirty or larger usually insures for the investigator the benefits of the central limit theorem."[8] Concerning the sample and the size required, Fox states the following:

> If data are to be collected from captive groups of students, the researcher is reasonably certain that his accepting and data-producing samples will be close together in size. However, if he plans to use data-gathering instruments which will be mailed to the accepting sample, then he will find that serious attrition is a very real threat, for returns of thirty percent are common, and even lower returns occur with disheartening frequency.[9]

Based upon these ideas, it was concluded that a sample of 100 for each population would be sufficient to provide the data required for the testing of hypotheses. Samples of this size would provide enough data to represent attitudes of the populations toward career education.

Attrition factors are usually uncertain and prediction can only be a reasonable forecast about the percentage of returns expected. Factors which may affect attrition include time of year, job position, interest in the study, length of the questionnaire, and ease of answering questionnaire.

Development of the Instrument

There are various types of attitude scales used in the research processes. In this study the instrument developed

---

[8]Roscoe, p. 151.

[9]Fox, p. 348.

was a Likert-type scale. "The Likert scale is a widely used type of ordinal measurement."[10] A large number of scaling techniques used in research procedures involve the respondent's reacting to a stimulus. Self-reporting scales are presented to the subjects and responses are dependent upon some certain combination of stimuli.

The two most common types of attitude scales are the Likert and Thurstone. Both scales are a series of statements which are usually restricted to one statement or description. The Likert-type attitude scale was chosen for this study after some investigation of both the Likert and Thurstone procedures. "Whether the Likert method is an adequate, perhaps superior alternative to the Thurstone method, has been a point of discourse since Likert's monograph appeared."[11] Both methods have been the most important procedures used for the measurement of attitudes. Both are used extensively despite the fact that some of the more recent scaling innovators, such as Guttman, have attempted to establish the comparative validity, reliability, and efficiency of the Thurstone and Likert attitude scales. Several important differences between these scales were found. The

---

[10] Gene Summers, editor, Attitude Measurement (Chicago, 1970), p. 125.

[11] Ibid.

following points became important in the issue of the difference between the Thurstone and Likert scales:

> The Likert method of scoring an attitude scale, of any given number of items, consistently produces more reliable results than the Thurstone method of scoring the scale: and the Likert method of scale construction and scoring requires fewer items to produce the same reliability as the Thurstone method.[12]

The Likert-type scale used in this study was given an additional category. The more categories the scale contains, the greater the chances that the respondent will be able to choose one that is closest to his attitudes. A standard Likert-type scale consists of five categories--strongly agree, agree, undecided, disagree, and strongly disagree. The undecided category splits the scale into equal portions of agreement and disagreement. In place of the undecided category, slightly agree and slightly disagree were on the initial questionnaire. The following categories were used in this study: strongly agree, agree, slightly agree, slightly disagree, disagree, and strongly disagree.

Six categories of responses were presented to the respondent. For the purpose of analyzing the data, each category was assigned a numerical value: strongly agree, 6; agree, 5; slightly agree, 4; slightly disagree, 3; disagree, 2; and strongly disagree, 1. This type of

---

[12] Ibid., p. 171.

construction for the Likert-type scale was suggested by Edwards.[13] Constructing the Likert-type scale for this study was facilitated by the use of a panel of jurors. According to Oppenheim,[14] a panel of jurors should be selected to agree upon the face and content validities of the questions placed on the questionnaire. The jurors validating the questions should be representative of the population under investigation.

Prior to the selection of the jurors, an item pool was established. Items used in the pool were based on various books, periodicals, publications from the Department of Health, Education and Welfare, and bulletins from the Texas Education Agency. This original item pool was then edited according to suggestions made by Edwards and Kilpatrick.[15] Irrelevant items, items that may be either accepted or rejected by all respondents, and ambiguous items which could be misinterpreted were omitted. The edited item pool was mailed to the judges, who were persons considered to be competent in the area of public school administration. Steps taken in the determination of jurors were contacting the president of the Texas Association of Public School Administrators and securing the

---

[13] A. L. Edwards, "A Critique of 'Neutral' Items in Attitude Scales Constructed by the Method of Equal Appearing Intervals," Psychological Review, LIII (May, 1946), 161.

[14] Oppenheim, p. 133.

[15] A. L. Edwards and F. P. Kilpatrick, "The Scale Discrimination Method for Measuring Social Attitudes," American Psychologist, II (October, 1947), 332.

names of superintendents and principals thought to be competent in public school administration.

Six jurors were identified as being very competent in public school administration and the initial questionnaire was mailed to them for editing and suggestions. Part A of the questionnaire (Appendix D) dealt with the descriptive data on the respondent and Part B contained the attitude scale. At the end of a ten-day period all jurors had returned their critiques of the questionnaire. Numerous changes were suggested for both parts of the questionnaire. Most of the suggested changes dealt with Part B. Among the changes to be effected were items to be deleted, added, and rephrased.

A final form of the questionnaire, based on juror critiques, was prepared to be sent to the samples previously selected for the study. Reliability of the questionnaire was an important factor. Shaw and Wright state that "the Likert-type scales are often valid and reliable, but they should be treated as other scales. The scales should always have the reliability and validity established."[16]

Validation of the Instrument

Validity

The quality of research can be no better than the procedures used to collect and analyze the data. "If the

---

[16]Shaw and Wright, p. 21.

procedures used possess all the necessary and desirable attributes, then the potential for sound research is present."[17] A major portion of this study was devoted to the development of a suitable data gathering instrument. Before the instrument could be mailed to the data producing samples, the validity and reliability had to be established. "Because research findings are so dependent upon the instrument used to gather information, the researcher is responsible for selecting those instruments which best fit the requirements of his investigation."[18] An important part of the selection of the instrument is related to past performance of the type scales under consideration.

> In writing research reports which include the use of tests, inventories, questionnaires, or rating scales, the investigator should take the responsibility of evaluating all tests used in the investigation. However, when the researcher has found it necessary to construct his own test or where new examinations are being employed, much care should be devoted to the objective evaluation of the instrument.[19]

Although the Likert-type scales are often reliable and valid, the instrument constructed in this study was validated to minimize error.

The face validity was established by a panel of jurors. "Face validity is of value in instances where the criterion to be judged in each instance relates to the entire instrument

---

[17] Fox, p. 352.

[18] Sax, p. 154.

[19] Ibid., p. 156.

and are similar in circumstance. The data being sought is relatively fixed and finite."[20] Content validity was also considered in the preparation of the instrument. Content validity is how well the instrument measures what it is intended to measure. This type of validity was established by the jurors.

Reliability

The split-half or odd-even technique was used to establish reliability in this study. "This type of reliability is one form of internal consistency reliability."[21] When time is an important factor and a single administration of the instrument is desired, the split-half technique is most suitable.

The split-half technique of obtaining reliability was used in this study for two reasons. First, the statements used on the Likert-type instrument covered the different areas of career education and vocational education concepts; splitting the statements into odds and evens would create alternative forms of the instrument. For this reason, the halves of the instrument would approximate alternate forms and similar procedures for establishing reliability could be used. There were thirty-two declarative statements on the final form of the attitude instrument. The statements on this form were divided into two equal portions; by splitting

---

[20]Fox, p. 369.

[21]Roscoe, p. 105.

the instrument, dissimilar instruments were obtained. Second, by following the procedures stated, the possibility of bias was greatly reduced. Bias could become a factor if the respondent lost interest near the end of the questionnaire or omitted items.

To use the split-half technique of reliability two procedures are required. A coefficient of correlation for the halves of the test must be calculated by the use of the Pearson Product-Moment technique and by the application of the Spearman-Brown correction formula.[22] "The Spearman-Brown prophecy formula is used to compensate for the fact that the reliability was estimated from a test one-half the length of the final form."[23]

> By far the most popular of the several available coefficients of correlation is the Pearson correlation coefficient, which may be defined as the mean of the z scores' products of two paired variables. It is represented by the lowercase letter r and may be calculated from the formula
>
> $$P_r = \frac{\Sigma Z_x Z_y}{N}.$$ [24]

The Pearson coefficient of correlation was calculated from an administration of the final instrument developed for this study. Administration of the instrument was performed on a representative group of thirty administrators from the public schools of Texas. Results of the instrument's

---

[22] Ibid., pp. 103-104.

[23] Ibid., p. 104.

[24] Ibid., p. 75.

administration were calculated by splitting the instrument into odd and even halves and using the Pearson Product-Moment method. "Where the split-half techniques are used, most researchers prefer to correlate scores on odd number items with even number items."[25] By using the Pearson Product-Moment correlation coefficient, the value of r was found to be .73. A table presented by Roscoe[26] indicated that r was significant at the .005 level.

After calculating the Pearson coefficient of correlation, the Spearman Brown prophecy formula for split-half technique was applied. The formula for correction is

$$\text{estimated Spearman-Brown reliability of the total instrument} = \frac{2 \times (\text{actual correlation})}{1 + (\text{actual correlation})}.$$ [27]

When the Spearman-Brown correction formula was applied to the actual correlation between the halves of the instrument, the coefficient of correlation for the total instrument was equal to .84. Using Roscoe's table for the value of $S\text{-}B_r$ with 28 degrees of freedom, r was significant at the .01 level.

Administration of the Instrument for the Collection of Data

Administering the final questionnaire to the administrators in the samples was done to collect the data for this

---

[25] Sax, p. 160.

