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A STUDY OF DISTRIBUTIVE EDUCATION STUDENTS' PERCEPTIONS AND ATTITUDES TOWARD SECONDARY DISTRIBUTIVE EDUCATION TEACHERS IN UTAH

by

Wallace J. Levere

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF EDUCATION

in

Curriculum Development and Supervision
with an emphasis in
Business Education

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1975

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DEDICATION

This dissertation is dedicated to my parents, Mr. and Mrs. Raymond G. Pitts, who not only inspired my initial desire for knowledge and truth, but who also encouraged and supported my efforts in this behalf.

ACKNOWLEDGMENTS

I would like to extend my sincere appreciation and gratitude to the following people who have given their help, guidance, and professional assistance in the preparation of this dissertation:

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To all those many others who helped and encouraged me in many various ways during the preparation of this dissertation.

In closing, I also give thanks to our Lord, who has given me the strength and capability to complete this dissertation.

Wallace J. Levere

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

LIST OF TABLES

LIST OF TABLES (Continued)

LIST OF TABLES (Continued)

LIST OF TABLES (Continued)

LIST OF TABLES (Continued)

LIST OF TABLES (Continued)

ABSTRACT

A Study of Distributive Education Students' Perceptions and Attitudes Toward Secondary Distributive Education Teachers in Utah

by

Wallace J. Levere, Doctor of Education

Utah State University, 1975

Major Professor: Dr. Harold R. Wallace
Department: Business Education

The purpose of this study was to measure secondary distributive education students' perceptions and attitudes toward their teacher-coordinators in the Utah secondary schools. The student scores were then analyzed to determine if there were any differences which may be attributed to a specific teacher characteristic such as age, sex, teaching experience, vocational work experience, and academic preparation.

Nine groups of null hypotheses (54 total) were tested. Each group consisted of the following six factors derived from student responses to the attitude and pupil observation survey questionnaires: (1) Friendly, cheerful, admired; (2) Knowledgeable, poised; (3) Interesting, preferred; (4) Strict control; (5) Democratic procedure; and (6) Student attitude score.

The population involved in the study consisted of the students of those teacher-coordinators randomly selected from the teacher-coordinators in Utah. Three questionnaires were used in the study. The

first questionnaire was a General Teacher Information Questionnaire designed to obtain teacher demographic information. The second questionnaire used was the Pupil Observation Survey (POSR) which was designed to measure students' perceptions. The third questionnaire used was A Scale for Measuring Attitude Toward Any Teacher, which measured the attitudes of the students.

The null hypotheses were tested by analysis of variance. Where more than two groups were involved, a statistical procedure known as the Duncan New Multiple Range Test was used to analyze where the difference occurred. The .05 level of significance was the criterion for rejecting or failing to reject the hypotheses.

The following findings were reported:

No significant difference was found between student perception and attitude scores relating to age, sex, years of occupational experience, occupational field experience, type of experience, academic degree, and type of professional training of the teachers.

There was, however, a significant difference in the student scores relating to teaching experience and teaching assignment. The perception scores indicated that the students perceived teachers with three or more years' teaching experience as being more knowledgeable and poised than those teachers with less than three years' teaching experience. Students also perceived the teachers with three or more years' teaching experience as being more interesting and preferred. The student attitude scores for the teachers with three or more years' teaching experience was also significantly different from those student attitude scores for the teachers with less experience.

Students perceived those teachers who taught both non-skills and skills subjects as using significantly more democratic procedures than those teachers of only skills subjects.

The major recommendations were:

1. A larger scale study, related to student perceptions and attitude toward their teacher-coordinators, should be undertaken to further substantiate the findings of this study.

2. Studies should be undertaken to determine students' perceptions relating to teacher effectiveness and evaluation of curriculum and methodology used in Distributive Education.

(193 pages)

CHAPTER I

INTRODUCTION

This study of student perceptions and attitudes is based on role theory. Brown (1965, p. 3) defines role theory as the study of human behavior resulting from the interactions between people in various types of groups and social systems. Sarbin (1954, p. 223) further explains that role theory includes such units as self, role, and position. Self is defined as an individual performing a role in a specific position: for example, a student or teacher. Role is defined as ones actions in a specific position. Position is defined as ones status or office in a social situation. The theory regards human behavior as the product of the interaction of self and role. Ones position in a social structure makes one behave in a certain way, and in return one learns to expect or anticipate certain actions from others. Ones position would also affect ones attitudes or feelings to some extent.

Krech, Crutchfield, and Ballachey (1962) state that role behavior is thought to be influenced by an individual's knowledge of the role, his motivations to perform the role, his attitude toward himself, and his interaction with other persons in a social situation. Role behavior, then, is affected by ones perceptions and attitudes as stated in the following:

> The behavior of an individual is a function of his ways of perceiving. That is to say, how any person behaves at a given moment is a direct expression of the way things seem to him at that moment. ... How each of us behave at any given moment is a result of how things seem to him. What a person does, what a person learns, is thus a product of what is going on in his unique and personal field of awareness. People behave in terms

> of the personal meanings (perceptions) existing for them at the moment of action. (Association for Supervision & Curriculum Development, 1962, pp. 67-68)

Therefore, it can be concluded that students' perceptions and attitudes play an important part in the learning process. Kelly (1947, p. 114) states that an educational system that hopes to change behavior must do more than provide facts--it must deal actively with meanings or personal perceptions.

While it is sometimes impossible to distinguish between perceptions and attitudes, some writers believe that there is a difference. For example, Guilford (1939, p. 151) states that "Perception involves two aspects: (1) the organization of sensory material and (2) the attachment of meaning or significance to it." Guilford (1939, p. 337) further indicates that:

> In a general sense, mere preference based upon pleasantness or unpleasantness, an esthetic judgment, or the expression of an interest, may be called attitudes. The attitude may be conscious or unconscious, verbalized or unverbalized, and active or inactive at the moment.

Further evidence is provided for the assumption that perceptions and attitudes are different as explained in the following statement:

> The behavior of the individual--his verbal reactions, his judgments, his actions--are therefore determined by the interaction between the specific attitudes relating to the object of his action, the other dynamic systems in communications with these specific attitudes, and the immediate perceptions contemporary with the situation in which he is behaving. (Helson, 1951, p. 684)

Finally, as stated above, this interaction of perceptions and attitudes influences behavior. Glasser (1969, pp. 23-24) recognizes the importance of student perceptions and attitudes in the learning process when he states that today's students need involvement with educators who are warm and personal, who will encourage them, who will

expect a commitment from the students, who will not excuse them when they fail in their commitments, but who will work with them again and again as they commit and recommit until they finally learn to fulfill a commitment.

This study is concerned with perceptions and attitudes of distributive education students toward their teacher-coordinators. It is also an attempt to determine if this student-teacher interaction is one which is beneficial for the learning process. A beneficial learning process results when the students perceive their teachers in a positive manner and display favorable attitudes toward those teachers.

Statement of the Problem

Distributive education programs in the Utah secondary schools are very important in the preparation of students for the world of work. Such programs need evaluation in order to measure their efficiency and success in carrying out their objectives. In the past, little or no evaluation of the Utah secondary distributive education programs has been attempted. Distributive education program evaluations can be made by various groups such as administrators, teachers, and students. Because the students of a program are so vitally affected by everything in that particular program, this research study will attempt to determine how distributive education students feel toward their teacher-coordinators in the Utah secondary schools.

The purpose of this study is to measure secondary distributive education students' perceptions and attitudes toward their teacher-coordinators in the Utah secondary schools. One instrument was used to

measure the students' perceptions, and another instrument was used to measure the students' attitudes. The instrument used to measure the students' perceptions was the Pupil Observation Survey (POSR) which is discussed in detail in Chapter III. The (POSR) is composed of 38 questions which relate to five sets of personal characteristics or factors. Veldman and Peck (1963, p. 349) summarized the specific questions which measure each factor. Their summary is presented in Appendix A to show the questions used to identify each factor. Examples of questions used in each factor are given on pages 14 and 15 for the reader's benefit.

The instrument used to measure the students' attitudes was A Scale for Measuring Attitude Toward Any Teacher which is also discussed in detail in Chapter III. This instrument was developed by Loyal A. Hoshaw under the direction of H. H. Remmers at Purdue University and is composed of 45 statements relating to teacher behavior in the classroom. A student attitude score is obtained which is related to the attitude factor in this study.

Variables which were considered in the study and which may have had a relationship to students' perceptions and attitudes were teacher age, teacher experience, teacher sex, and teacher academic preparation.

The specific problem with which this study is concerned is to analyze student scores in relation to students' perceptions and attitudes toward their teachers and to determine if there are differences between student scores which are due to some specific teacher characteristic. For example, does teacher age affect student perceptions and attitude scores? What about teacher sex and its effect on how students perceive the teacher? Does the number of years' teaching

experience affect the students' perception and attitude scores? Other variables which may be considered are: the courses taught, the years of occupational experience, the occupational experience in a specific occupational field, the level of occupational experience, the academic degree attained, and principles courses taken by the teachers. All or some of these variables may or may not make a difference in student perceptions and attitudes. This study is an attempt to determine if these variables influence how distributive education students perceive and feel about their teacher-coordinators.

Hypotheses to be tested

Nine groups of null hypotheses (54 total) were formulated to answer the specific questions involved in the study. Each group consists of the following six "factors" derived from student responses to the questionnaires:

1. Friendly, cheerful, admired
2. Knowledgeable, poised
3. Interesting, preferred
4. Strict control
5. Democratic procedure
6. Student attitude score

A more detailed definition of each factor is found on pages 11 through 13.

The hypotheses are that with respect to student scores on Factors I., II., III., IV., V., and VI., there will be no difference:

1. Between teachers under 30 years of age and teachers over 30 years of age.

2. Between male and female teachers.

3. Between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience.

4. Between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects.

5. Between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience.

6. Among teachers who have had occupational experience in the fields of Food Retailing, Retailing-Department Stores, Petroleum Services, Insurance, and Real Estate.

7. Between teachers with supervisory work experience and teachers with no supervisory work experience.

8. Between teachers with Bachelor's degrees and teachers holding Master's degrees.

9. Between teachers who have taken Distributive Education Principles and Methods courses and teachers who have not taken Distributive Education Principles and Methods courses.

Definition of Terms

To assist the reader in analyzing the structure and findings of this study, a definition of terms is provided to clarify the intent of the author.

Distributive education. Distributive education is defined as a program of education to provide instruction in merchandising, marketing, and management.

Distribution. Distribution is defined as those occupations followed by proprietors, managers, or employees engaged primarily in marketing or

merchandising goods or services. Such occupations may include, but are not limited to, retailing, wholesaling, manufacturing, storing, transporting, financing, and risk bearing.

Distributive teacher-coordinator. A distributive teacher-coordinator may be defined as a member of the school staff who teaches distributive education courses in addition to performing duties of a coordinator in integrating classroom instruction and on-the-job activities of those students who are employed in distributive occupations.

Skill subjects. Skill subjects are defined as those courses which require a specific level of psycho-motor skill development in order to achieve success. A typical skill subject is typewriting.

Non-skill subjects. Non-skill subjects are defined as those courses which require more development of the cognitive and affective skill areas than the psycho-motor areas in order to achieve success. A typical non-skill subject is marketing.

Perceptions. Perceptions are defined as those personal feelings which cause students to judge teacher behavior in a specific way.

Factor. A factor is a group of questions in the Pupil Observation Survey (POSR), the student perception questionnaire, and in A Scale for Measuring Attitude Toward Any Teacher, the student attitude questionnaire, which compose a specific teacher behavior or student attitude score. See pages 11 through 13 for detailed definitions of the following six factors:

1. Friendly, cheerful, admired
2. Knowledgeable, poised
3. Interesting, preferred
4. Strict control

5. Democratic procedure

6. Student attitude score

Teacher demographic information. Teacher demographic information is defined as that data gathered by means of the teacher information questionnaire relating to specific teacher characteristics. Those characteristics are fully defined in Appendix C.