[26] Roscoe, p. 301.

[27] Ibid., p. 104.

study. Accompanying the questionnaire was a letter of explanation (Appendix B). A return, self-addressed envelope was included with the questionnaire. "The difficulty usually lies not in choosing the sample, but in getting those persons selected for the sample to return their questionnaire."[28] Bias may occur because sufficient questionnaires are not returned; therefore, every available method should be used to obtain a 100 percent return. The percentage of returns may be increased by sending more than one follow-up letter, by registering the letter, or by making a phone call to the respondent. Shown in Table I are the percentages of questionnaires returned. In this study, three separate attempts were

TABLE I

PERCENTAGES OF RETURNS FROM THE DATA PRODUCING SAMPLES

Respondents	Initial Mailing	First Follow-up	Second Follow-up	Total
Superintendents	72%	11%	1%	84%
Principals	66%	11%	3%	80%

made to retrieve all possible questionnaires. The number of superintendents and principals responding from each school size is given in Appendix F. After the questionnaires were mailed to the samples, a two-week time span elapsed before a follow-up letter was mailed. A copy of this letter is in Appendix C.

[28] Sax, p. 215.

CHAPTER IV

TREATMENT AND PRESENTATION OF DATA

Introduction

In this chapter the procedures for treatment of data and the statistical treatment of that data are presented. Most of the data collected were treated statistically and were related to the purposes and research hypotheses of this study. Other descriptive data were collected and are presented without any type of statistical treatment. All data presented in this study are the reactions of the superintendents and principals who responded to the questionnaire used. A copy of the questionnaire is in Appendix D.

Treatment of the Data

After the termination of the data collection period, the data were tabulated and statistical treatment applied to test the research hypotheses. Tabulation of the data for statistical treatment was accomplished by entering the data on data summary work sheets. Each set of data was coded for the purpose of distinguishing between the two groups, superintendents and principals. The data were then entered on IBM punchcards. The Computer Center at North Texas State University, Denton, Texas, through the use of data processing

equipment, applied various statistical treatments to the data. These statistical treatments are discussed later in this chapter.

The primary research hypotheses as stated in Chapter I were restated in the null hypothesis form to be tested statistically. Tenable hypotheses then could be tested and on the basis of this test either be retained or rejected. To test the primary hypotheses, the t-test for two independent samples was used. Retention or rejection of these hypotheses was made at the .05 level of significance. All of the primary hypotheses were related to the Likert-type scale developed for use in this study.

There were two samples used for gathering data for this study. The samples were drawn from two populations, superintendents and principals in Texas public schools, by random sampling techniques. The t-ratio was used as a test of significance of difference between the means (t-test for two independent samples). The ratio was calculated using the following formulas:

$$t = \frac{M_1 - M_2}{S_{M_1 - M_2}}.$$ [1]

M_1 = mean of single criterion measure of group one.

M_2 = mean of single criterion measure of group two.

---

[1] John Roscoe, Fundamental Statistics (Dallas, 1969), pp. 167-168.

$$S_{M_1 - M_2} = \frac{SS_1 + SS_2}{N_1 + N_2 - 2} \left(\frac{1}{N_1} + \frac{1}{N_2}\right).$$

SS_1 = sum of the deviation squares of group one.

SS_2 = sum of the deviation squares of group two.

N_1 = number in group one.

N_2 = number in group two.

To determine the degrees of freedom for the t-test for two independent samples, the formula

$$N_1 + N_2 - 2$$

was used. A table presented by Roscoe was used to determine the level of significance of the t-ratio.[2]

Part A of the questionnaire concerned descriptive information about the respondents and their respective school districts. Three areas on Part A were subject to statistical treatment and were related to secondary hypotheses II, III, and IV. These secondary hypotheses were tested for tenability from the data collected. The statistical treatment used for these data was the simple analysis of variance (ANOVA). The following formula was used to calculate this statistic:

$$F = \frac{MS_{bg}}{MS_{wg}}.$$[3]

---

[2] Ibid., p. 293.

[3] Henry Garrett, Statistics in Psychology and Education (New York, 1966), pp. 253-254.

F = the ratio that determined if a t-test should be computed.

MS_{bg} = mean of the squares between groups.

MS_{wg} = mean of the squares within groups.

Tables presented by Roscoe[4] were used to determine the retention or rejection of the hypotheses at the .05 level of significance.

Presentation of Descriptive Data Compiled from the Questionnaire

Data presented in this portion of the chapter came from Part A of the questionnaire developed for use in this study. Although these data are of a descriptive nature, this portion of the questionnaire was used in testing hypotheses. The data collected on Part A of the questionnaire was reflective of the management structure and their respective school districts.

The ages of the respondents are presented in Table II. The ages of both the superintendents and principals who returned the questionnaires are presented according to the school district size (B, A, AA, AAA, AAAA). As shown in Table II, most of the management structure responding to the questionnaire were over thirty years of age. In the over-thirty age group a large number were in the category of 41-50 years of age. The ages of superintendents and principals seemed to be distributed among all the school district

---

[4]Roscoe, p. 322.

TABLE II

PERCENTAGE OF MANAGEMENT STRUCTURE IN EACH AGE CATEGORY ACCORDING TO SCHOOL SIZE CLASSIFICATIONS

School Size	Management Group	Percentage in Each Age Category				
		Under 30	31-40	41-50	51-60	Over 60
B	S*	--	31	31	19	19
	P**	--	26	26	26	22
A	S	20	26	19	7	28
	P	--	12	53	23	12
AA	S	--	18	32	38	18
	P	6	33	34	20	7
AAA	S	--	15	23	45	17
	P	--	35	41	18	6
AAAA	S	--	13	33	40	14
	P	--	5	47	35	13

*Superintendents.

**Principals.

size classifications with the exception of AAA superintendents, AAAA superintendents, and AAAA principals. These three exceptional management structure groups tended to be in the higher age categories.

In the formulation of three secondary hypotheses, some differences in the attitudes of the management structure toward career education were thought to exist. The size of the school system, the length of service, and the location of the school in a rural or metropolitan area were points in the three hypotheses.

In direct relationship to the size of the school and its size classification was the population of the school district and the population of the city in which the district was located. Although the secondary hypotheses were tested, there was some descriptive data included in Part A of the questionnaire about the size of the school district. As shown in Figure 1, the respondents indicated the size of

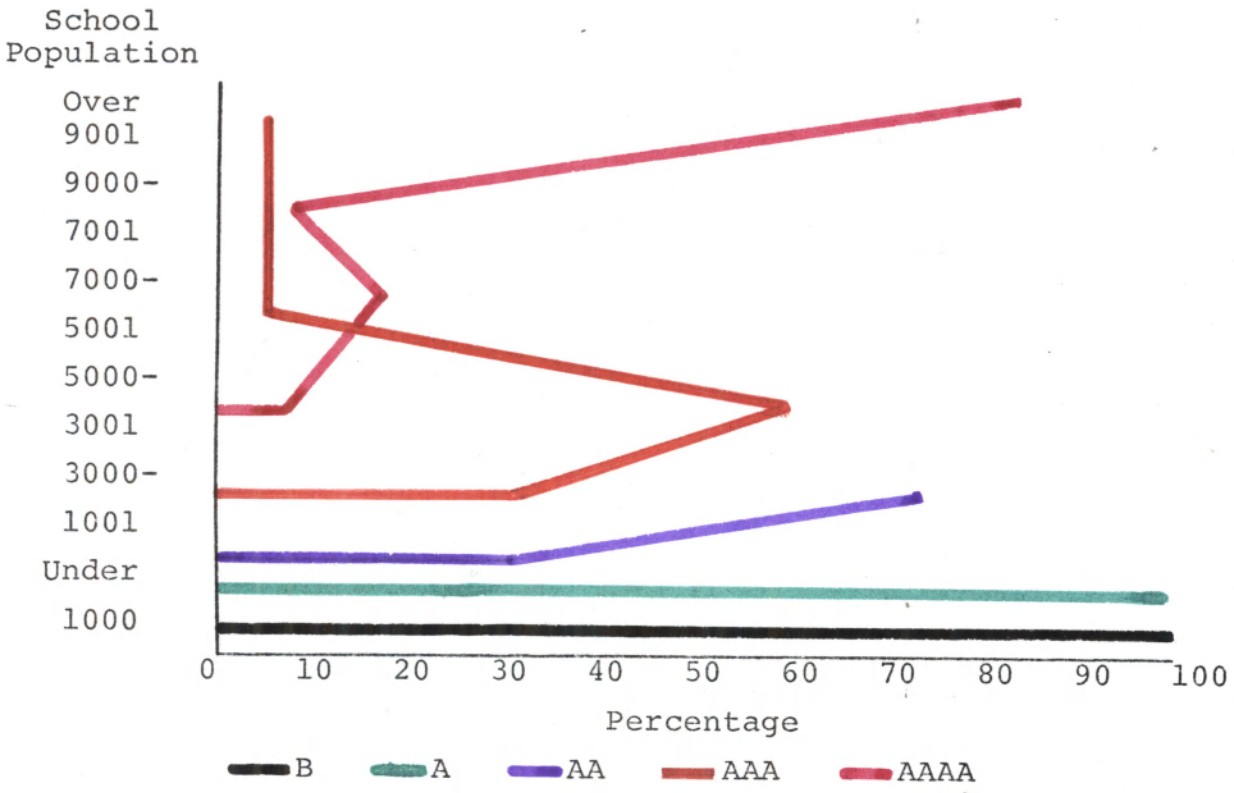

Fig. 1--Comparison of school size classification and student population.

the school district's population and its classification. All size B and A school districts had a student population of less than 1,000. Size AAA school districts' student populations varied from about 3,000 to 5,000. The AAAA school

districts' student populations were varied, but mostly over 9,000.