Scope and Limitations of the Study

The perceptions of secondary distributive education students were limited to those perceptions identified by the Pupil Observation Survey (POSR), the instrument used to measure perceptions in the present study. The attitudes of secondary distributive education students were limited to those attitudes identified in A Scale for Measuring Attitude Toward Any Teacher, the attitude measurement instrument used to evaluate students' attitudes in the present study.

The perceptions and attitudes measured in this study were obtained from a random sample of secondary distributive education teachers' classes in Utah, and, therefore, the results are illustrative of students' perceptions and attitudes toward Utah secondary distributive education teachers, but not all secondary distributive education teachers in the United States. The perceptions and attitude measurements in the present study are means obtained from individual measurements classified into groups; therefore, while the scores are indicative of groups, they cannot be thought of as truly indicative of the individual subjects involved.

The Pupil Observation Survey (POSR) used in this study is assumed to be a valid instrument for the measurement of students' perceptions of

the five teacher behavior characteristics in the classroom. Also, the attitude scale used in this study, A Scale for Measuring Attitude Toward Any Teacher, is assumed to be a valid instrument for the measurement of students' attitudes. Both the (POSR) and the attitude scale were chosen for use in this study because of their high reliability and validity. Details on the reliability and validity of each instrument are given in Chapter III. Both instruments are considered accurate and unbiased in their measurement of students' perceptions and attitudes. Students were in no way coerced. However, it is assumed that their answers on both questionnaires are truthful. The researcher's procedures and instructions in administering the questionnaire were carefully rehearsed to insure uniformity; therefore, the assumption is made that the procedures and instructions did not affect or influence any subjects in their responses to the questionnaires.

While perceptions and attitudes are related, there is assumed to be a degree of difference between the two concepts; therefore, each is treated as a different area.

Importance of the Study

The area of distributive education is becoming increasingly important in the Utah secondary schools. The Utah State Advisory Council (1972) states the following important facts which pertain to distributive education:

1. Enrollments in distributive education have increased from 1,754 students to 2,828 students in the secondary schools.

2. The number of students intending to go to college has decreased from 69.1o percent to 54.11 percent. This is a decrease of 14.99 percent.

3. The percentage of students planning to go to vocational or business schools has increased from 14.17 percent to 17.55 percent. This is an increase of 3.38 percent.

4. Fifty-six percent of more than 400 participants in a series of nine regional advisory committee leadership seminars agreed that vocational education programs in the Utah schools (distributive education programs are a part of those programs) generally suffer from lack of adequate and proper evaluation.

5. There were 27,000 people unemployed in Utah during 1972, and many jobs could not be filled because those who were unemployed did not have the skills required to meet the qualifications of the positions.

6. In a survey of high school graduates, over 40 percent stated that a major factor contributing to their difficulty in obtaining employment was that their school course offerings did not correspond with the knowledge and skills required to obtain positions available in the labor market.

These findings emphasize the importance of distributive education programs in helping students achieve relevant skills which will meet performance requirements in the Utah job market. One aspect of evaluating the distributive education programs is through the measurement of students' perceptions and attitudes toward the teacher-coordinators. The research cited in this section indicates that the study of students' perceptions and attitudes has implications for the measurement of general

teacher quality as well as those teacher behavior factors which were mentioned before.

In relation to overall teacher quality, student perceptions are important as tools in the improvement of the instructional process. A report from the Peninsula Study Council (1962) concluded that a pupil's perception of a teacher is the result of long-term observation. The report also stated that this perception influenced a pupil's behavior; therefore, the council reasoned that how pupils perceive teachers can be a useful tool in the improvement of the instructional process and has value in assessing teacher performance.

Brown (1972, p. 34) concluded that student perceptions are valid as measurement tools, and that a significant relationship existed between student evaluations and immediate supervisor evaluations of teaching effectiveness.

Smalzried and Remmers (1943, pp. 363-367) stated that any meaningful evaluation of a teacher will include what the pupils think of the teacher and how they feel about the teacher.

Bryan indicated that perceptions affect motivation when he stated the following:

> Whether or not adult judges would agree that student feelings and opinions are justified does not change the fact that they have them and that their feelings and opinions are potent influences in conditioning the nature of the learning that takes place. ... It should be remembered that imaginary grievances interfere with desirable rapport between teachers and pupils as readily as do real grievances. (Bryan, 1941, pp. 513-526)

Student perceptions and attitudes related to the six factors considered in this study are important in the learning process, and a description of and the need for each factor is analyzed as follows:

Factor I. (Friendly, cheerful, admired). Friendly, cheerful, admired is a teacher characteristic which is defined as being warm, understanding, friendly, and liked by the students. According to Glasser (1972, pp. 37-43) students' perceptions of this factor are important. Glasser states that in order for a student to achieve success, the teacher must be friendly and treat the students kindly. Also, Glasser believes this factor is important in "motivating the children and young people to learn."

Factor II. (Knowledgeable, poised). Knowledgeable, poised is a teacher characteristic which is defined as describing teacher self-confidence based on the teacher's thorough understanding of the material to be taught. Veldman and Peck (1963, pp. 346-355) in a discussion of the (POSR) (the perception questionnaire used in this study) state that this factor is related to teacher competence. Teacher competency is an important issue today.

Factor III. (Interesting, preferred). Interesting, preferred is a teacher characteristic which is defined as teacher behavior reflecting lively and skillful presentations of materials and behavior which is particularly preferred by the students. This factor relates to the teacher's skill in presentation and can be useful in evaluation. McCall (1952) indicates that students' perceptions of teaching skill shows they have a "truer idea of what constitutes good teaching than professors of education."

Factor IV. (Strict control). Strict control is a teacher characteristic which can be signified as domineering or could reflect a serious, well-organized approach to learning. Strict control relates to discipline.

Kounin and Gump (1961, pp. 44-49) concluded in their investigation that pupils were perceptive of teacher disciplinary behavior and that these perceptions were reflected in their own behavior. The pupils who perceived their teachers as punitive disciplinarians manifested more aggression and were less concerned with learning and school-unique values.

Factor V. (Democratic procedure). Democratic procedure is a teacher characteristic which is defined as teacher behavior wherein the teacher actively solicits the help of the pupils in making decisions about the goals and procedures to be used in the classroom. Democratic procedure is associated with student academic freedom. Emmer (1967) in his study on teacher behavior found that when teachers increased their use and acceptance of student ideas, there was more student participation.

Factor VI. (Student attitude score). Student attitude score is defined as the measurement of the students' likes or dislikes relating to their teacher's behavior based on results of the instrument, A Scale for Measuring Attitude Toward Any Teacher. The students' attitude scores are very important according to Ellish (1968) who concluded in his study that the attitude of a student has a definite effect upon the student's academic success. It was also determined in the study that a statistically-significant positive correlation existed between attitude and academic achievement.

Mayberry (1969) concluded in his study that students' attitudes toward their instructor were related to their perceptions of the instructor's attitude toward them. Those teachers who demonstrated a lack of concern about students and teaching alienated their students, resulting in a negative student attitude.

In general, a study of students' perceptions and attitudes toward their teacher-coordinators is important because it can indicate to some extent whether there is a good relationship between the students and the teacher in the classroom.

Eble (1970, p. 3) states:

> The relationship between teachers and students is vital to teaching, and the general concern an institution shows for teachers and teaching is a direct measure of its concern for students and learning.

Examples of questions which measure perception factors and which are used in the (POSR) questionnaire are given here to enable the reader to understand more fully each factor. All the questions are shown in Appendix A. While the questions refer to a female teacher, they should be construed as referring to all teachers. Question examples are as follows:

Factor I. (Friendly, cheerful, admired)

A. She smiles most of the time.

B. She always seems cheerful and happy.

C. I would like to be like her in some ways.

Factor II. (Knowledgeable, poised)

A. She is never stumped by a student's questions.

B. She doesn't get confused by unexpected questions.

Factor III. (Interesting, preferred)

A. She knows how to put her subject across in a lively way.

B. I wish all my teachers were like her.

Factor IV. (Strict control)

A. She expects a lot from her students and usually gets it.

B. She doesn't let her students get away with anything.

Factor V. (Democratic procedure)

A. Before she decides on a new project, she often asks the students what they think.

B. She likes to give the students a choice of how to do an assignment.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Student perceptions and attitudes in the classroom are a result of the interaction between the students and the teacher. Eggland (1974, pp. 17-24) in his study of student-teacher interaction in Distributive Education stated that the teacher is one of the prime determinants of a favorable climate in the teaching-learning process. After comparing interaction patterns in distributive education classes with other classes, Eggland found that teachers and students talk more significantly in distributive education classes. Also, his findings indicated that distributive education teacher-coordinators had more direct influence on their students than other teachers and that the students in distributive education classes spent less time in responsive talk and more time in initiating talk than do students in other classes. This greater interaction in distributive education places more importance on how these students perceive and feel toward their teacher-coordinators. Meaningful interaction can come about only when the students perceive their teacher-coordinator as a positive influence in the classroom.

For this reason, the review of literature will report on literature and research related to: (1) a general review of distributive education, and (2) a review of students' perceptions and attitudes as they relate to distributive education and to the problem of this study.

Distributive Education

Origin of distributive education

Distributive education trains its students for the dynamic field of distribution. Distribution is that area of occupations which deals primarily with the merchandising of goods or services. Harris (1967, p. 6) states that distribution, an important phase of the total business activity, seems to have appeared thousands of years ago. This early form of distribution was called bartering and helped families to better supply their needs. Early commercial activity dates back to 3000 B. C. on the little island of Crete.

According to Richert (1954, p. 33), the early distributor in the ancient cities of Carthage, Athens, Alexandria, and Rome was looked down upon by social leaders. Social leaders were primarily large landowners and militarists, while many of those employed in distribution were aliens and freed slaves. Modern distribution occupies a more important role in our society as indicated in the following recent quotation:

> Distribution, along with production and consumption, is one of the nation's three leading economic activities. Our system of mass production is based on an efficient system of mass distribution. If distribution fails to achieve its maximum efficiency, our nation will fall short of reaching its full economic potential. (Harms, Stehr, and Harris, 1972, p. 339)

Brisco (1935, p. 375) states that the apprenticeship system was the first method used to prepare workers for distribution. Most of his training was haphazard and consisted primarily of teaching the routing of goods to the customers and watching the store. Brisco indicates that Daniel Defore reportedly wrote the first textbook on retailing in 1726

called "The Complete English Tradesman." In his book, Defore advised the young apprentice to gain judgment in the wares, to weight measure, to know his merchandise, to know bookkeeping, to be cautious in his credit dealings, and to be patient with his customers.

According to Ivins and Runge (1951, p. 43), Lucinda Prince is credited with being the first person to establish a formal class in retail salesmanship combined with on-the-job training in 1905. This beginning of distributive education as an organized activity was followed with the establishment of high school retail training classes in 1910 in Providence, Rhode Island, and in 1911 in Fitchburg, Massachusetts. Daily work experience as a basic principle of cooperative occupational training was developed in those early classes. From this modest beginning, distributive education progressed slowly until the passage of the George-Deen Act in 1936, which earmarked federal funding for vocational training in distributive occupations. Currently, distributive education programs can be found throughout the nation, reflecting the tremendous growth of distributive education.

Legislation relating to distributive education

Smith-Hughes Act, 1917. This act is also known as the Vocational Act of 1917 and, while it did not provide funds for distributive education, was instrumental in gaining future legislation. A Federal Board for Vocational Education was established through this act's provision and a $7 million appropriation was authorized to help support trade and industrial education, home economics, and agricultural education. While support for distributive education was not authorized, Logan (1952, p. 17) feels that the Smith-Hughes Act made a significant contribution

to distributive education through its Federal Board for Vocational Education. The investigations, reports, and encouragement that the Federal Board for Vocational Education gave to aid states and communities to organize retail selling classes had far-reaching results for future legislation. Also, Logan feels that while the training was often mediocre, it created a favorable impression on management and aided in the later development of secondary school cooperative classes.

Development of distributive education from 1910 to 1936 was quite erratic, however, and Emick (1936, p. 11) reports that in 1933 the total enrollment in nineteen cities was 9,508 high school and adult students. Haas (1939, p. 6) feels, however, that these selling classes did not develop largely because federal funds were not available for reimbursement of salaries for qualified local and state supervisors and teacher trainers. The Federal Board for Vocational Education also lacked adequate personnel to promote and administer the program.

George-Deen Act of 1936. Under the provisions of this act, distributive education received for the first time federal funding. The report of the United States Office of Education (1937, p. 53) states that 1,200,000 dollars of funds were made available for distributive education. These funds were to be used for the reimbursement of salaries of teachers, supervisors, directors, and for the training of teachers in a new field of vocational education, namely distributive occupations.

The United States Office of Education (1957) reports that the enrollment in various distributive occupations classes in 1938 showed a total of 36,008 students. The total enrollment in distributive education in 1943 rose to 297,534 students.

It is quite evident that financial aid was an important factor in stimulating the growth of distributive education. The impact of the George-Deen Act is emphasized in the statement which follows:

> The George-Deen Act gave tremendous impetus to both the cooperative distributive occupations and diversified occupations type of work experience programs. The main innovation was the specific provision for distributive occupations training which could have been supported by Smith-Hughes funds but was not for a variety of reasons. Funds for the maintenance of diversified occupations programs were continued and substantially liberalized. (Ivins and Runge, p. 33)

George-Barden Act of 1946. Additional vitality was given distributive education with the passage of the George-Barden Act. This act actually replaced the George-Deen Act and, as Nolan, Hayden, and Malsbary (1967, p. 55) indicate, provided 2,500,000 dollars for distributive education. This was a tremendous stimulus for further encouraging the expansion of distributive education programs.

Vocational Education Act of 1963 and Vocational Education Amendments of 1968. While the major importance of the 1963 act was to initiate funds for office occupations training, it must be also noted that more funds were made available for vocational education, of which distributive education is an important part. The vocational education amendments of 1968, according to Crawford and Meyer (1972, pp. 272-279) authorized more than three times the amount of money previously appropriated for vocational education. The major emphasis of this act was the availability of funding for the development of programs to help the "disadvantaged" (those who have academic, socio-economic, or other handicaps which prevent them from succeeding in regular vocational education programs) and the physically handicapped. Funding was made available for exemplary programs to cover costs or part of the costs of a "bridge between school

and earning a living for young people who are still in school, who have left school either by graduation or by dropping out, or who are in post-secondary programs of vocational preparation."

Both the 1963 act and the amendment of 1968 are important statutes relating to distributive education. Because distributive education is not in the academic area, many of its students are disadvantaged. Programs are being and should be developed in distributive education for these students.

Goals and objectives of distributive education

Two leading educators in distributive education, Lucy C. Crawford and Warren G. Meyer (1972, pp. 26-32) list the following eleven goals of distributive education:

1. The program should have as its primary goal its students' preparation for gainful employment and advancement in distributive occupations.

2. The program should engender an understanding and appreciation of the American private enterprise system.

3. The program should foster an awareness of the civic, social, and moral responsibilities of business to society.

4. The program should encourage and promote the use of ethical standards in business and industry.

5. The program should stimulate the student's interest in his chosen distributive career field by providing an understanding of the opportunities it offers him to be a contributing member of society.

6. The program should prepare distributive personnel to analyze consumer demand and to satisfy the needs and wants of consumers intelligently, efficiently, and pleasantly.

7. The program should provide training that results in increased efficiency in distribution and marketing.

8. The program should contribute to the improvement of the techniques in distribution and marketing.

9. The program should be sensitive to change in distributive and marketing practices and procedures as they are affected by societal, economic, technical, and educational developments, and adapt to such changes.

10. The program should advance the objectives of the total educational program.

11. The program should strive to develop among employers, employees, and consumers a wider appreciation of the value of specifically trained personnel in distribution.

The aforementioned goals emphasize the importance of interaction among people. Perceptions and attitudes determine to a great degree the effectiveness of this interaction. Distributive education is the training ground for the field of distributive occupations and, while mastery of subject matter is important, success in distribution may be more dependent on how one relates to another human being. The importance of human relations in distribution is emphasized as follows:

> Work in the field of distribution is people-oriented, not machine-oriented; thus, social competency in human relationships is of paramount importance. Social competency, which is a composite of personal characteristics such as appearance, attitude, and initiation, is an important qualifying factor of initial employment and for retention of employment in the field of distribution. (Nolan, Hayden, and Malsbary, 1967, p. 255)

Because the field of distribution is so dependent on effective interaction among people, its training program which is conducted through distributive education should also recognize the importance of people and

their relations with each other. This means that student-student relationships and student-teacher relationships are equally important. These relationships are dependent on the perceptions and attitudes of those individuals involved. Those students in distributive education who have positive perceptions and attitudes toward their teacher-coordinators may possibly also have the same feelings and attitudes toward their peers. Those positive relationships in school may possibly forecast future success in their relationships in the dynamic field of distribution.

Desirable qualities of the distributive teacher-coordinator

Research and literature on the desired behavioral qualifications of teacher-coordinators was deemed necessary because the present study measured perceptions and attitudes of students in distributive education relating to their teacher-coordinators' behavior in the classroom. Therefore, their qualifications were being evaluated to a certain extent by their students.

Samson (1964, p. 5) states that "the ideal coordinator can be epitomized as a composite doer-thinker who devises better and more effective means to achieve the goals of the local program." This is a broad definition of an ideal coordinator and may perhaps be too general.

Another authority in the field of distributive education, Mason (1962, p. 7) states:

> The success of distributive education is most certainly dependent upon the training, tact, and ability of the teacher-coordinator. He not only has to possess considerable administrative ability but he needs to be exceptionally skillful in public relations.

Haas (1949, p. 253) summarized the general qualifications for distributive teacher-coordinators as follows:

> The specifications for their (teacher-coordinators) jobs called for certain definite qualifications. These qualifications were divided into four general groups, the first of which included those leadership characteristics needed by everyone who hopes to succeed in this field. The second group consisted of occupational experiences. The third group embraced those qualifications that make for professional ability. The fourth group comprised that technical or functioning information needed by the coordinator for an appreciation and understanding of his subject matter and for a more efficient discharge of his duties.

A national education conference was held at Chicago, Illinois, in 1961, and dealt with many phases of teacher education, including a major session on the development of distributive teacher-coordinators. Some conclusions in relation to desirable qualities of teacher-coordinators were:

1. Teacher-coordinators should have a basic understanding of economics of distribution.
2. Teacher-coordinators should have a broad background in marketing, merchandising, and management.
3. Teacher-coordinators should exhibit creativity.
4. Teacher-coordinators should have pride in their profession.
5. Teacher-coordinators should have the ability to:
    a. Organize for basic and specific instruction.
    b. Offer adequate guidance to their students.
    c. Develop instructional materials.
    d. Promote and conduct practical research and interpret results.
    e. Communicate effectively to members of the trade.
6. Teacher-coordinators should possess the administrative management qualities of the:
    a. Teacher.

b. Organizer.

c. Community relations specialist.
(U.S. Office of Education, 1962, p. 14)

The literature indicates how authorities feel the teacher-coordinator should behave, but there appears to be limited literature or research in distributive education on student's perceptions and attitudes relating to their teacher-coordinator behavior. This conclusion is supported by Larson (1961) who found that, of 330 studies completed or underway, 21 percent were community or occupational surveys, and the other research was divided among post-high school programs, adult education, facilities, costs of programs, legislation, guidance, methods of evaluation, curriculum development, and instructional materials. Also, while literature on desirable qualities of teacher-coordinators is abundant, it is not always specific as to what behaviors are necessary to fulfill these qualities. It is believed that this study of how students perceive and feel toward their teacher-coordinators will help reveal dominant teacher behavior in their classroom and also give more insight on students' attitudes in realtionship to their teacher-coordinator's behavior.

Summary

The literature revealed in distributive education seems to indicate four things. First, student-teacher interaction is significant in distributive education; therefore, how students perceive and feel is very important. Secondly, the area of distribution is of great importance in our economy, and success is based very much on one's social competency. Thirdly, distributive education is a comparatively new field of education

in our society and is gaining increased recognition with the new emphasis on vocational training. Fourth, while many authorities have written on desirable general qualifications of teacher-coordinators, there has been limited research dealing specifically with students' perceptions and attitudes toward their teacher-coordinator's classroom behavior. Specific studies dealing with students' perceptions and attitudes toward teacher behavior will be reviewed in the next section on students' perceptions and attitudes.

Students' Perceptions and Attitudes

General findings on students' perceptions

A considerable volume of research has been conducted and reported related to students' perceptions of their teachers. While this research may also be called student ratings or student evaluations of their teachers, it falls into the category of perceptions. Two staunch advocates of student evaluations of their teachers are H. H. Remmers and Roy C. Bryan, who have conducted or directed a major portion of research in this area. Remmers summarized the major generalization from his research in the Handbook of Research on Teaching, edited by Gage (1963). A report of research by Bryan (1963) was published by the Cooperative Research Division of the U.S. Office of Education. The findings of Remmers, Bryan, and others which relate to this study are as follows:

1. Student ratings of their teachers are reliable according to such researchers as Shock, Kelly, and Remmers (1927), Wilson (1932), Guthrie (1927), Boardman (1930), Bowman (1934), and Bryan (1963).

2. Student opinions of teachers do not change measurably during post-school years or as students mature, according to Boyce and Bryan (1954), Drucker and Remmers (1951), and Bryan (1963).

3. There is no significant correlation between pupil's marks and pupil ratings, according to Bowman (1934), Bryan (1937), Elliott (1950), and Remmers (1928, 1930).

4. Remmers (1929), and Veldman and Peck (1964), concluded that the sex of the teacher bears little relationship to the student evaluations.

5. Remmers (1929) found that teachers with less than five years' experience tend to be rater lower than teachers with more than eight years' experience.

6. Bryan (1963) concluded that the image one group of students has of a teacher is usually very similar to that held by other groups of students.

There are mixed reactions as to the value of student ratings or perceptions. Coffman wisely states the following:

> ... critics of the use of student ratings have pointed to the inadequacy of the student as a judge of teaching ability, emphasizing his lack of experience and difficulty of reporting judgments which are free from subjected bias. Proponents of student ratings, on the other hand, have tended to emphasize that effective learning results from the interaction of student and teacher and that however biased ratings may be, they are valuable as a source of information concerning student reactions to the behavior of teachers. (Coffman, 1954, p. 277)

Whether one agrees or does not agree as to the value of students' perceptions, they are important as an indicator as to what type of relationship exists between the student and the teacher. As indicated previously, a positive relationship is necessary for a good learning environment.

Variables affecting perceptions

Teacher behavior. Teacher behavior does have an effect on how students perceive their teachers. Brookover (1955, p. 298) states that a student's idea of good teaching behavior is closely related to their personal reactions to the teacher's behavior. The question "Do you like this teacher?" would get about the same response as the question "Do you think this person is a good teacher?" Brookover found that students liked teachers who were pleasant, friendly, and helpful, who participated in their activities, and who seemed to enjoy associating with them.

Hudson (1964) agrees with Brookover when he concluded that student ratings were associated with the student's liking for the teacher, liking for the subject, and contact with the teacher in extra-curricular activities.

Teacher sex. While the literature seems to indicate that teacher behavior affects how students perceive them, the sex of the instructor may also be a significant factor related to students' perceptions. A study was conducted by Veldman and Peck (1964) to determine if pupil evaluations of teachers were affected by a systematic sex bias, such as girls favoring men teachers over women teachers or vice versa, or that boys show such a bias. Subjects involved were 34 male teachers and 34 female teachers. The Pupil Observation Survey (POSR) (an instrument used in the present study) was administered to all students of these teachers and scores for boys and girls on eleven scales entered separately in corresponding cells of a 2 x 2 analysis of variance design. The conclusions of the study were that pupils considered female teachers to be, on the average, more cheerful than the male teachers. There was also

a tendency for the pupils to regard female teachers as more friendly, more interested in them, and more democratic in their teaching procedures. There was a significant tendency for boys to want to "be like" male teachers and for girls to want to "be like" female teachers. The over-all conclusion made by Veldman and Peck was that pupil ratings of teachers in this study, were not severely biased by the sex of the teacher.