Closely associated with the size of the school district and its location in a rural or metropolitan area was the curriculum. Data received and tabulated from the questionnaires indicated a large variation in the number of vocational education courses being offered at the present time. The courses offered in relation to the size of the school district are presented in Table III.

The data in the table indicated that the larger the school district size the greater the variety of vocational courses offered to the student population. Courses listed are vocational education courses and should not be confused with industrial arts courses. In the B and A size schools, vocational home economics and vocational agriculture were the main courses offered. Size A schools tended to have a larger number of courses than B schools. Of the fifteen occupational clusters discussed in the Dictionary of Occupational Titles,[5] schools in the B and A size categories offered courses from four occupational clusters. The AAAA schools offered courses related to nine of the occupational clusters. Yet, the AAAA schools had a smaller percentage of vocational agriculture courses offered than B or A school districts.

---

[5]Department of Labor, Dictionary of Occupational Titles (Washington, D.C., 1965).

TABLE III

PERCENTAGE OF SCHOOL DISTRICTS IN EACH SIZE CLASSIFICATION OFFERING VOCATIONAL COURSES

Courses	School District Size				
	B	A	AA	AAA	AAAA
Distributive Education	6.4%	12.4%	45.0%	93.6%	100.0%
Auto Mechanics	----	18.7	25.8	77.8	68.6
Auto Body	----	----	6.4	9.4	37.4
Office Practices	9.7	9.4	30.0	74.9	84.2
Cosmetology	----	----	9.7	21.8	37.4
Machine Shop	3.2	9.4	9.7	16.6	43.7
Vocational Agriculture	93.4	93.6	90.2	93.6	74.9
Building Trades	3.2	12.5	25.8	48.2	56.2
Vocational Drafting	----	----	----	15.6	40.8
I C T	3.2	12.5	25.8	62.4	90.5
General Mechanics	3.2	3.1	19.3	37.4	21.9
Welding	12.5	21.8	22.5	24.9	40.5
Electronics	----	----	----	6.2	49.9
Home Economics	86.9	90.5	96.8	100.0	93.6
C V A E	6.4	12.5	32.2	44.6	62.4
Commercial Art	----	----	----	-----	12.5
Printing	----	----	----	3.1	12.5
Radio-Television	----	----	----	-----	6.2
Vocational Nursing	----	----	----	-----	3.1
Health Occupations	----	----	----	-----	3.1
Masonry	----	----	----	-----	6.2
Plumbing	----	----	----	-----	6.2
Plastics	----	----	----	3.1	3.1
Food Service	----	----	----	3.1	3.1

The vocational courses offered by the smaller school districts were different than those offered by the larger districts. The AAAA school districts were offering a greater variety of courses and better opportunities for youth to gain skills in an area of vocational concentration. Although the AAAA school districts covered a wider array of occupations in the fifteen occupational clusters, not all districts offered a great variety of courses.

The management structure responding to the questionnaire used in this study indicated that some type of vocational education courses were offered to the students in each school district. Though all districts had vocational courses, the smaller schools had fewer courses than the larger districts. The percentage of students enrolled in the respective vocational programs for each school size classification is presented in Table IV.

TABLE IV

PERCENTAGE OF STUDENTS ENROLLED IN VOCATIONAL EDUCATION PROGRAMS IN EACH SIZE CLASSIFICATION AS REPORTED BY RESPONDENTS

	Percentage of Students Enrolled				
School Size	Under 15%	16-25%	26-35%	36-45%	Over 46%
B	3.5%	20.0%	34.0%	3.0%	39.5%
A	---	17.0	20.0	40.0	14.0
AA	---	33.3	32.0	6.0	28.7
AAA	12.0	32.0	18.0	21.0	17.0
AAAA	25.0	37.0	26.0	12.0	----

Although the AAAA schools offered a greater variety of vocational courses to the students in their districts, the percentage of students involved in these courses was less than that of the smaller schools. Of the management structure responding to the questionnaire, the B, A, and AAA representatives reported a greater percentage of their students enrolled in the vocational courses offered. The percentage of students enrolled in vocational courses would indicate that most of the students in most of the districts have little opportunity to gain skills for entry into the world of work.

As shown in Table V, the districts with the largest percentage of students involved in vocational education also had the largest percentage of students not entering the

TABLE V

PERCENTAGE OF STUDENTS IN EACH SCHOOL CLASSIFICATION WHO COMPLETE VOCATIONAL EDUCATION COURSES AND WORK IN THAT VOCATION

School Size	Percentage of Students Following Up Training				
	Under 15%	16-25%	26-35%	36-45%	Over 46%
B	52%	34%	13%	--	--
A	47	40	13	--	--
AA	73	20	3	4%	--
AAA	42	35	14	3	6%
AAAA	43	38	8	4	7

occupations for which they were trained. Almost one half of the respondents indicated that under 15 percent of the school districts' students in vocational education courses did enter the field for which they were trained. A very small percentage--6 percent of AAA, 7 percent of AAAA, and 0 percent of AA, A, and B schools--reported that over 46 percent of their students were involved in the occupations for which they were trained. Larger school districts, mainly AAA and AAAA, had a greater percentage of their students entering the occupations for which they were trained than the other school districts.

As shown in Figure 2, the majority of superintendents and principals responding to the questionnaire reported that the pupil-teacher ratio was between 16 to 1 and 25 to 1. Only a few of the management structure personnel reported a 36 to 1 pupil-teacher ratio in their vocational education programs. Only 11.25 percent of the districts whose management structure responded to the questionnaire had a greater than 36 to 1 ratio. Smaller districts had a greater percentage of occurrence of the 36 to 1 pupil-teacher ratio than did the larger size school districts.

Data Compiled from the Attitude Scale

The attitude scale developed for this study contained statements about vocational education and career education. These were statements related to the purposes and hypotheses

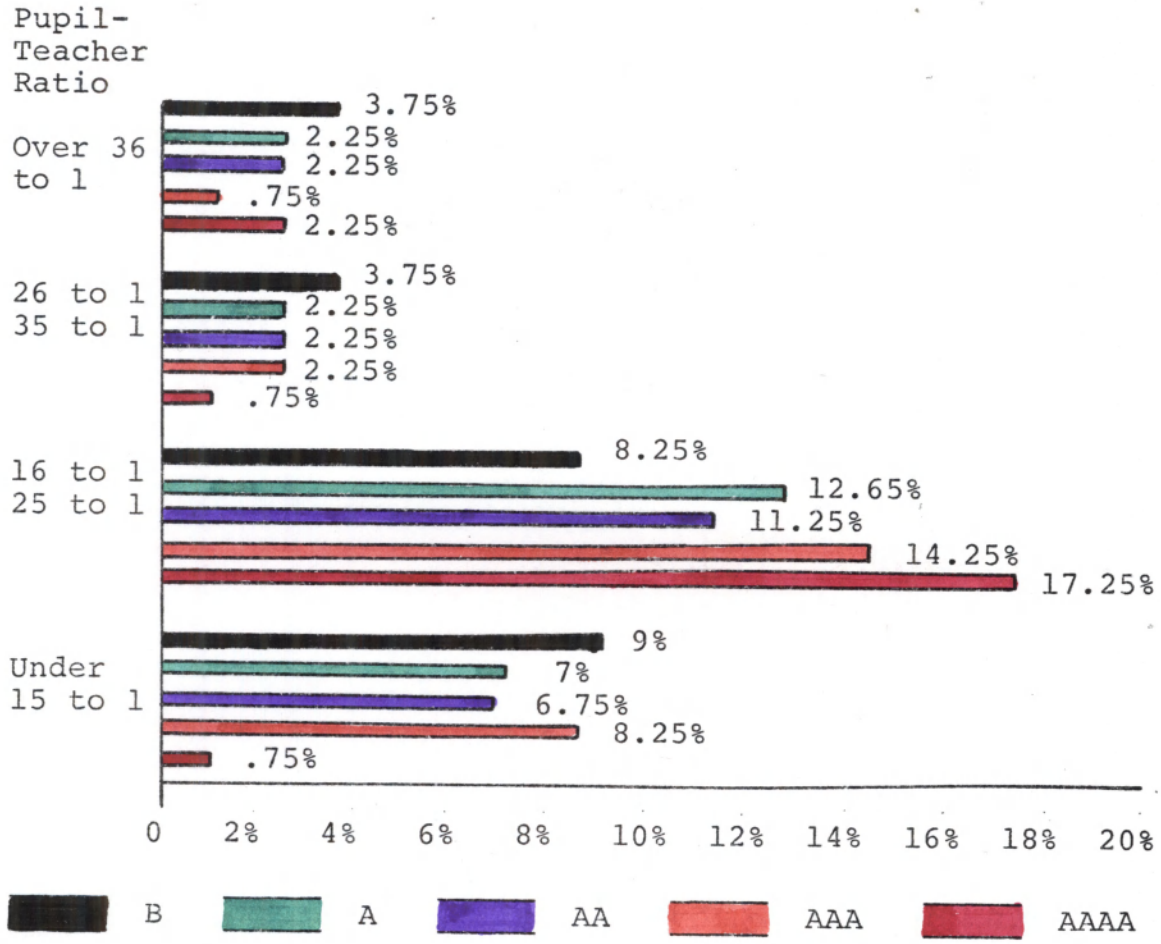

Fig. 2--Percentage of pupil-teacher ratio for each school district size classification.

of the study. The data related to specific areas stated in the purposes and hypotheses are presented.