In a recent study by Cheatham and Jordan (1972), an analysis was made of the effect of instructor sex on the students' perceptions toward the instructor and the course. Their findings indicated that pupils enrolled in the section taught by the male instructor were more significantly favorable toward the instructor and in the over-all appraisal of the course. Pupils enrolled in the section taught by the female instructor were significantly more favorable toward the textbook than the instructor. This tends to indicate that sex of the instructor is a significant factor and may bias students' perceptions, contrary to the over-all conclusion of Veldman and Peck.

Teacher experience. Another variable which may affect students' perceptions is teacher experience. As Remmers (1929) indicated previously, teachers with less than five years' experience tend to be rated lower by students than those teachers with more than eight years' experience. In a study on the relationship of achievement to experience, Chung-Phing (1963) found that those students taught by teachers having ten or more years of teaching experience achieved significantly more than those students taught by teachers with less than ten years' teaching experience. The study measured achievement in such areas as arithmetic,

language, and reading. This conclusion tends to reinforce Remmers' findings that teachers with less experience are not as effective, according to their students' perceptions. It also tends to emphasize the validity of students' perceptions.

Teacher academic preparation. Teacher academic preparation is another variable which may affect students' perceptions. In a study relating to teacher preparation, Ferralasca (1961) found that those teachers who possessed a master's degree with at least twenty-four hours of graduate education courses used more desirable teaching practices than did those teachers with bachelor's degrees and not more than six hours of graduate education courses. This study implies that teachers with advanced degrees and graduate education courses tend to have better teaching methods in their classrooms. The quality of teaching methods may also affect how students rate or perceive those teachers' performances in their classrooms.

In conclusion, the literature on students' perceptions, while adundant, does tend to indicate that student evaluations of their teachers are generally honest and sincere. The literature also indicates that many factors can influence students' perceptions, and an attempt was made by the author to report on the more significant variables related to the problem of this study. It should also be noted that there are two opinions on the use of students' perceptions, pro and con. This author takes the same approach to student evaluation or perceptions as that taken by H. H. Remmers and Roy C. Bryan, who believe that they are important and can be used as a means of self-improvement and self-supervision for the teachers involved.

General findings on students' attitudes

Remmers, Gage, and Rummel (1960) define an attitude as "an emotional tendency, organized through experience, to react positively or negatively toward a psychological object."

Attitudes influence how one perceives and how one perceives influences his attitudes. The general importance of students' attitudes is summarized as follows:

> Attitudes, beliefs, and ways of behaving, like institutions, develop at the local level. They are the produce of local traditions, ways of meeting local problems, and face-to-face relationships. Teachers and citizens seeking to achieve a world society must give attention to unfavorable attitudes which inhibit the development of such a society and to those attitudes which are favorable to a free world. (Arndt and Everett, 1951, pp. 252-256)

Wood (1974) stressed the importance of attitudes in the classroom when he wrote:

> Educators too often neglect the volatile area of value and attitude changes that occur in their students as the result of exposure to particular content or a particular teacher. Too often we measure student progress solely on the amount of information the student can retain and the number of problems which can be solved through the proper manipulation of certain basic principles. In the basic business area of business education this practice can be especially fatal. While the latter areas of measurement are not unimportant, they do give an incomplete picture of the intellectual environment existing ... .

As Wood indicated, values and attitudes are sadly neglected in the classroom. One major reason may be that it is not always easy to measure them accurately. A major problem in the measurement of attitudes is obtaining valid responses. Corey (1937) studied the correlation between responses on a paper-and-pencil questionnaire and observed behavior. Corey administered a test to a group of educational psychology students near the end of the week. The class was also given an attitude test on cheating.

The test was anonymous, but was secretly coded so that the students completing it could be identified later. Copies were made of the students' papers over the weekend. The students were then allowed to correct their own papers. The correlation between the students' attitudes expressed on the scale about cheating and their actual cheating behavior was determined to be .02, a very low correlation.

Other investigators such as Doob (1947) have also concluded that there is not a direct and perfect correlation between verbal behavior and real behavior. McNemar (1946) feels that much of the fault lies in the superficiality or shallowness of most attitude measuring techniques McNemar also states that attitude scales can be constructed to achieve satisfactory reliability and validity results if more effort is expended than is usually the case. McNemar states also:

> The statistical issues in attitude-opinion research are not different from those encountered in other social sciences. Inadequate analyses and statistical errors have been plentiful, but as more statistical sophistication is acquired, one can expect adequate statistical treatment with fewer errors. (McNemar, 1946, pp. 289-374)

As McNemar implies, satisfactory measurement of attitudes is possible if the researcher is willing to devote extra effort in the obtaining of more legitimate results.

Measurement techniques

In obtaining attitude measurements, two techniques seem to be dominant in the field. The two dominant techniques are the Thurstone attitude scaling technique and the Likert scale for measuring attitudes. A discussion of each technique seems appropriate because of their importance in the field.

The Thurstone technique. Thurstone and Chave (1929) collaborated on the Thurstone technique for measuring attitudes. The scheme used for constructing the Thurstone scale is one of arranging items on an eleven-point scale according to the degree of favorableness of unfavorableness as determined by having a large number of judges sort quite a number of statements into eleven piles. At one end is the most favorable attitude, and at the other, the least favorable. The center position is the neutral position.

As an examinee takes the test, he marks the statements with which he agrees, and his score is the median of the scale values of the checked statements. The attitude scale devised by Hoshaw (1936), which is used in the present study, uses the same scoring techniques as the Thurstone scale.

Nelson (1939) states that while other researchers in their reviews of the literature have expressed the opinion that the Thurstone technique is very laborious and costly, it seems to be the best and most refined method so far devised for the measurement of attitudes.

The Likert scale. Guilford (1954) discusses the Likert scale for measuring attitudes. The Likert-type scales are fairly easy to construct, compared to the Thurstone-type scales. In the Likert scale, the statements again reflect favorable and unfavorable attitudes about an attitude object. There are five responses to check: (strongly approve, approve, undecided, disapprove, strongly disapprove).

A large number of persons take the test and an item analysis is then made. The final selection or elimination of items does not depend upon objective judgments as in the case of the Thurstone scale. The items

that correlate highest with the total score on the scale are selected for the final form. The Likert-type scales can be constructed in very much less time than the Thurstone-type scales. They require no judges and scoring is very easy.

As far as reliability and validity are concerned, Likert, Roslow, and Murphy (1934) state that correlations between the results obtained by both types of scales (Thurstone and Likert) measuring the same attitude are high. Because correlations have been high and it is easier to construct a Likert-type scale, the Likert technique has replaced the Thurstone technique to a large extent.

This has brought forth discussion on which technique is better. McNemar expresses his opinion on the Thurstone technique as he compares it to the Likert scale:

> The writer is inclined to believe that some combination of these two competing techniques for scale construction (Thurstone and Likert) would be better than either one alone. It would seem logical to expect that more reliable scales would result if the Likert method were modified to assure the selection of some items in the middle range of the favorable-unfavorable continum, or if the equal appearing used for item selection and the media check scoring (Thurstone technique) were dropped in favor of the simpler scoring techniques of Likert. (McNemar, 1946, pp. 289-374)

In conclusion, the literature on attitudes indicates they are very important in the learning process. It is believed also that attitude measurement can be valid and reliable if properly handled. The two important techniques, Thurstone and Likert, were also discussed, and while both are acceptable, a combination of the two might be more worthwhile.

Experimental studies

In the review and research of experimental studies in the areas of

students' perceptions and attitudes, the studies were found to be quite extensive. Also, the researcher found that those studies which were closely related to the problem of this study were quite limited. Therefore, the researcher's intent is to report and review only those studies which are deemed pertinent to the present study's problem. The following studies are closely related to the problem of this study.

The Iva Brown Study

Brown (1965) studied the role perception of secondary teachers as related to the students' perceptions of their teacher behavioral characteristics in their classrooms.

Problem of the study. The specific problem of her study was to compare different groups of secondary teachers (according to age, academic subjects taught, academic preparation, and teacher experience) from two standpoints: (1) the role expectations of the teachers in respect to their working relationships with their students, and (2) the pupils' viewpoints of their teachers' behavioral characteristics in their classroom. A secondary problem was to determine if these students' attitudes were related to their perceptions of the teachers' behavioral characteristics.

Methods and procedures. Brown employed the following methods and procedures in obtaining her data. Three questionnaires were used. The first questionnaire was the Teacher Practices Questionnaire (TPQ), developed by Sorenson, Husek, and Yu (1963). The (TPQ) was given to a random sample of 178 secondary teachers of various academic subjects. The following five roles as perceived by the teachers were measured by this instrument: (1) Advice-information giver, (2) Motivator,

(3) Disciplinarian, (4) Counselor, and (5) Referrer. The second questionnaire used was the Pupil Observation Survey (POSR), developed by Veldman and Peck (1963) to measure students' perceptions. The (POSR) was given to the students of the secondary teachers and measured these students' perceptions in relation to five teacher behavioral characteristics: (1) Friendly, cheerful, admired; (2) Knowledgeable, poised; (3) Interesting, preferred; (4) Strict control; and (5) Democratic procedure. The third instrument used was A Scale to Measure Attitude Toward Any Teacher, developed by Hoshaw (1936) to measure students' attitudes.

Statistical analysis. The statistical analysis used in Brown's study was the least squares analysis of variance to analyze the effects of age, sex, teaching experience, and academic preparation upon: (1) the role expectations of the teachers, (2) the students' perceptions of their teachers' behavioral characteristics, and (3) the pupils' attitudes toward the teachers. In addition, when a significant ratio was found to exist, the Duncan's New Multiple Range Test was used to make mean comparison tests. The .05 level of significance was adopted as the level indicating significant differences.

Findings and conclusions. Brown's findings were as follows:

1. The teachers' age, sex, and academic preparation area had a significant effect on teacher-role expectations.

2. The pupils' perceptions of the teachers' behavioral characteristics were found to be related to the teachers' sex, teaching experience, and academic area.

3. From the pupils' viewpoint, the experienced teacher was significantly more knowledgeable and poised than the beginning teacher.

4. Significant mean differences were found when relating such variables as teacher sex, teacher experience, and teacher academic area, to the students' perceptions of the teacher behavioral characteristic, strict control.

5. In the findings related to students' attitudes, students were found to have a significantly more favorable attitude toward female teachers.

6. A highly significant positive correlation was found to exist between pupil perceptions of the teacher behavioral characteristics and the pupils' attitudes toward the teachers.

In conclusion, Borwn makes the recommendation that further research should be conducted in the identification of factors which may influence pupil estimates of teacher behavioral characteristics.

The Samson Study

Samson (1964) reported on observed effective and ineffective behaviors of secondary distributive education teacher-coordinators.

Problem of the study. The main problem of the study was to determine the critical requirements for the performance of secondary school distributive education teacher-coordinators by the analysis of critical incidents. Secondary problems were the determination of patterns of effective and ineffective critical behaviors as reported by the observer groups, and the determination of relationships between the critical behaviors and certain personal and professional characteristics of the teacher-coordinators.

Methods and procedures. Samson used the following methods and procedures in obtaining data: The observers for the study consisted of 404

students, 83 school administrators, 58 faculty members, and 53 training sponsors associated with 31 state approved distributive programs operating in Iowa public high schools during the 1962-1963 school year.

The critical incident technique was used in the study to collect the observed behaviors of the teacher-coordinators. These critical incidents reported by observers had to: (1) contain a report of the situation or circumstances leading up to the action or behavior on the part of the teacher-coordinator, (2) contain a report of the teacher-coordinator's observed behavior, and (3) contain a report of the results of the teacher-coordinator's behavior. Also, the observer had to identify when the observation occurred and indicate whether it was effective or ineffective behavior.

A total of 1,548 usable critical incident reports were collected from the observers. Some reports contained multiple behavior, therefore, a total of 1,574 critical behaviors were isolated. These critical behaviors were then classified into six major areas of responsibility for teacher-coordinators. The six areas were: (1) student discipline and control, (2) direction of club programs and projects, (3) administration and operation of programs, (4) instructional activities, (5) coordination, and (6) personal and professional relationships. From the critical behaviors reported, similar behaviors were grouped, and a total of 127 critical requirements were developed (77 critical requirements for effective performance and 50 critical requirements for ineffective performance).

Statistical analysis. In analyzing the data, Samson made three comparisons of the critical behaviors which had been classified to the six major areas of teacher-coordinator responsibility. The three comparisons

were: (1) the distribution of total behaviors reported by each observer group in the six categories of teacher-coordinator responsibility, (2) the effective and ineffective critical behaviors of high and low rankings of teacher-coordinators' personal and professional characteristics within the six categories, and (3) effective and ineffective critical behaviors of teacher-coordinator responsibility with high and low rankings of school and program factors within the six categories. The Chi-square test was used to test significance.

Findings and conclusions. Samson's findings indicate the following:

1. There was a significant difference in the total number of critical behaviors reported by the four observer groups within the six areas of teacher-coordinator responsibility. Observations by students were mainly related to control and instructional activities. Administrators were concerned mainly with the operation and administration of the program. Faculty reported observations relating to instruction and personal or professional relationships. Finally, training sponsors reported behaviors heavily in the area of coordinator behavior.

2. Coordinators who were younger, in the lower salary groups, having less educational preparation, with fewer years' experience in distributive education, and greater occupational experience received higher over-all percentages of effective critical behaviors than their counterparts in older or higher groups.

3. The female group of teacher-coordinators received a higher over-all percentage of effective behaviors than the male group.

4. A higher percent of effective critical behavior was reported for teacher-coordinators operating newer programs, with smaller classes,

with limited model store equipment, and with advisory committees than for counterpart groups.

Samson concluded that high school seniors, who served as observers in this study, were able to provide comprehensive critical incident reports of the same quality as other adult observers. He also concluded that the critical requirements for effective or ineffective performance of distributive education teacher-coordinators are related to a large extent to: (2) student discipline and control, (b) direction of club program and projects, (c) administration and operation of the distributive education program, (d) instructional activities, (e) coordination, and (f) personal and professional relationships. Samson stated the following commonalities exist in relation to critical requirements:

1. The teacher-coordinator shows respect for students and is highly committed to their individual growth, both in personal development and in occupational understanding.

2. The teacher-coordinator is firm, logical, and consistent in behavior.

3. The teacher-coordinator is well organized and concentrates teaching effort on the subject matter under study.

4. The teacher-coordinator uses a variety of techniques in teaching and operating the distributive education program.

The Betty Jean Brown study

Brown (1971) studied the relationships between student and supervisor evaluations of teacher effectiveness in general business.

Problem of the study. The major problem of the study was to compare student and supervisor evaluations of the teaching effectiveness of

general business educators. Another problem of a secondary nature was to identify the qualities of effective general business teachers through student and supervisor evaluation.

Methods and procedures. The methods and procedures used by Brown in collecting data for her study involved 30 general business teachers, randomly sampled from a population of 102 high schools. Their students and supervisors were asked to evaluate the teachers' effectiveness by completing a performance specimen checklist and supervisors' rating scale. The students evaluated their teachers on 68 items on the checklist. The supervisors rated the teachers on 30 teacher characteristics In addition, each teacher furnished information about his background and preparation for teaching general business by completing a questionnaire designed by the researcher. The researcher constructed the supervisors' rating scale through use of the Delphi Technique, in which a panel of experts in general business education identified essential characteristics of effective teachers of general business. The researcher constructed the performance checklist by collecting and compiling examples of good and poor general business teaching from 538 general business students in the high schools involved.

Statistical analysis. In analyzing the data, Brown measured the reliability of the performance checklist by use of the split-halves method, corrected by the Spearman-Brown Prophecy formula to estimate reliability for the entire instrument. A Chi-square analysis was used to determine the discriminatory power of each of the 68 items on the checklist. Teacher effectiveness scores and scores from the supervisors' rating scale for the most effective teachers (upper 27 percent of the sample) and least effective teachers (lower 27 percent of the sample)

were subjected to one-way analysis of variance. This analysis determined whether any significant differences resulted from differences in years of teaching experience, years of teaching general business, and years of outside work experience. The Pearson Moment Correlation and Spearman Rank Correlation formulas were used to measure the degree of relationship between supervisor and student evaluations of the teachers' effectiveness.

Findings and conclusions. Important findings of the study were the following:

1. There was no significant relationship between number of years of teaching experience and teaching effectiveness in general business as evaluated by the students.

2. There was a significant relationship between student and supervisor evaluations of teaching effectiveness in general business. However, there were differences in the way students and supervisors evaluated teaching effectiveness.

3. There was no significant relationship between general business teaching experience in years and teaching effectiveness in general business.

4. There was no significant relationship between years of outside work experience and teaching effectiveness.

5. There are distinguishing characteristics that differentiate between effective and ineffective general business teachers.

In summary, Brown stated that there is a positive relationship between the evaluation of teacher effectiveness by students and immediate supervisors. Brown also states that there are differences in the criteria used by students and supervisors in evaluation. A recommendation

advanced by the researcher was that immediate supervisors should consult students for evaluation of teaching effectiveness in the determination of teacher assignments.

In conclusion, the studies reported here disclose that teacher characteristics or behavior may influence perceptions and attitudes to a great degree. It must also be noted that the researchers all apparently assumed that the students were competent evaluators of their teachers. This assumption is also being made in the present study.

Summary

The literature and research related to students' perceptions and attitudes indicate the following five points. First, the measurement of students' perceptions is important as an indicator of the type of relationship between the student and the teacher and the degree of meaningful learning which takes place. Secondly, students' perceptions can be affected by such variables as teacher behavior, teacher age, teacher sex, teacher experience, and teacher academic preparation. Thirdly, students' attitudes affect student learning in many ways, but are often sadly neglected in the classroom. Fourth, students' attitudes, while sometimes difficult to measure, can be satisfactorily measured by the use of established techniques. Fifth, the review of experimental studies reveals the lack of research on student's perceptions and attitudes in the area of distributive education. In conclusion, studies tend to indicate that students' perceptions are valuable tools in evaluating teacher behavior and effectiveness. Students' attitudes have also been found to be influenced to a great extent by how the students perceive the teachers' behavior in the classroom.

CHAPTER III

PROCEDURE

Population and Sample

The population with which this study is concerned is secondary students who were enrolled in distributive education classes in the Utah secondary schools during Spring, 1974. Using a table of random digits, twelve distributive education teachers were randomly selected. Their students in the distributive education classes were considered as the student population in this study.

Method of Initiating Study

In initiating the study, it was felt that it would be more expedient to contact each school superintendent by phone and, after a brief explanation of the study's objectives and its importance, it was then the researcher's intention to obtain either the superintendent's approval during the telephone conversation or to schedule an appointment, if necessary, to secure the superintendent's cooperation. The researcher secured approval of all the superintendents involved on the condition that the teachers could approve or disapprove the study being done in their classroom, if they so desired.

A personal interview was then arranged with each selected teacher and a detailed explanation of the study's objectives and importance was given to each teacher. Each teacher was shown all the questionnaires to be used in the study and it was clearly emphasized that all information

obtained would be reported as group data and no names would be used. One teacher refused to cooperate on the grounds that the study would disrupt his classroom procedures. The other eleven teachers consented to cooperate and their students are the sample for this investigation.

The next step was to obtain information about the times of the teachers' classes and the number of students in those classes. Appointments were then set up with teachers for the specific times when their classes were being taught. The collection of data for all the students involved in the present study was accomplished in a period of about four weeks.

Data Gathering Instruments

Three questionnaires were used to gather data for this study. The first is a general teacher information questionnaire (see Appendix B). This questionnaire is designed by the researcher to obtain demographic information about the teacher's age, sex, experience, and academic preparation which are explained fully in Appendix C.

The second questionnaire was designed to measure students' perceptions of male and female teacher behavioral characteristics (see Appendixes D and E).

The third questionnaire was designed to measure students' attitudes toward their teachers (see Appendix F).

A pilot study was conducted at Logan High School and Skyview High School in Logan, Utah, to determine whether the general teacher information instrument was clearly understood by the distributive education teachers at those schools. The decision was made to use this instrument for the measurement of teacher characteristics without revision.

The instrument which was used to measure students' perceptions of teacher behavioral characteristics was the Pupil Observation Survey (POSR). The (POSR) was developed as a part of the assessment program of the Mental Health in Teacher Education Project at the University of Texas to gather comprehensive descriptions of teacher behavior. It is a 38 item questionnaire which attempts to measure pupils' reactions relating to five teacher behavior factors. Pupils are asked to rate their teachers on each statement by use of a four-point scale.

The factor structure of the 38 (POSR) items was determined by an analysis of 554 teachers. The five identified factors were described by Veldman and Peck as follows:

> The first factor was tentatively labeled Friendly, Cheerful, Admired and seems to be very much like Ryans' Pattern X at the descriptive level. The second factor was called Knowledgeable, Poised and seems to describe self-confidence based on thorough understanding of the material to be taught. The third factor was labeled Interesting, Preferred and appears to match Ryans' Pattern Z_0. The item content reflects lively, skillful presentation of materials as well as a generalized preference for teachers with these qualities. The fourth factor called Strict Control seems to resemble Ryans' Pattern Y_0 more than any of the other factors. These items could signify domineering behavior, but could also reflect a serious well-organized approach to teaching. The fifth factor, tentatively labeled Democratic Procedure, is loaded heavily by only two items, which have in common the teacher's active solicitation of the help of the pupils in making decisions about the goals and procedures to be chosen. (Veldman and Peck, 1963, pp. 346-355)

The instrument which was used to measure students' attitudes toward the teachers was an instrument developed by Loyal A. Hoshaw under the direction of H. H. Remmers at Purdue University. The name of the instrument is A Scale for Measuring Attitude Toward Any Teacher. Hoshaw (1936) developed the scale after a list of more than 500 statements was compiled from first-hand information on the likes and dislikes of students and

from literature related to the subject. With the help of five professors at Purdue University, this list of statements was reduced and revised. Sixty Purdue University students and 110 high school pupils ranked the revised list of statements using the Thurstone sorting technique, which was originated by Thurstone and Chave (1929). The present instrument, A Scale for Measuring Attitude Toward Any Teacher, is the result of that technique. The scale has 45 statements, relating to teacher behavior in the classroom which measures the student attitude score factor.

In administering the scale, students are instructed to place a plus sign before each statement with which they agree with reference to their teacher. The median scale value of the statements marked with a plus is the attitude score. A high scale value means a favorable attitude score, while a low scale value means an unfavorable attitude. The highest value possible to score is 10.9 and the lowest value possible is 0.9.

Validity and Reliability of the Instruments

Veldman and Peck determined the factor score (the sum of the score points for items making up a factor) reliability of the Pupil Observation Survey (POSR) as follows:

> The 50 teachers with the largest classes were selected and item means and factor scores were computed separately for each randomly divided half of each teacher's class. These factor scores were then correlated to yield reliability estimates for the factor scores. The reliability coefficients (termed "split-class" by Veldman and Peck) for each of the factor scores were these: Factor I., .92; Factor II., .72; Factor III., .91; Factor IV., .81; and Factor V., .89. (Veldman and Peck, 1963, pp. 346-355)

Brown (1965) used the (POSR) questionnaire in her study and made an additional reliability check. Reliability coefficients obtained with the test-retest method (N=54) were: Factor I., .84; Factor II., .80;

Factor III., .79; Factor IV., .71; Factor V., .66; and the whole (POSR), .86. The reliabilities appeared high enough to warrant the use of the (POSR) in the study.