The attitudes of the superintendents and principals were revealed by their response to each of the statements. There were six possible reactions to each of the statements; these reactions range from strongly agree to strongly disagree. A numerical value beginning with six for strongly agree to one for strongly disagree was assigned to each of the positions. If the mean score for any statement was

below 3.5, then the majority of the respondents held negative attitudes toward that particular statement. If the mean score was above 3.5, the respondents as a whole held positive attitudes toward that statement. As the mean increased or decreased above or below 3.5, the positive or negative attitudes were stronger.

Responses to statements on the expansion of vocational education are presented in Table VI. Both groups had a

TABLE VI

RESPONSE TO STATEMENTS ON THE QUESTIONNAIRE RELATED TO THE EXPANSION OF VOCATIONAL EDUCATION

Statement	Management Structure	Mean Scores	Reaction to Statement	
7 Expansion of Vocational Education	Superintendents	5.096	Positive	
	Principals	5.234	Positive	
9 Effectiveness of Expanded Vocational Ed.	Superintendents	2.566		Negative
	Principals	2.716		Negative
24 Inadequate student involvement in vocational education	Superintendents	4.421	Positive	
	Principals	4.641	Positive	
28 Insufficient preparation for employment	Superintendents	4.903	Positive	
	Principals	4.641	Positive	

favorable attitude toward the statements concerning the expansion of vocational education in Texas public schools. Superintendents and principals had a positive attitude toward statement 7, "The present vocational education programs in the public schools should be expanded."

On the position that expanding the present vocational education programs would not effectively aid students in gaining employment, statement 9, both superintendents and principals had a negative attitude. On the position that there were not enough students involved in the present vocational programs, statement 24, a low positive attitude was indicated by the mean scores of the management groups. A positive response was indicated by superintendents and principals on statement 28, "Texas public schools are not offering enough students an opportunity to gain skills needed to enter the world of work."

Appearing on the instrument were two statements related to the philosophy of vocational education. The respondents' attitudes toward these questions were revealed by the data that are presented in Table VII.

The two statements are reverse statements. Statement 22, "The present philosophy of vocational education should be changed to a broader concept of career education," was viewed positively by both groups. Statement 32, "The present philosophy of vocational education should be changed from a structured point of view to one that concentrates on specific

TABLE VII

RESPONSES TO QUESTIONNAIRE STATEMENTS RELATED TO THE PHILOSOPHY OF VOCATIONAL EDUCATION

Statement	Management Structure	Mean Scores	Reaction to Statement	
22 Broaden vocational education	Superintendents	4.807	Positive	
	Principals	4.827	Positive	
32 More structured vocational education	Superintendents	3.467		Negative
	Principals	3.347		Negative

programs," was viewed negatively by both groups. On these statements the mean scores indicated that both groups had more favorable attitudes toward a broader concept of career education than toward a more structured vocational education program.

Data about the reactions of the management structure toward the progression of career education are shown in Table VIII. An examination of Table VIII reveals that both groups reacted to statement 10, "Orientation to career education should begin in the elementary school," positively. The mean scores on statement 11, "Orientation to career education should begin in the junior high school," and statement 12, "Orientation to career education should begin in the high school," indicated that negative attitudes were held by both superintendents and principals. Statement 13,

TABLE VIII

REACTIONS OF MANAGEMENT STRUCTURE TO STATEMENTS ABOUT THE PROGRESSION OF CAREER EDUCATION

Statement	Management Structure	Mean Scores	Reaction to Statement	
10 Orientation in elementary	Superintendents	4.156	Positive	
	Principals	3.827	Positive	
11 Orientation in high school	Superintendents	2.734		Negative
	Principals	2.814		Negative
12 Orientation in junior high	Superintendents	2.506		Negative
	Principals	2.324		Negative
13 Cluster selection in junior high	Superintendents	4.759	Positive	
	Principals	4.654	Positive	
14 All levels involved in career education	Superintendents	4.060	Positive	
	Principals	3.567	Positive	
15 Exploration in junior high	Superintendents	4.867	Positive	
	Principals	4.728	Positive	
16 Exploration in high school	Superintendents	4.867	Positive	
	Principals	4.753	Positive	
17 Cluster exploration in junior high	Superintendents	4.674	Positive	
	Principals	4.629	Positive	

"The junior high should assist the students in selecting specific clusters of career education in which he may

specialize in high school," and statement 15, "The junior high school should promote exploratory experiences for students through career education," were viewed positively by the management structure responding to the questionnaire. Slightly positive attitude toward statement 14, "Career education should involve all levels of education from kindergarten through the twelfth grade," was indicated by the mean scores of 4.060 and 3.567. Superintendents were more positive than principals in their attitudes toward statement 14. "The high school should promote exploratory experiences for students through career education," statement 16, and "Career education in the junior high should involve the exploration of specific clusters of occupations," statement 17, were highly acceptable to both superintendents and principals.

Attitudes of the management structure on what should be involved in career education are presented in Table IX.

Statement 5, "Career education should provide skill, information, and help in developing attitudes about the personal, social, and economic significance of work," was viewed positively by superintendents and principals. The management structure held positive attitudes toward statement 18, "In the exploration of occupations, first-hand experiences, field trips, and classroom instruction would best help the students gain insight into various occupations." Statement 23, "Career education should involve all grades,

TABLE IX

MANAGEMENT STRUCTURE ATTITUDES TOWARD STATEMENTS ON WHAT SHOULD BE INVOLVED IN CAREER EDUCATION

Statement	Management Structure	Mean Scores	Reaction to Statement	
5 Development of attitudes and skills	Superintendents	5.277	Positive	
	Principals	5.148	Positive	
18 Techniques used in occupational exploration	Superintendents	5.084	Positive	
	Principals	4.851		
23 Content of Career education	Superintendents	4.433	Positive	
	Principals	4.432	Positive	
29 All education should be career education	Superintendents	2.518		Negative
	Principals	2.160		Negative

multi-disciplines, and include unskilled, semi-skilled, technical, and professional work," was viewed with positive attitudes by the management structure. "All education should be career education," statement 29, was reacted to in a negative manner by the superintendents and principals participating in this study.

In Table X are shown the attitudes of the management structure toward statements about the present vocational education programs in Texas public schools.

TABLE X

ATTITUDES OF THE MANAGEMENT STRUCTURE TOWARD STATEMENTS ABOUT THE PRESENT VOCATIONAL EDUCATION PROGRAMS IN TEXAS PUBLIC SCHOOLS

Statement	Management Structure	Mean Scores	Reaction to Statement	
1 Emphasis on training students	Superintendents	5.457	Positive	
	Principals	5.407	Positive	
3 Reform of vocational education	Superintendents	4.373	Positive	
	Principals	4.654	Positive	
4 Benefits of vocational education	Superintendents	4.951	Positive	
	Principals	4.814	Positive	
6 Career education not significant	Superintendents	1.481		Negative
	Principals	1.543		Negative
8 Career education better than vocational education	Superintendents	2.144		Negative
	Principals	2.271		Negative
20 Not enough exploratory experiences	Superintendents	4.481	Positive	
	Principals	4.654	Positive	

Statement 1, "Schools should place greater emphasis on helping train students for employment after high school," was viewed with positive attitudes by the management structure. Statement 3, "Most vocational education programs

offered by the public schools are in need of modification," was received with positive attitudes. On statement 6, "Career education has no significant part to play in the public schools of Texas," the superintendents' and principals' attitudes were very negative. A positive attitude was indicated on statement 20, "Students have not been provided with exploratory experiences in vocational education early enough in their development."

Testing of Hypotheses

The tenability of the hypotheses stated in Chapter I was determined by statistical analysis techniques. The results of this analysis are presented in the following portion of this chapter. Each hypothesis was either retained or rejected at the .05 level of significance. The t-test for two independent samples was used to determine if there was a significant difference between superintendents' and principals' attitudes on Part B of the questionnaire. Analysis of variance was used to determine if significant relationships existed between the attitudes of superintendents and principals, as indicated on Part B of the questionnaire and descriptive data on Part B of the questionnaire.

Hypothesis I

Hypothesis I was restated in the null form as follows: There is no significant difference between the attitudes of superintendents and principals about the purposes of career

education. Table XI shows the mean, standard deviation, t value, and level of significance on statements related to Hypothesis I.