As an outside criterion for testing the validity of the scale for measuring student attitude, Hoshaw (1936) selected the Purdue Rating Scale for Instructors which is designed to rate the classroom traits of a teacher. Data were gathered to measure the validity and reliability of the attitude scale at the same time. The attitude scale used in the present study and the Purdue Rating Scale were sent to high school administrators, and administered by them to pupils in five schools of North Central Indiana. The correlation for this attitude scale with the Purdue Rating Scale was found to be .51. The Purdue Rating Scale for Instructors was chosen as an outside criterion for testing the validity of the scale because it was believed that a degree of relationship existed between the students' attitude toward the teacher and the student's estimate of the ability of the teacher. A positive significant relationship was found to exist. The reliability of the obtained scale values was found to be .97.

Relating to validity again, Remmers (1934) states that attitude toward anyone of a large group can validly be measured on a single scale. The instrument used in the present study, A Scale for Measuring Attitude Toward Any Teacher, was developed under his direction at Purdue University.

Administering the Questionnaires

The questionnaire which was designed to obtain demographic information was given to each teacher to fill out at the beginning of the period

when the students were scheduled to respond to the two instruments which measured their perceptions and attitudes. It was felt that the teacher questionnaire was relatively easy to complete and that any difficulty a teacher experienced could be straightened out before the end of the testing period.

Before the administration of the two instruments, a careful explanation of the importance of the study was given. It was also clearly emphasized that no names of students or schools would be reported in the study. This was emphasized because it was felt that student responses to the two instruments would be more truthful if their responses were anonymous.

The researcher carefully explained procedures to use in filling out each questionnaire and gave a brief example of each.

After the questionnaires were completed by the students, each student's questionnaires were checked for completeness. After it was determined that the questionnaires were completed properly, they were collected by the researcher. The approximate time needed to complete both questionnaires was 15 minutes.

Blank questionnaires were left with one teacher for absent students to fill out. The teacher was given instructions about how to fill out each questionnaire. The researcher returned to the school after a period of one week and, after checking the questionnaires for completeness, picked them up.

While the questionnaires filled out by both the teachers and students did not require names or school listings, the researcher devised a coding system to permit matching of teachers' questionnaires with their students' responses.

Scoring the Questionnaires

Pupil Observation Survey (POSR)

Student scores on the (POSR) were determined by the researcher as follows:

Rating	Score Points
Completely true (T)	4
More true than false (t)	3
More false than true (f)	2
Completely false (F)	1

The number of items for each of the five factors measured by the (POSR) are: Factor I., (Friendly, Cheerful, Admired), 16 items; Factor II., (Knowledgeable, Poised), 8 items; Factor III., (Interesting, Preferred), 8 items; Factor IV., (Strict Control), 4 items; and Factor V., (Democratic Procedure), 2 items. For comparative purposes, it was desirable for each factor to be equally scaled; therefore, each factor was scaled as 64 points. Factor I. consisted of 16 items which could total 64 points. Factors II. and III., consisting of 8 items each, were multiplied by 2 to total 64 points. Factor IV., which consists of 4 items, was multiplied by 4 to obtain a total of 64 points. Factor V., which consists of only 2 items, was multiplied by 8 to obtain a total of 64 points. This explanation is shown in Table 1 to further clarify the procedure.

Table 1. Determination of value of factors as related to (POSR)

Factor	No. of Items	Highest Possible Points	Multiple
I. (Friendly, Cheerful, Admired)	16 x 4 =	64	x 1 = 64
II. (Knowledgeable, Poised)	8 x 4 =	32	x 2 = 64
III. (Interesting, Preferred)	8 x 4 =	32	x 2 = 64
IV. (Strict Control)	4 x 4 =	16	x 4 = 64
V. (Democratic Procedure)	2 x 4 =	8	x 8 = 64

The mean score for a teacher's students was used as a perception score for that teacher.

A Scale for Measuring Attitude Toward Any Teacher

The scoring procedure for the attitude scale was as follows:

1. The statements with a plus sign were counted.

2. The median statement among those marked with plus signs was located.

3. The scale value of the median statement was read from the scale devised for the instrument.

This median scale value of the statements marked with plus signs is the attitude score. The mean attitude score for the entire class was computed and used in the statistical treatment of the data.

Statistical Analyses

Information regarding teacher age, sex, teaching experience, vocational experience, and academic preparation for each teacher was entered on a computer form. After the two questionnaires measuring the students' perceptions and attitudes had been hand scored by the researcher, the data was entered for each student. Cards were then keypunched, using the computer forms which listed teacher data and student data, for use in the computer programs designed for compiling and tabulating the information at the Computer Center at Utah State University. A computer program designated as STATPAC/BASIC was used.

All hypotheses were tested initially by analysis of variance. The .05 level of significance was the criterion for rejecting or failing to reject each of the hypotheses. In those instances where more than two groups were being tested and a significant difference was found, a statistical procedure identified as the Duncan New Multiple Range Test was used to determine where the difference existed. This test is explained in detail by Duncan (1955, pp. 1-42).

CHAPTER IV

FINDINGS AND DISCUSSION

Introduction

The detailed findings for the nine null hypotheses tested in this study required a considerable amount of space and are, therefore, given in Appendix H for the reader's convenience. The pertinent findings of this study, relating to the teacher demographic information obtained and the nine teacher characteristics tested, will be summarized in the next section. A brief summary of the findings will follow, indicating those null hypotheses rejected by the researcher. A discussion will then follow on measurement of personality and the implications of the findings.

Findings

Teacher demographic information

Before the findings of the students' perceptions and attitudes related to the nine teacher characteristics tested are given, the teacher demographic information obtained from the general teacher information questionnaire will be presented. Table 2 shows the information on the teachers which was obtained. The data shown indicates the age, sex, teaching experience, subject area, occupational experience, occupational field, supervisory experience, academic preparation, and type of training of each teacher-coordinator involved in the study.

Table 2. Teacher demographic information obtained from teacher questionnaire.

Teacher Demographic Information	Teacher										
	1	2	3	4	5	6	7	8	9	10	11
Sex: Male	X	X	X	X	X	X	X	X	X		
Female										X	X
Age: Under 30		X	X	X			X	X	X		X
Over 30	X				X	X				X	
Teaching Experience: 0-3 Years		X					X		X		
3 Years & Over	X		X	X	X	X		X		X	X
Subjects Taught: Only Non-Skills			X	X	X	X	X	X	X		
Non-Skills & Skills	X	X								X	X
Occupational Experience: 0-2 Years			X	X							X
2 Years & Over	X	X			X	X	X	X	X	X	
Occupational Fields: Foods	X			X							X
Department Stores		X	X				X		X		
Petroleum Services						X					
Insurance					X			X			
Real Estate										X	
Supervisory Experience: Supervisory	X	X			X	X		X		X	
Non-Supervisory			X	X			X		X		X
Academic Degree: Bachelor's Degree	X		X	X	X	X	X		X	X	
Master's Degree		X						X			X
D.E. Principles & Methods Courses: Have Taken	X	X	X				X	X	X	X	X
Have Not Taken				X	X	X					

Teacher age

The findings suggest that distributive education students do not perceive the classroom behavioral characteristics of teacher-coordinators under 30 years of age as being significantly different from those of teacher-coordinators who were 30 years of age or older. Also, the findings relating to student attitude reveal that both teacher groups received high scores. The students displayed a very favorable attitude toward both the teacher-coordinators under 30 years of age and the teacher-coordinators who were 30 years of age or older.

A difference was found, however, in student scores related to Factor II. (Knowledgeable, poised). The student scores on this factor disclosed that teachers under 30 years of age received a mean score of 49.73, while the teachers who were 30 years or older received a mean score of 53.36. While the difference is not statistically significant, the evidence suggests a tendency for students to perceive the teacher-coordinators who were 30 years of age or older as more knowledgeable and poised. A reasonable assumption here is that the teacher's age may have some relationship to the teacher's poise in the classroom.

Teacher sex

The findings suggest that distributive education students do not perceive the classroom behavioral characteristics of male teacher-coordinators as being significantly different from that of female teacher-coordinators. Also, the findings relating to student attitude scores reveal both teacher groups received high scores. The students' attitude toward the male and female teacher-coordinators were favorable.

A difference was found, however, in student scores related to Factor II. (Knowledgeable, poised). Male teachers received a mean score of 49.93, while the female teachers received a mean score of 54.29. While the difference is not statistically significant, it suggests a tendency for students to perceive female teacher-coordinators as being more knowledgeable and poised than their male counterparts.

Teaching experience

The findings reveal a statistically significant difference at the .05 level between student scores related to Factor II. (Knowledgeable, poised), leading to a rejection of the related null hypothesis. Teachers with less than three years' teaching experience received a mean score of 47.00, while teachers with three or more years' teaching experience received a mean score of 52.12. Students perceived teachers with three or more years' teaching experience as being more knowledgeable and poised than their counterparts with less teaching experience.

A statistically significant difference at the .05 level was also found between student scores related to Factor III. (Interesting, preferred) and resulted in the rejection of the related null hypothesis. Teachers with less than three years' teaching experience received a mean score of 38.05, while teachers with three or more years' teaching experience received 42.09. The students perceived the teacher-coordinators with three or more years' teaching experience as being more interesting and more preferred. This tends to relate well to the previous finding, as it is reasonable to assume that a teacher who is perceived as being more knowledgeable would also be perceived as being more interesting.

The findings reveal a statistically significant difference at the .01 level between the student attitude scores of the teachers with less than three years' teaching experience and teachers with three or more years' teaching experience. The null hypothesis related to Factor VI. (Student attitude score) was rejected. Students displayed a more favorable attitude toward the teacher-coordinators with three or more years' teaching experience. Apparently, teaching experience of the distributive education teacher-coordinators significantly affects the students' attitudes.

Subjects taught

The findings reveal a statistically significant difference at the .01 level between student scores of teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects when Factor V. (Democratic procedure) was tested. The null hypothesis related to this factor was rejected. The teachers of only non-skills subjects received a mean score of 45.79, while the teachers of both non-skills and skills subjects received a mean score of 36.49. The students perceived teachers who teach only non-skills subjects as being more democratic in the classroom. This may be a consequence of the rigid practice required in the skills subjects, which is not a major consideration in the non-skills area. The teachers of both areas may possibly carry over some of their disciplinary procedures in the skills subjects to the non-skills classes.

Occupational experience - time

The findings suggest that distributive education students do not perceive the classroom behavioral characteristics of teachers with less

than two years' occupational experience as being significantly different from teachers with two or more years' occupational experience. Also, the findings relating to student attitude reveal that both teacher groups received high scores. Students' attitudes were favorable toward both groups of teachers.

A difference, however, was found in student scores related to Factor I. (Friendly, cheerful, admired). The teachers with less than two years' occupational experience received a mean score of 49.39, while the teachers with two or more years' occupational experience received a score of 47.42. While the difference is not statistically significant, it does suggest a tendency for students to perceive teachers with less occupational experience as being more friendly, cheerful, and admired. Teachers with more occupational experience may become more impersonal because of the competition faced in the business world.

Occupational experience - field

The findings suggest that distributive education students do not perceive the classroom behavioral characteristics of teacher-coordinators sho have had occupational experience in the varied fields of Food Retailing, Retailing-Department Stores, Petroleum Services, Insurance, and Real Estate as being significantly different. Also, no significant differences were noted in the student attitude scores of the teachers with varied experience. All teachers received high scores, and students' attitudes were favorable toward all the teacher-coordinators.

Supervisory work experience

The findings suggest that distributive education students do not perceive the classroom behavioral characteristics of teacher-coordinators

who have had supervisory work experience as being significantly different from that of teacher-coordinators who have had no supervisory work experience. Also, the findings related to student attitude scores revealed no significant differences between the two teacher groups.

A difference, however, was found in student scores related to Factor II. (Knowledgeable, poised). Teachers with supervisory work experience received a mean perception score of 52.30, while teachers with no supervisory work experience received a score of 48.82. While the difference is not statistically significant, the evidence suggests a tendency for students to perceive teacher-coordinators with supervisory work experience as being more knowledgeable and poised. This may possibly be a result of self-confidence and poise gained from the previous supervisory experience.

Another difference was found in student scores relating to Factor V. (Democratic procedure). Teachers with supervisory work experience received a mean score of 39.43 and teachers with no supervisory work experience received a score of 45.99. While the difference is not statistically significant, the evidence suggests a tendency for students to perceive teacher-coordinators with no supervisory work experience as using more democratic procedures in the classroom. Previous supervisory experience may result in the teacher becoming a stricter disciplinarian, while those teachers with no supervisory work experience may tend to be more lenient in the classroom.

Academic degree

The findings suggest that distributive education students do not perceive the classroom behavioral characteristics of teachers with

Bachelor's degrees as being significantly different from that of teachers holding Master's degrees. Also, no significant difference was found between the student attitude scores of the two teacher groups. Both groups received high scores, and students displayed favorable attitudes toward both groups of teacher-coordinators.

Type of professional training

The findings suggest that distributive education students do not perceive the classroom behavioral characteristics of teachers who have taken Distributive Education Principles and Methods courses as being significantly different from that of teachers who have not taken Distributive Education Principles and Methods courses. The findings also disclosed no significant differences in the student attitude scores of both groups. Both teacher groups received high scores, and students displayed favorable attitudes toward both the teacher-coordinators who have taken and have not taken Distributive Education Principles and Methods courses.

Summary

A brief summary of the findings is given to show the reader those hypotheses which were rejected by the researcher. There was a significant difference between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience when Factor II. (Knowledgeable, poised); Factor III. (Interesting, preferred); and VI. (Student attitude score) were tested. Also, the reader can note that there was a significant difference between teachers of only non-skills subjects and teachers of both non-skills and skills subjects when Factor V. (Democratic procedure) was tested.

Discussion

Measurement of personality

Testing of personality is done professionally in three ways: (1) self-report, (2) objective measures, and (3) reports of others. This study utilizes the third method in terms of pupils' viewpoints related to their teacher's behavior.

For example, the first method would involve the teacher in self-evaluation. The teacher would state how he feels about himself regarding specific teacher behavior. This method is highly subjective and, possibly, could result in faulty measurement because of the human factor. The teacher involved may not disclose all behavior, especially of a negative nature. The second method would use objective measurement. The teacher, in this instance would take a specific test designed to measure certain characteristics. The Minnesota Teacher Attitude Inventory, for instance, measures teachers' attitudes to determine how well they will get along with students and how satisfied they are with the teaching vocation. In taking this test, the teacher indicates whether he strongly agrees, agrees, is undecided, disagrees, or strongly disagrees with each of 150 statements. While this method may still be faulty, it is more likely that all behaviors will be measured to some degree because of their appearance on the questionnaire.

The third and last method involves evaluation by others. This study utilizes this method through measurement of students' perceptions and attitudes toward their distributive education teacher-coordinators. This method, while also having its shortcomings, may possibly be the best of the three in evaluating a teachers' classroom behavior. In this

study, two objective measuring devices are used and the evaluation is done by another individual, not the teacher. While a pupil's dislikes or likes may affect his evaluation, it does not seem to be a highly significant factor. Past studies have indicated, for instance, that pupils' evaluations of their teachers are fair and reasonable. Also, this study measures the average of all the teachers' students; therefore, it is felt that the final measurement is an indication of a large majority of the students.

Implications for teacher training

As for teacher training program implications, the question is: Can we train prospective teacher-coordinators to exhibit desirable personality characteristics?

For example, if Factor I. (Friendly, cheerful, admired) is desirable, how would we train the prospective teacher? Through an examination of the questions identified with this factor, it can be readily noted that behavioral characteristics such as being friendly and concerned about the students are emphasized. Stressing the importance of friendliness and concern for the students in the training programs will considerably strengthen this teacher personality characteristic.

Factor II. (Knowledgeable, poised) is measured by questions which emphasize teacher knowledge of the subject content and effective teacher preparation and lesson planning. Teacher training programs can stress these two areas if these teacher personality characteristics are deemed important.

Factor III. (Interesting, preferred) is measured by questions which emphasize clear classroom presentations of the subject matter,

along with clear understanding by the students of all assigned work. Training programs should emphasize effective classroom teaching techniques and methods, if this teacher characteristic is also deemed desirable in the classroom.

Factor IV. (Strict control) is measured by questions which emphasize strict discipline and control in the classroom. If this teacher characteristic is desirable, the teacher training program could emphasize these procedures and possibly train its students through simulated classroom situations before actual teaching practice is experienced.

Factor V. (Democratic-procedure) is measured by questions which emphasize student initiative in the classroom encouraged by the teacher. If this is desirable, then the training program can be designed to instruct and encourage the prospective teacher to allow students to participate in classroom activities.

In conclusion, teacher training programs can train the prospective teachers to display certain desirable behavioral characteristics if they so desire. On the other hand, training programs can be designed to discourage certain teacher behavior also. The final decision as to what behavioral training to teach is the responsibility of each individual training program director.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Statement of the problem

The purpose of this study was to measure secondary distributive education students' perceptions and attitudes toward their teacher-coordinators.

The specific problem was to analyze Utah distributive education students' perceptions and attitudes with respect to their teacher-coordinators' classroom behavior, and to determine if there were any differences which may be attributed to specific teacher characteristics. The teacher characteristics considered were age, teaching experience, vocational work experience, and academic preparation.

Nine groups of null hypotheses (54 total) were tested to answer the specific questions of the study. Each group consisted of the following six factors derived from student responses to the attitude scale and pupil observation survey questionnaires: Factor I. (Friendly, cheerful, admired); Factor II. (Knowledgeable, poised); Factor III. (Interesting, preferred); Factor IV. (Strict control); Factor V. (Democratic procedure); and Factor VI. (Student attitude score). The nine hypotheses tested for differences related to teacher age, teacher sex, teaching experience, teaching assignment, occupational experience time, occupational experience field, type of work experience, academic degree, and type of professional training.

Importance of the study

Distributive education is becoming increasingly important in the Utah secondary schools, and current programs need to be evaluated as to their worth. The Utah State Advisory Council (1972) emphasizes the importance of distributive education with the following facts: (1) Distributive education enrollments have increased in the secondary schools from 1,754 students to 2,828 students, (2) the number of students intending to go to college has decreased from 69.10 percent to 54.11 percent, (3) the percentage of students planning to go to vocational or business schools has increased by 3.38 percent, (4) a majority of participants in a series of seminars agreed that vocational education programs (including distributive education) generally suffer from lack of adequate and proper evaluation, (5) during 1972, there were 27,000 people unemployed in Utah, and many jobs could not be filled because those unemployed did not have the required skills to fill the available positions, and (6) over 40 percent of high school graduates who were surveyed stated that a major factor contributing to their difficulty in obtaining employment was that school course offerings did not correspond with the knowledge and skills required to obtain available positions in the labor market.

One way of evaluating the program is through the measurement of students' perceptions and attitudes toward their teacher-coordinators. Researchers such as Brown (1972) and Smalzried and Remmers (1943) have stated that student perceptions are a valid means of evaluating a teacher. Bryan (1941) has indicated that student perceptions influence their motivations to learn. This study has measured students'

perceptions and attitudes relating to six factors: (1) Friendly, cheerful, admired; (2) Knowledgeable, poised; (3) Interesting, preferred; (4) Strict control; (5) Democratic procedure; and (6) Student attitude score. The importance of each factor is emphasized more fully when the opinion of leading educators are disclosed. Glasser (1972) believes that teachers must be friendly in order to motivate the students. Veldman and Peck (1963) state that students will perceive competent teachers as being knowledgeable and poised. The factor, interesting and preferred, relates to teaching skills, which McCall (1952) believes students can perceive very accurately. Karnin and Gump (1961) have indicated that strict discipline can adversely affect learning. Emmer (1967) has found that using democratic procedure in the classroom has a positive effect on student participation. Finally, the students' attitude, according to such researchers as Ellish (1968) and Mayberry (1969) is directly related to the students' academic success.

In summary, programs in distributive education are important in the Utah secondary schools and research indicates that evaluating those programs through the measurement of students' perceptions and attitude scores is an effective means of determining the worth of present programs.

Procedure

Population tested. The distributive education students of eleven Utah secondary distributive education teacher-coordinators, randomly selected from a table of random digits, were the population used in this study.

Instruments used to collect data. In collecting the data, three instruments were used. The first instrument was a general teacher

information questionnaire, which was designed by the researcher to obtain demographic information about the teacher's age, sex, experience, and academic preparation.

The second instrument used was the Pupil Observation Survey (POSR), which measured the students' perceptions of five teacher behavioral characteristics. This questionnaire was developed at the University of Texas to be used to gather comprehensive descriptions of teacher behavior. The (POSR) consisted of 38 questions which relate to five teacher behavior factors. The five teacher behavior factors measured were: (1) Friendly, cheerful, admired; (2) Knowledgeable, poised; (3) Interesting, preferred; (4) Strict control; and (5) Democratic procedure. Each factor was measured by student responses to those specific questions involving each factor.

The third instrument was A Scale for Measuring Attitude Toward Any Teacher, which measured the students' attitudes. The scale was developed by Hoshaw (1936) at Purdue University. There are 45 statements relating to teacher behavior in the classroom. Student responses to these statements resulted in the student attitude score which is Factor VI.

Validity and reliability of the instruments. Both the (POSR) and A Scale for Measuring Attitude Toward Any Teacher were tested previously for reliability and validity. Veldman and Peck (1963) used the split-half method to determine reliability for the (POSR). The reliability scores for the five factors measured were: Factor I., .92; Factor II., .72; Factor III., .91; Factor IV., .81; and Factor V., .89.

Brown (1965) made an additional reliability check on the (POSR), using the test-retest method. Her reliability scores were:

Factor I., .84; Factor II., .80; Factor III., .79; Factor IV., .71; and Factor V., .66. Her findings indicated a reliability score of .86 on the whole (POSR).

The validity of the scale for measuring student attitude was tested by Hoshaw (1936). Hoshaw selected the Purdue Rating Scale for Instructors as an outside criterion for determining the validity of the attitude scale. The Purdue Rating Scale for Instructors was chosen as an outside criterion for testing the validity of the scale because it was believed that a degree of relationship existed between the students' attitude toward the teacher and the students' estimate of the ability of the teacher. A positive significant relationship was found to exist. The reliability of the obtained scale values was found to be .97.

Statistical analysis

The nine null hypotheses were tested initially by analysis of variance. In those instances where more than two groups were tested, the Duncan New Multiple Range Test was used to determine where the difference occurred. The .05 level of significance was the criterion for rejecting or failing to reject each hypothesis.

All data was processed at the Utah State University Computer Center. A program designated as STATPAC/BASIC was used to analyze the data. STATPAC/BASIC was developed by Dr. Rex Hurst, director of the Computer Center.

Findings

Table 3 presents the demographic information and scores on the six factors for each teacher-coordinator. Any significant differences

Table 3. Summary of findings*

Teacher Demographic Information	Factors Tested					
	Friendly Cheerful Admired I.	Knowledgeable Poised II.	Interesting Preferred III.	Strict Control IV.	Democratic Procedure V.	Student Attitude Score VI.
Age: Under 30 vs. Over 30						
Sex: Male vs. Female						
Teaching Experience: Less than 3 years vs. 3 years or more		X	X			X
Teaching Assignment: Non-skills vs. skills and non-skills subjects					X	
Occupational Experience - Time: Less than 2 years vs. 2 years or more						
Occupational Experience - Field: Food vs. Department Store vs. Petroleum vs. Real Estate vs. Insurance						
Type of Work Experience: Supervisory vs. Non-supervisory						
Education Degree: Master's vs. Bachelor's						
Type of Professional Training: D.E. Principles and Methods vs. no D.E. Principles and Methods						

*A significant difference resulting in rejection of hypotheses is shown by an "X."

between or among the teachers are shown in the table. As noted, a significant difference was found between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience when Factors II., III., and VI. were tested. Also, there was a significant difference between teachers of only non-skills subjects and teachers of both non-skills and skills subjects when Factor V. was tested. No significant differences were found for any of the other teacher characteristics.