TABLE XI

SIGNIFICANCE OF ATTITUDES TOWARD THE PURPOSES OF CAREER EDUCATION

Statement	Management Structure	Mean	S.D.	df	t	Level of Significance
21 Career education is for minorities	Superintendents	1.92	.952	162	1.39	NS
	Principals	2.15	1.184			
27 Career education should involve all students	Superintendents	4.93	.907	162	1.60	NS
	Principals	4.72	.778			
31 Career education is for the unskilled	Superintendents	1.98	1.168	162	1.14	NS
	Principals	2.17	1.034			

The t value for statement 21, "The main purpose of career education is to help the minority groups," was found to be non-significant. Superintendents' and principals' attitudes were negative toward the statement. On statement 27, "Career education should involve both students who enter the world of work immediately after high school and students who enter post-high school education," were positive and not significantly different. There was a non-significant relationship between the superintendents' and principals'

attitudes on statement 31, "Career education is mainly for the unskilled worker." Both management structure groups' attitudes were negative according to their mean scores. The null hypothesis was retained on the basis of the statistical evidence presented in Table XI.

Hypothesis II

There was no significant difference between the attitudes of superintendents and principals toward what should be involved in career education. Statistical data concerning this hypothesis are shown in Table XII.

TABLE XII

SIGNIFICANCE OF ATTITUDES TOWARD WHAT SHOULD BE INVOLVED IN CAREER EDUCATION

Statement	Management Structure	Mean	S.D.	df	t	Level of Significance
5 Development of attitudes and skills	Superintendents	5.28	.77	162	1.11	NS
	Principals	5.15	.71			
18 Techniques used in occupational exploration	Superintendents	5.08	.67	162	2.06	.05
	Principals	4.85	.78			
23 Content of career education	Superintendents	4.43	1.21	162	.01	NS
	Principals	4.43	1.25			
29 All education should be career education	Superintendents	2.51	1.64	162	1.56	NS
	Principals	2.16	1.30			

Statement 5, "Career education should provide skill, information, and help in developing attitudes about the personal, social, and economic significance of work," had a t value of 1.11. For the superintendents and principals to have had significantly different attitudes toward the statement, the t value would have had to be 1.96. A t value of 2.06 indicated a significant difference between the attitudes of superintendents and principals on statement 18, "In the exploration of occupations, first-hand experience, field trips, and classroom instruction would best help the student gain insight into the various occupations." In the attitudes of the two groups, the superintendents had more positive attitudes toward the statement than principals, as indicated in Table XII. On statement 23, "Career education should involve all grades, multi-disciplines, and include unskilled, semi-skilled, technical, and professional work," a positive, non-significant attitude was indicated by the mean scores and the t value. There was no significant difference in superintendents' and principals' attitudes toward statement 29, "All education in the public schools should be career education." Both groups' attitudes were negative toward the statement. The null hypothesis was retained for statements 5, 23, and 29 on the basis of the results of the t-test for two independent samples. An analysis of the data on statement 18 indicated that the research hypothesis should be retained.

Hypothesis III

Table XIII presents the data related to the significance of the statements from the questionnaire that the expansion of vocational education will better meet the needs of Texas youth.

TABLE XIII

SIGNIFICANCE OF ATTITUDES TOWARD THE EXPANSION OF VOCATIONAL EDUCATION

Statement	Management Structure	Mean	S.D.	df	t	Level of Significance
7 Expansion of vocational education	Superintendents	5.10	.91	162	1.028	NS
	Principals	5.23	.81			
9 Effectiveness of expanded vocational education	Superintendents	2.57	1.44	162	.701	NS
	Principals	2.72	1.29			

Superintendents and principals had positive attitudes toward statement 7, "The present vocational education programs in the public schools should be expanded." Negative attitudes were noted toward statement 9, "Expanding the present vocational education programs will not change their effectiveness in aiding students to gain successful employment." An analysis of the data in Table XIII indicates that there was no significant difference between the attitudes of the two management structure groups, as indicated by

responses to statements 7 and 9. The null hypothesis was retained and the research hypothesis was rejected.

Hypothesis IV

Null Hypothesis IV stated that there is no significant difference between the attitudes of superintendents and principals on the statement that career education will create a unified school. Shown in Table XIV are data for the statement on the questionnaire related to Hypothesis IV.

TABLE XIV

SIGNIFICANCE OF ATTITUDES TOWARD CAREER EDUCATION'S CREATING A UNIFIED SCHOOL

Statement	Management Structure	Mean	S.D.	df	*t*	Level of Significance
26 Career education will unify the school	Superintendents	4.80	.851	162	.887	NS
	Principals	4.69	.625			

The mean scores on statement 26, "The career education concept could unify the academic and vocational approaches to education," indicate that both groups held positive attitudes. The *t* value of .887 did not reach the .05 level of significance and the research hypothesis was rejected.

Secondary Hypothesis I

Secondary Hypothesis I, as restated for statistical purposes, stated that there is no significant difference between the attitudes of superintendents and principals toward the progression of career education in the public schools. The content of statements 10, 11, 12, 13, 14, 15, 16, and 17 were presented previously in this chapter on pages 70 through 72 and are also located in Appendix D.

Shown in Table XV are the mean scores, standard deviations, t values, and the levels of significance for these statements relating to Secondary Hypothesis I. There was no significant difference in the attitudes of the management structure groups on any statement, except statement 14. On this statement, a t value of 1.96 was calculated and found significant at the .05 level. On statement 14 the mean score of the superintendents was more positive than that of the principals. Superintendents' and principals' attitudes toward statements 10, 13, 14, 15, 16, and 17 were found to be positive; the mean scores on these statements were above 3.5. Attitudes toward statements 11 and 12 were negative. These statements concerned the role of the junior high school in the career education curriculum. Superintendents and principals were in positive agreement on statement 17, which was concerned with the role of the junior high in career education.

TABLE XV

SIGNIFICANCE OF ATTITUDES TOWARD THE PROGRESSION OF CAREER EDUCATION

Statement	Management Structure	Mean	S.D.	df	t	Level of Significance
10 Orientation in elementary	Superintendents	4.16	1.49	126	1.42	NS
	Principals	3.83	1.48			
11 Orientation in high school	Superintendents	2.73	1.57	126	.33	NS
	Principals	2.81	1.56			
12 Orientation in junior high	Superintendents	2.51	1.71	126	1.51	NS
	Principals	2.32	1.56			
13 Cluster selection in junior high	Superintendents	4.75	1.10	126	.61	NS
	Principals	4.65	1.11			
14 All levels involved in career education	Superintendents	4.06	1.56	126	1.96	.05
	Principals	3.57	1.68			
15 Exploration in junior high	Superintendents	4.87	.88	126	.98	NS
	Principals	4.73	.94			
16 Exploration in high school	Superintendents	4.87	.92	126	.80	NS
	Principals	4.75	.90			
17 Cluster exploration in junior high	Superintendents	4.67	.84	126	.32	NS
	Principals	4.63	.94			

Secondary Hypothesis II

Statement 30, "A new curriculum with the concept of career education should be developed," was related to Secondary Hypothesis II. The null hypothesis stated that there is no significant relationship between the size of the school system and the attitudes of the management structure toward the need for developing a career education curriculum. Analysis of variance was used to test this sub-hypothesis. In Table XVI, a summary of the results of the application of analysis of variance to the data is shown.

TABLE XVI

SIGNIFICANCE OF THE RELATIONSHIP BETWEEN SCHOOL SIZE AND THE DEVELOPMENT OF A CAREER EDUCATION CURRICULUM

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Level of Significance
Between	14.920	4	3.730	2.327	NS
Within	246.860	154	1.603		
Total	267.780	158			

The F ratio required for significance of difference in the attitudes of the management structure groups was not obtained. Since the F ratio was not significant, the null hypothesis was retained.

Secondary Hypothesis III

Secondary Hypothesis III was restated in the null form as follows: There is no significant relationship between the length of service and the attitudes held by the management structure on what should be involved in the progression of career education. There were four statements on the attitude scale related to Secondary Hypothesis III. The results of the analysis of variance are shown in tabular form for each of the statements.

For statement 5, "Career education should provide skill, information, and help in developing attitudes about the personal, social, and economic significance of work," the results of applying analysis of variance are presented in Table XVII.

TABLE XVII

RELATIONSHIP BETWEEN THE LENGTH OF SERVICE AND ATTITUDES TOWARD STATEMENT 5

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Level of Significance
Between	.141	2	.0705	.128	NS
Within	86.464	158	.5472		
Total	86.605	160			

The F ratio obtained indicated the relationship between length of service and attitudes toward statement 5 was not significant at the .05 level.

Shown in Table XVIII are the data obtained by applying analysis of variance to the responses to statement 18, "In the exploration of career education, first-hand experience, field trips, and classroom instruction would best help the student gain insight into the various occupations."

TABLE XVIII

RELATIONSHIP BETWEEN THE LENGTH OF SERVICE AND ATTITUDES TOWARD STATEMENT 18

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Level of Significance
Between	.476	2	.2381	.450	NS
Within	83.484	158	.5284		
Total	83.960	160			

The F ratio was not significant at the .05 level and the null hypothesis was retained. There was no significant difference between the length of service and the attitudes of the management structure toward statement 18.

Statement 23, "Career education should involve all grades, multi-disciplines, and include unskilled, semi-skilled, technical, and professional work," was related to Secondary Hypothesis III and subjected to analysis of

variance. Data compiled from applying analysis of variance are presented in Table XIX.

TABLE XIX

RELATIONSHIP BETWEEN LENGTH OF SERVICE AND ATTITUDES TOWARD STATEMENT 23

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Level of Significance
Between	7.405	2	3.702	2.465	NS
Within	237.285	158	1.501		
Total	244.690	160			

The F ratio required for significance at the .05 level was not obtained. Since the F ratio was not significant, the null hypothesis was retained.

The data obtained as a result of applying the analysis of variance to the responses to statement 29, "All education in the public schools should be career education," are presented in Table XX.

TABLE XX

RELATIONSHIP BETWEEN LENGTH OF SERVICE AND ATTITUDES TOWARD STATEMENT 29

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Level of Significance
Between	.724	2	.362	.164	NS
Within	348.598	158	2.206		
Total	349.322	160			

The F ratio obtained was not significant at the .05 level and the null hypothesis was retained.

Secondary Hypothesis IV

Secondary Hypothesis IV in the null form stated that there is no significant difference between the attitudes of the rural management structure and the metropolitan management structure on what should be involved in career education. There were four statements on the attitude scale related to Secondary Hypothesis IV that are presented in the following tables.

Table XXI presents the data on statement 5, "Career education should provide skill, information, and help in developing attitudes about the personal, social, and economic significance of work."

TABLE XXI

RELATIONSHIP BETWEEN SCHOOL LOCATION AND ATTITUDES TOWARD STATEMENT 5

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Level of Significance
Between	.293	1	.293	.528	NS
Within	82.163	148	.555		
Total	82.456	149			

The F ratio obtained was not significant at the .05 level. The null hypothesis was retained.

Attitudes toward statement 18, "In the exploration of occupations, first-hand experience, field trips, and classroom instruction would best help the students gain insight into the various occupations," for rural and metropolitan management structure personnel were compared. The results of analysis of variance are presented in Table XXII.

TABLE XXII

RELATIONSHIP BETWEEN SCHOOL LOCATION AND ATTITUDES TOWARD STATEMENT 18

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Level of Significance
Between	1.635	1	1.635	2.978	NS
Within	81.250	148	.549		
Total	82.885	149			

The F ratio was not significant at the .05 level and the null hypothesis was retained.

Attitudes of respondents from the rural and metropolitan management structure toward statement 23, "Career education should involve all grades, multi-disciplines, and include unskilled, technical, and professional work," were treated statistically, using analysis of variance techniques. Table XXIII presents the results of this analysis. The F ratio was not significant at the .05 level. The null hypothesis was retained and the research hypothesis was rejected.

TABLE XXIII

RELATIONSHIP BETWEEN SCHOOL LOCATION AND ATTITUDES TOWARD STATEMENT 23

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Level of Significance
Between	1.441	1	1.441	1.552	NS
Within	229.713	148	1.552		
Total	230.154	149			

Attitudes of the rural and metropolitan management structure were compared on statement 29, "All education in the public schools should be career education." The results of statistical analysis are shown in Table XXIV.

TABLE XXIV

RELATIONSHIP BETWEEN SCHOOL LOCATION AND ATTITUDES TOWARD STATEMENT 29

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Level of Significance
Between	.459	1	.459	.216	NS
Within	314.194	148	2.122		
Total	314.653	149			

The difference in the attitudes of the management structure groups was not significant; therefore, the null hypothesis was retained.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The emphasis of this study was placed on career education and views held by the superintendents and principals toward this concept. Particular attention was given to the views of superintendents and principals in relation to the progression and involvement of career education in Texas public schools. Utilized in this study were some aspects of vocational education and how the management structure viewed these points. Presented in Appendix E are tables that contain the mean, standard deviation, and t value for all the statements on the instrument.

Career education in the nation and Texas is at the embryo stage. There has been very little done in public educational systems toward preparing the nation's youth for employment after high school in giving students some skills needed at least to begin to enter the labor force. The present vocational education programs have made contributions by helping public education move toward helping students in obtaining some skills that may help them gain employment after graduation from the secondary school.

This study consisted of several phases. Each phase was important in contributing to the finalization of the study. The first phase was the development of an instrument to measure the attitudes of superintendents and principals toward career education. Items for the initial instrument were based on ideas contained in various sources that were researched for this study. A Likert-type attitude scale was chosen and developed into an instrument meeting the criterion to measure the attitudes of superintendents and principals toward the career education concept. The initial instrument was presented to a panel of jurors for their consideration to establish the face validity of the instrument. The instrument was reconstructed using the suggestions of the jurors and some items were deleted. The reliability of the instrument was established, using the split-half technique, before the questionnaire was mailed to the samples.

Two samples were drawn, one from the population of superintendents and one from the population of principals. A questionnaire was sent to each of the 100 individuals in each of the samples. There were two follow-up attempts made to obtain as many of the questionnaires as possible.

An additional phase of this study involved the data that were compiled from the questionnaires returned by the two samples. These data and their statistical analysis were presented in Chapter IV. Research hypotheses were tested with two types of statistical treatments. The *t*-test for

two independent samples was used on Hypotheses I, II, III, and IV and Secondary Hypothesis I. The simple analysis of variance was used on Secondary Hypotheses II, III, and IV. These statistical techniques were used to determine if there were significant differences in the attitudes of superintendents and principals in relation to statements on the instrument. Part A. of the questionnaire contained descriptive data on the respondent and his school district. Part B contained statements on career education and vocational education. Secondary Hypotheses II, III, and IV concerned relationships between statements on the attitude portion of the instrument and length of service, school size, and metropolitan or rural location. All other hypotheses were concerned with the relationships between attitudes of superintendents and principals and certain statements on Part B of the instrument.

Findings

As a result of an analysis of data from items on the instrument, the following results were statistically found:

1. There was no significant difference between the attitudes of superintendents and principals toward the purposes of career education.

2. With the exception of statement 18, "In the exploration of occupations, first-hand experience, field

trips, and classroom instruction would best help the student gain insight into the various occupations," there was no significant difference between the attitudes of superintendents and principals toward what should be involved in career education.

3. There was no significant difference between the attitudes of superintendents and principals on the proposal that expanded vocational education programs would better meet the needs of Texas youth.

4. There was no significant difference between the attitudes of superintendents and principals on the question of career education creating a unified school.

5. With the exception of statement 14, "Career education should involve all levels of education from kindergarten through the twelfth grade," there was no significant difference between the attitudes of superintendents and principals toward the progression of career education in the public schools.

6. There was no significant relationship between the size of the school system and the attitudes of the management structure toward the need for developing a career education curriculum.

7. There was no significant relationship between the length of service and the attitudes held by the management structure on what should be involved in the progression of career education.

8. There was no significant difference in the attitudes of the rural management structure and the metropolitan structure on what should be involved in career education.

The following results were not related to hypothesis testing, but are a summary of the attitudes of the management structure toward career education:

1. More emphasis should be placed on training students for employment.

2. Most vocational programs need modification.

3. The cost of vocational education has benefited enough students to be justified.

4. Career education could be an improvement over vocational education.

5. Career education could play a significant part in public education.

6. Students have not been provided with exploratory vocational experiences early enough in their development.

7. The philosophy of vocational education should be changed to a broader, more flexible concept of career education rather than to a more structured concept.

8. Academic education should be coordinated with career education.

9. The public schools should place more emphasis on orientation of students toward available occupational opportunities.

Conclusions

The following conclusions were made on the basis of the findings, as indicated by the attitudes of superintendents and principals toward career education in Texas:

1. If career education is introduced into the curriculum of the public schools of Texas, the superintendents and principals will support the concepts and purposes of career education. The age of the management structure, the size of the school district, and the rural or metropolitan location of the school district should not become a factor in determining the acceptance of the career education concept by the Texas public school management structure.

2. A curriculum developed in the public schools of Texas with the concept of career education could help create an educational system in which students would no longer be placed in general, college preparatory, or vocational educational curricula, but a system in which all students could engage in experiences in one of the fifteen occupational clusters.

3. A career education curriculum could aid students in gaining skills and information about occupations that would enable them to seek employment or to enter college after graduation from the public secondary schools.

4. A career education curriculum may include a wide array of subjects with exploration of occupations, experiences in various occupations, field trips, and classroom instruction and be coordinated with academic education.

5. Vocational education in Texas needs to be changed or modified to enable more students in the public schools to gain insight into the world of work.

6. A career education curriculum could enable more students to investigate the occupational choices that are available than in the present system of public education.

Recommendations

In view of the findings and conclusions of this study, the following recommendations appear to be warranted:

1. A career education curriculum should be developed for the purpose of helping all students in the public schools of Texas gain insight into the world of work and should not be directed toward any one level of work, but include all levels from unskilled to professional.

2. The progression of a career education curriculum should involve three steps in the public schools. First, orientation to career education in the elementary school, second, exploration of specific clusters of occupations and the selection of areas for specialization in the junior high school, and third, continuation of exploration of occupations and specialization in selected occupational areas in the high school.

3. After the development of a career education curriculum, the present vocational education system should be replaced by the career education curriculum.

4. Additional studies should be undertaken in order to determine some specific courses and course content for the career education curriculum.

APPENDIX A

Dear Sir:

I am a student at North Texas State University and am in the process of writing my dissertation, "A Study of Attitudes Held by Superintendents and Principals Toward Career Education in Texas." It is hoped that the information gained through this study will help the Texas Education Agency in their planning of career education. This study will require the use of a questionnaire which will be sent to the management structure personnel in the Texas public schools.

Your name was submitted to me in a list made up of persons thought to be qualified in the area of administration and supervision. It was felt that you would be a qualified judge to help in the validation of the questionnaire to be used in this study. Please review the attached questionnaire and either delete, add, or amend the questions so that the respondents' questionnaire will be more meaningful and comprehensive.

There are six judges being used; of these, four must agree upon a question before it will be placed on the final questionnaire that will be sent to the participants in the study. Please feel free to complete this questionnaire in a manner that you believe will provide maximum benefit to the study.

Thank you for the time and response to this letter.

Sincerely,

Denist Harrison

APPENDIX B

Dear Administrator:

I am a student at North Texas State University and am writing to request your help in a statewide survey on career education. This study is being conducted in cooperation with the Division of Program Development, Texas Education Agency. You are one of the superintendents or principals selected through random procedures to participate in this study.

The study is entitled "The Attitudes of Superintendents and Principals Toward Career Education in Texas" and is a small part of the larger overall planning and development phase of career education in the state of Texas. Your help is needed in order that the data may be collected, compiled, and forwarded to the Texas Education Agency for their consideration in the planning of career education.

Enclosed you will find a questionnaire which has been designed to make answering as easy as possible. It will take approximately 15 minutes to complete the questionnaire. All answers will be considered confidential. Please fill out the enclosed questionnaire and return it as soon as possible. Thank you for your cooperation in this study.

Director of the Study

Dr. William A. Miller
Professor of Education
College of Education
North Texas State University
Denton, Texas 76203

Sincerely yours,

Denist Harrison
Student
North Texas State University
P. O. Box 13364
Denton, Texas 76203

APPENDIX C

Dear Administrator:

Approximately two weeks ago, I sent you a copy of a questionnaire concerning the Attitudes Held by Superintendents and Principals Toward Career Education in Texas, but have not yet received your reply. Your response to this questionnaire is urgently desired because it is persons in your position who can help build the career education program. Will you respond today?

Should you need another copy of the questionnaire, please check the notation on this form and return it to me. However, if you cannot now participate, check the notation below and return it to me. Thank you for your consideration and help in this important study.

Sincerely,

Denist Harrison

_____Please send me another copy of the questionnaire.

_____Please drop me from this study.

APPENDIX D

A STUDY OF ATTITUDES HELD BY SUPERINTENDENTS AND PRINCIPALS TOWARD CAREER EDUCATION IN TEXAS

Career education is an educational process aimed at helping students gain insight into the world of work, explore different kinds of work, why man works and the social and economic benefits of work, help students make reasonable decisions about occupational choices, gain skills needed to gain employment or pursue further academic education leading to eventual employment.

Part A

Directions: Please supply the information requested by checking the appropriate responses. Please answer all questions.

1. What is your age?
   ____Under 30, ____31-40, ____41-50, ____51-60,
   ____Over 61
2. What administrative position do you now hold?
   ___Superintendent, ___Principal
3. How many years have you been in your present position?
   ___Under 10, ___11-20, ___Over 21
4. What official position did you hold before becoming an administrator?
   ____Teacher (Field_____)
   ____Counselor
   ____Other (Specify_____)
5. What is the size of the city in which your district is located?
   ____Less than 10,000 population
   ____Between 10,000 and 50,000 population
   ____Over 50,000 population
6. What is the student population for your district?
   ____Under 1,000 ____3,001-5,000 ____7,001-9,000
   ____1,001-3,000 ____5,001-7,000 ____Over 9,001
7. How is your school district classified?
   ____B, ____A, ____AA, ____AAA, ____AAAA

8. Please check the vocational education courses offered in your district.

____Distributive Education	____General Mechanics
____Auto Mechanics	____Welding
____Auto Body	____Electronics
____Office Practices	____Home Economics
____Cosmetology	____Cooperative Vocational-Academic Education
____Machine Shop	____All of the Above
____Vocational Agriculture	____Other (Please Specify)
____Building Trades	_____
____Vocational Drafting	_____
____Industrial Cooperative Training	_____

9. What percentage of your students are enrolled in the vocational programs?
____Under 15%, ____16%-25%, ____26%-35%, ____36%-45%, ____Over 46%

10. What is the percentage of students who have completed the vocational program and gone into the occupation for which they were trained?
____Under 15%, ____16%-25%, ____26%-35%, ____36%-45%, ____Over 46%

11. What is the teacher-pupil ratio in your vocational program?

____Under 15 to 1	____26 to 1--35 to 1
____16 to 1--25 to 1	____Over 36 to 1

Part B

Directions: Please check the response which most closely represents your feelings about each item. These items are not considered to be answered in terms of right or wrong. Do not spend too much time on any one item. Place a check in the space which most closely corresponds with your feelings about the statement. Select only one of the responses. Please answer all items.

Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree	
						1. Schools should place greater emphasis on helping train students for employment after high school.
						2. Public schools have not helped in giving sufficient orientation about occupational choices to students.
						3. Most vocational education programs offered by the public schools are in need of modification.
						4. The vocational education programs in Texas public schools benefit enough students to justify the cost.
						5. Career education should provide skill, information and help in developing attitudes about the personal, social, and economic significance of work.
						6. Career education has no significant part to play in the public schools of Texas.
						7. The present vocational education programs in the public schools should be expanded.
						8. The concept of career education will not make any improvements over traditional vocational education programs.
						9. Expanding the present vocational education programs will not change their effectiveness in aiding students to gain successful employment.
						10. Orientation in career education should begin in the elementary school.
						11. Orientation in career education should begin in the high school.
						12. Orientation in career education should begin in the junior high school.

Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree	
						13. The junior high school should assist the students in selecting specific areas of career education in which he may specialize in high school.
						14. Career education should involve all levels of education from kindergarten through the twelfth grade.
						15. The junior high school should promote exploratory experiences for students through career education.
						16. The high school should promote exploratory experiences for students through career education.
						17. Career education in the junior high school should involve the exploration of specific clusters of occupations.
						18. In the exploration of occupations, first-hand experience, field trips, and classroom instruction would best help the student gain insight into the various occupations.
						19. Academic education should be coordinated with corresponding career education.
						20. Students have not been provided with exploratory experiences in vocational education early enough in their development.
						21. The main purpose of career education is to help the minority groups.
						22. The present philosophy of vocational education should be changed to a broader concept of career education.
						23. Career education should involve all grades, multi-disciplines, and include unskilled, semi-skilled, technical, and professional work.

Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree	
						24. There are not enough students involved in the present vocational programs in the public schools.
						25. At the present time vocational education should be changed into a more structured program that concentrates on specific programs.
						26. The career education concept could unify the academic and vocational approaches to education.
						27. Career education should involve both students who enter the world of work immediately after high school and students who enter post-high school education.
						28. The public schools of Texas are not offering enough students the opportunity to gain skills needed to enter the world of work.
						29. All education in the public schools should be career education.
						30. A new curriculum with the concept of career education should be developed.
						31. Career education is mainly for the unskilled worker.
						32. The philosophy of vocational education should be changed to a more structured view that concentrates on specific programs.

PART C

If you have any comments to make about occupational-career education, please make them below.

APPENDIX E

VARIABLE, RESPONDENT, MEAN, STANDARD DEVIATION, t VALUE, AND LEVEL OF SIGNIFICANCE FOR THE THIRTY-TWO STATEMENTS ON THE INSTRUMENT

Variable No.	Respondent	Mean	S.D.	t Value	Level of Significance
1	Superintendents Principals	5.45 5.40	.84 .83	.38	NS
2	Superintendents Principals	4.50 4.56	1.31 1.08	.32	NS
3	Superintendents Principals	4.37 4.65	1.25 1.14	1.49	NS
4	Superintendents Principals	4.95 4.81	1.09 1.13	.78	NS
5	Superintendents Principals	5.27 5.14	.77 .70	1.11	NS
6	Superintendents Principals	1.48 1.54	.87 .75	.47	NS
7	Superintendents Principals	5.09 5.23	.90 .81	1.02	NS
8	Superintendents Principals	2.14 2.27	1.06 1.08	.75	NS
9	Superintendents Principals	2.56 2.71	1.44 1.28	.70	NS
10	Superintendents Principals	4.15 3.82	1.49 1.48	1.41	NS
11	Superintendents Principals	2.73 2.81	1.57 1.55	.32	NS
12	Superintendents Principals	3.25 2.32	1.71 1.56	1.40	NS
13	Superintendents Principals	4.75 4.65	1.09 1.10	.60	NS
14	Superintendents Principals	4.06 3.56	1.56 1.68	1.96	.05

APPENDIX E--Continued

Variable No.	Respondent	Mean	S.D.	t Value	Level of Significance
15	Superintendents Principals	4.86 4.72	.88 .93	.98	NS
16	Superintendents Principals	4.86 4.75	.92 .90	.80	NS
17	Superintendents Principals	4.67 4.62	.84 .94	.32	NS
18	Superintendents Principals	5.08 4.85	.66 .77	2.05	.05
19	Superintendents Principals	5.02 4.96	.74 .87	.48	NS
20	Superintendents Principals	4.48 4.65	1.22 1.03	.97	NS
21	Superintendents Principals	1.91 2.14	.95 1.18	1.38	NS
22	Superintendents Principals	4.80 4.82	.78 .60	.18	NS
23	Superintendents Principals	4.43 4.43	1.21 1.25	.008	NS
24	Superintendents Principals	4.42 4.64	1.21 1.11	1.21	NS
25	Superintendents Principals	3.81 3.93	1.23 1.22	.61	NS
26	Superintendents Principals	4.79 4.69	.85 .62	.88	NS
27	Superintendents Principals	4.92 4.71	.90 .77	1.60	NS
28	Superintendents Principals	4.90 4.88	1.01 1.09	.08	NS
29	Superintendents Principals	2.51 2.16	1.64 1.29	1.54	NS
30	Superintendents Principals	4.12 4.17	1.34 1.26	.25	NS
31	Superintendents Principals	1.97 2.17	1.16 1.03	1.14	NS
32	Superintendents Principals	3.46 3.37	1.41 1.35	.41	NS

APPENDIX F

NUMBER OF RESPONDENTS FROM EACH SCHOOL SIZE CLASSIFICATION

Respondents	B	A	AA	AAA	AAAA
Superintendents	17	15	17	18	17
Principals	17	15	16	17	15

BIBLIOGRAPHY

Books

Barnhart, C. L., editor, The American College Dictionary, New York, Random House, 1960.

Fox, David, The Research Process in Education, New York, Holt, Rinehart and Winston, Inc., 1969.

Garrett, Henry E., Statistics in Psychology and Education, New York, David McKay Company, Inc., 1966.

Hoppock, Robert, Occupational Information, New York, McGraw-Hill Book Company, 1967.

Krech, Robert, The Individual in Society, New York, McGraw-Hill Book Company, 1962.

McNemar, Quinn, Psychological Statistics, New York, John Wiley and Sons, Inc., 1962.

Oppenheim, Abraham, Questionnaire Design and Attitude Measurement, New York, Basic Books, Inc., 1966.

Roscoe, John, Fundamental Research Statistics, Dallas, Holt, Rinehart and Winston, Inc., 1969.

Rosenburg, James, editor, New Concepts in Technical-Vocational Education, New York, Teacher's College Press, 1965.

Sax, Gilbert, Empirical Foundations of Educational Research, Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1968.

Shaw, Marvin and Jack Wright, Scales for the Measurement of Attitudes, New York, McGraw-Hill Book Company, 1967.

Sherif, Carolyn and others, Attitude and Attitude Change, Philadelphia, W. B. Saunders Company, 1965.

Summers, Gene, editor, Attitude Measurement, Chicago, Rand McNally and Company, 1970.

Super, Donald, The Psychology of Careers, New York, Harper and Row Publishers, Inc., 1957.

Wolfbein, Seymour, Education and Training for Full Employment, New York, Columbia University Press, 1967.

Articles

Aylor, K. E., "Peephole Into the World of Work," American Education, VII (March, 1971), 29-30.

Baker, Richard A. and others, "Curricular Approach to Vocational Choice," American Vocational Journal, XLIV (December, 1969), 57-58.

Bergland, Bruce W. and John D. Krumboltz, "An Optimal Grade Level for Career Exploration," Vocational Guidance Quarterly, XVIII (September, 1969), 29-33.

Bottoms, Gene and George O'Kelley, "Vocational Education as a Developmental Process," American Vocational Journal, XLVI (March, 1971), 21-24.

Conroy, William, "The Staff Attitudes Factor," American Vocational Journal, XLIV (December, 1969), 28-29.

Crews, Alton, "Career-Oriented Curriculum--Cobb County Model," American Vocational Journal, XLIV (December, 1969), 17.

DeVore, Paul W., "Preparing People for the World of Work," Journal of Industrial Arts Education, XXIX (March, 1970), 22-28.

Edwards, A. L., "A Critique of 'Neutral' Items in Attitude Scales Constructed by the Method of Equal Appearing Intervals," Psychological Review, LIII (May, 1946), 160-168.

_____ and F. P. Kilpatrick, "The Scale Discrimination Method for Measuring Social Attitudes," American Psychologist, II (October, 1947), 331-339.

Ferguson, John L. and Frank G. Dickey, "Career-Planning, Job Placement, and Follow-Up," Review of Educational Research, XXXII (October, 1962), 377-381.

Guttman, L. A., "A Basis for Scaling Quantitative Data," American Sociological Review, IX (September, 1944), 139-150.

Hamilton, Jack A. and William J. Webster, "Practically Speaking," Vocational Guidance Quarterly, XIX (March, 1971), 215-219.

Loomis, William G., "Career Education," American Education, VII (March, 1971), 3-5.

Lux, Donald, "Think Twice About Jumping Aboard the Vocational-Education Bandwagon," School Shop, XXX (February, 1971), 43-44.

Maley, Donald, "How Industrial Arts Relates to Occupational Education," Industrial Arts and Vocational Education, XXIX (February, 1970), 30-32.

Marland, Sidney P., "Career Education Now," School Shop, XXX (May, 1971), 27-29.

_____, "Marland Reasserts USOE Thrust," Phi Delta Kappan, LIII (November, 1971), 204.

Neel, Elsie, "Preparing Students for Employment," The School Counselor, XVIII (March, 1971), 294-296.

Parnell, Dale, "State Plan for Applying Relevance to Education," American Vocational Journal, XLIV (December, 1969), 14-17.

Ryan, Charles, "Innovations in Career Development," American Vocational Journal, XLIV (March, 1969), 63-65.

Samson, George, "Enriching Their Early-Age Store of Occupational Information," School Shop, XXX (February, 1971), 60-61.

Sovilla, E. Sam, "A Plan for Career Planning," Journal of College Placement, XXXI (October, 1970), 50-58.

Stanton, William, "Middle School Years and Career Development," The Clearing House, XLIV (May, 1970), 531-533.

Straubel, James, "Accountability in Vocational Technical Instruction," Educational Technology, XI (January, 1971), 43.

Super, Donald, "A Theory of Vocational Development," American Psychologist, VIII (May, 1953), 180-186.

Teeple, John B., "Planning Vocational Programs to Meet National Goals," American Vocational Journal, XLIV (November, 1969), 31-33.

Venn, Grant, "Observations on Industrial Arts and Vocational Education," Journal of Industrial Arts, XXIX (September, 1969), 14-17.

Vetter, L. E., "Planning Ahead for the World of Work," American Vocational Journal, XLV (December, 1970), 28-30.

Reports

Lee, Arthur and Doris Fitzgerald, Career Education in Arizona, Report of Arizona Occupational Research Coordinating Unit, Phoenix, Arizona, 1970.

Spengler, James, Attitudes of School Board Members Toward Occupational Education in Western New York, Report of the New York School Development Council, Williamsburg, New York, 1970.

Publications of Learned Organizations

Robertson, Von H., editor, Career Counseling, 1968 Yearbook, Chicago, American Vocational Association, 1968.

Venn, Grant, Man, Education and Work, Washington, American Council on Education, 1964.

Public Documents

Department of Health, Education and Welfare, Evaluation of Vocational Education Now and Tomorrow, Washington, Government Printing Office, 1969.

Department of Labor, Dictionary of Occupational Titles, Washington, Government Printing Office, 1965.

Kliever, Douglas, Vocational Education Act of 1963, Washington, Government Printing Office, 1970.

Marland, Sidney P., Career Education, Washington, Government Printing Office, 1971.

National Advisory Council on Vocational Education, Vocational Education Amendments of 1968, Washington, Government Printing Office, 1970.

Texas Education Agency, Public School Directory, Austin, Texas Education Agency, 1971.

U.S. Office of Education, "Statement of Policies for the Administration of Vocational Education," Bulletin No. 1, Washington, Government Printing Office, 1948.

Unpublished Material

Bugher, Wilmer, "An Evaluation of the Superintendent's Concept and Impact on Selected Aspects of Vocational Education," unpublished doctoral dissertation, Purdue University, Indianapolis, Indiana, 1960.

Englebart, Leon, "Developing a Vocational Education Curriculum Model," unpublished doctoral dissertation, University of Nebraska, Lincoln, Nebraska, 1970.

Haynes, Suzanne, "The Role of Texas Secondary Schools in the Preparation of Youth for Employment," unpublished master's thesis, University of Texas, Austin, Texas, 1970.

Kaufman, Jacob, "Role of Secondary Schools in the Preparation of Youth for Employment," unpublished paper, Institute for Research on Human Resources, Pennsylvania State University, University Park, Pennsylvania, 1967.

McNeil, Jackson, "A Study of Vocational Education as Perceived by Principals in Thirty-Two High Schools," unpublished doctoral dissertation, Auburn University, Auburn, Alabama, 1968.

Martin, Waldo, "The Identification of Occupational Areas for Emphasis in Vocational Education Program Planning," unpublished doctoral dissertation, University of Illinois, Urbana, Illinois, 1970.

Parks, Darrell, "Attitudes and Principles Regarding Vocational Education in Ohio," unpublished doctoral dissertation, Ohio State University, Columbus, Ohio, 1968.

Prichard, Neal Wayne, "Selected Factors Affecting School Administrators' and School Board Members' Attitudes Toward Vocational Trade and Industrial Education in Pennsylvania," unpublished doctoral dissertation, Pennsylvania State University, University Park, Pennsylvania, 1962.

Texas Education Agency, "A Design for the Development of Occupational-Career Orientation," unpublished paper, Austin, Texas.

Walker, Sister Mary Catherine, "The Influence of Instruction in Occupations and Self Appraisal Activities upon the Vocational Preferences, Vocational Interests, and Vocational Attitudes of High School Girls," unpublished doctoral dissertation, Northwestern University, Evanston, Illinois, 1955.