In summary, the findings disclose that students perceive teachers with three or more years' teaching experience as being significantly different than those teachers with less than three years' teaching experience when Factor II. (Knowledgeable, poised), Factor III. (Interesting, preferred), and Factor V. (Student attitude score) were tested. Teachers with more teaching experience were perceived as being more knowledgeable and poised, more interesting and preferred, and their students also displayed more favorable attitudes toward them. Students also perceived the teachers who teach only non-skills subjects as using more democratic procedures in the classroom than those teachers of both skills and non-skills subjects.

Conclusions

The findings of this study lead to the following conclusions:

1. The length of teaching experience significantly affects students' perceptions and attitudes toward their teacher-coordinators. Students view teacher-coordinators who have had three or more years' teaching experience more positively than teacher-coordinators with less experience.

2. Teacher-coordinators who teach only non-skills subjects use more democratic procedures in the classroom than teacher-coordinators who teach both non-skills and skills subjects.

3. While teacher characteristics such as sex, age, vocational experience, and academic preparation affect students' perceptions and attitudes, no definite conclusions can be made about their effects, based on the findings of this study. Further study in this area is needed to obtain additional data.

Recommendations

The following recommendations seem justified on the basis of this study:

1. Business teacher-educators should re-evaluate present teacher training programs to determine whether sufficient time is being allowed for the student-teaching experience. The teachers involved in this study with less than three years' teaching experience were perceived as being less knowledgeable, less poised, less interesting, and less preferred than teachers with three or more years' teaching experience. More student-teaching experience before actual employment might offset this situation.

2. Business teacher-educators should examine current methods and principles courses being offered both undergraduate and graduate business education students to determine whether those courses are adequately meeting the needs of their students. The objective of these courses is to develop professional teachers who use varied methods and procedures in their instructional activities. The findings of this study suggest

no differences between teachers who have taken principles and methods courses and teachers who have not taken principles and methods courses.

3. Business teacher-educators should recognize that methods classes should stress affective learning as well as cognitive learning to instill in the future teacher the importance of student perceptions and attitudes. Affective learning involves students' feelings and attitudes which vitally affect cognitive learning. A negative attitude on the part of the student may result in considerably less cognitive learning than possible with a positive student attitude. The direction for the consideration of both affective learning and cognitive learning in the classroom comes from the teacher, and this emphasis on both types of learning should begin in the methods courses.

4. Business teacher-educators should consider the inclusion of apprentice supervisory experience in the requirements for teacher-coordinators. This study indicates a tendency for students to perceive teacher-coordinators with supervisory experience as being more knowledgeable and poised than teacher-coordinators with no experience. The additional supervisory experience gained by the future teacher would eventually result in a more meaningful classroom experience for the students.

Recommendations for Further Study

As a result of this study, the following recommendations for further study seem warranted:

1. A larger scale study, related to students' perceptions and attitudes toward their teacher-coordinators, should be undertaken to further substantiate the findings of this study.

2. Studies should be conducted on students' perceptions relating to teacher competency and effectiveness and to subject matter and methodology used in Distributive Education. The area of teacher competency and effectiveness is of vital concern to both teachers and the general public. Many authorities in education believe that student evaluations of teachers and programs is as valid as other methods of evaluation. The student viewpoint of the distributive education teacher and programs is important and should be studied because the students ultimately reap the rewards or suffer the consequences of such programs.

3. A study is recommended to determine the teacher-coordinators' perceptions and attitudes toward his distributive education program's objectives, relevancy, and benefits. An evaluation from the teacher-coordinator's viewpoint is just as important as an evaluation by the students. Both teacher and student input is necessary for the creation of more relevant educational programs in distributive education.

4. Further studies on teacher behavior are needed in distributive education as this is an area which has received little attention. Teacher behavior affects student performance either positively or negatively. Teachers who are friendly, democratic, poised, and interesting relate differently to students than their opposites. Studies on the relationship of academic achievement of students in distributive education to specific teacher behavior such as those mentioned previously, may give additional insight as to the importance of teacher behavior on student performance and motivation.

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APPENDIXES

Appendix A

Summary of Questions in (POSR) Which Measure Factors I-V.

Summary of Questions in (POSR) Which Measure Factors I-V.

It should be noted that while the questions refer to a female teacher, they should be construed as applying to all teachers. The five factors and the specific questions related to each factor are as follows:

Factor I. (Friendly, cheerful, admired)

1. She is admired by most of her students.
5. She hardly gets flustered about anything that happens.
6. She seems to understand the problems students have.
9. She usually looks on the bright side of things.
11. I would like to be like her in some ways.
13. You can depend on her to be fair with you.
16. You can tell that she really likes her students.
18. She never seems to order her students around.
19. She smiles most of the time.
21. She sets a good example for her students.
26. She is always friendly toward her students.
29. She always seems cheerful and happy.
30. I would like to have her as a personal friend.
35. She is as interested in her students as she is in her subject.
37. She is always interested in hearing student's ideas.
38. She is good-natured and easy to get along with.

Factor II. (Knowledgeable, poised)

7. She is never stumped by a student's question.
15. She always seems sure of herself in front of the class.
17. She knows a great deal about her subject.
25. She doesn't seem to be afraid of making mistakes.
27. She must have studied hard to know so much about her subject.
33. She always seems to know just what she'll do next.
34. She doesn't get confused by unexpected questions.
36. She seems to know more about her subject that just what is in the book.

Factor III. (Interesting, preferred)

2. She has made her subject alive and interesting for me.
4. She explains her assignments clearly and completely.
10. She is the best teacher I have ever had.
12. Her class is never dull or boring.
20. I wish all my teachers were like her.

Factor III. (Interesting, preferred) Continued

22. She knows how to put her subject across in a lively way.
24. She doesn't try to cover the lesson too fast.
31. She makes learning seem more like fun than work.

Factor IV. (Strict control)

3. She expects a lot from her students and usually gets it.
14. She doesn't let the class discussion get too far off the subject.
23. Students respect her because she means what she says.
32. She doesn't let her students get away with anything.

Factor V. (Democratic procedure)

8. Before she decides on a new project, she often asks the students what they think.
28. She likes to give the students a choice of how to do an assignment.

(Veldman and Peck, 1963, p. 349)

Appendix B

General Teacher Information Questionnaire

General Teacher Information Questionnaire

Your thoughtful response to the questions below will be of great help in the completion of a study being conducted at Utah State University and will be very much appreciated. Most questions require only a check. All information will be treated as confidential and only general conclusions, representing group data, will be reported.

Thank you for your cooperation.

Check your answer in the appropriate box for each question below.

SEX: Male /__/ Female /__/ AGE: Under 30 /__/ Over 30 /__/

TEACHING EXPERIENCE:

Years Taught:

/__/ 0-3 Years.

/__/ Over 3 Years.

Courses Taught:

/__/ Typewriting /__/ Business Law

/__/ Shorthand /__/ Salesmanship

/__/ Bookkeeping /__/ Marketing

/__/ Business Math /__/ Co-op Programs

/__/ Others (Specify)_____

DISTRIBUTIVE OCCUPATIONAL EXPERIENCE:

Years of Experience:

/__/ 0-2 Years.

/__/ Over 2 Years.

Occupational Field:

/__/ Retailing-Foods

/__/ Retailing-Dept. Stores

/__/ Petroleum Services

/__/ Insurance

/__/ Real Estate

/__/ Others (Specify)_____

Supervisory Experience:

/__/ Yes.

/__/ No.

ACADEMIC PREPARATION:

Highest Degree:

/__/ Bachelor's Degree

/__/ Master's Degree

HAVE YOU TAKEN THE FOLLOWING DISTRIBUTIVE EDUCATION COURSES OR WORKSHOPS?

Co-op Courses /__/ Yes /__/ No

D. E. Principles & Methods /__/ Yes /__/ No

D. E. Curriculum /__/ Yes /__/ No

Appendix C

Specific Teacher Demographic Information Obtained from the General Teacher Information Questionnaire

Specific Teacher Demographic Information Obtained from the General Teacher Information Questionnaire

The eight teacher characteristics included in the information questionnaire are as follows:

1. Sex of Teacher. Teachers are classified into male and female teachers.

2. Teacher Age. Teacher age is self-explanatory, and ages will be classified into two groups as follows:

   a. Under 30 years of age.

   b. Thirty years of age or over.

3. Teacher Experience. Teacher experience is defined in this study as the number of years of teaching experience a teacher has in the classroom and the number of years a teacher has in occupational experience. Experience is classified as follows:

   a. Teaching Experience.

      (1) 0 - 3 years.

      (2) Over three years.

   b. Distributive Occupational Experience.

      (1) 0 - 2 years.

      (2) Over two years.

4. Teacher Academic Preparation. Teacher academic preparation is defined as the degrees a teacher has earned from a college of good academic standing. Preparation will be classified into two groups:

   a. Teachers with Bachelor's degrees.

   b. Teachers with Master's degrees.

5. Subjects Taught by the Teachers. Subjects taught by the teachers can be classified as either non-skills or skills subjects.

Subjects are segregated as follows:

a. Non-Skills Subjects.

(1) Bookkeeping.

(2) Business Mathematics.

(3) Business Law.

(4) Salesmanship.

(5) Marketing.

(6) Co-op Programs.

b. Skills Subjects.

(1) Typewriting.

(2) Shorthand.

6. Occupational Field Experience. Occupational field experience is defined in this study as the specific area in which the teacher has had occupational experience. Five specific areas were designated as the occupational fields in which the teachers had experience. These five areas are as follows:

a. Food Retailing.

b. Retailing-Department Stores.

c. Petroleum Services.

d. Insurance.

e. Real Estate.

7. Supervisory Work Experience. Supervisory work experience is defined as work experience which includes responsibility for supervision or management of some type. In this study supervisory work experience is separated as follows:

a. Teacher has supervisory work experience.

b. Teacher has no supervisory work experience.

8. Distributive Education Principles and Methods Courses. Distributive education principles and methods courses are defined as those courses which are designed to acquaint the student with basic concepts relating to distributive education and to instruct and familiarize the student in appropriate means or methods which can be used in teaching those concepts. Distributive education principles and methods courses are: (1) Co-op programs, (2) Distributive education curriculum, and (3) Distributive education methods courses which emphasize methods of teaching distributive education or improvement of instruction in distributive education. In this study, distributive education principles and methods courses are separated as follows:

a. Teacher has taken distributive education principles and methods courses.

b. Teacher has not taken distributive education principles and methods courses.

Appendix D

Pupil Observation Survey (POSR)

Male Teacher

Pupil Observation Survey (POSR)

Directions: We want to know how you feel about working with your teacher. Your answers to these questions will be used for research only, and will have nothing to do with your grade. When you answer the questions, it is important to mark the way you really feel.

After you read each question, put a circle around one of the four letters that follow each statement. If you think the statement is completely true, circle the capital T. If you think the statement is more true than it is false, put a circle around the small t. If you think the statement is more false than it is true, circle the small f. If you think the statement is completely false, circle the capital F.

Here is an example:

My teacher has a loud voice	T t f F
If you think he has a very loud voice, you would circle the big T.	(T) t f F
If his voice is a little louder than most people, circle the small t.	T (t) f F
If his voice is a little softer than most people, circle the small f.	T t (f) F
If his voice is very soft, you would circle the big F.	T t f (F)

When you finish the questions, please go back and make sure that you did not accidentally skip any of them. Please answer all of the questions.

Begin by writing your age in the space provided and drawing circles around your grade and sex classifications. It is not necessary to write your name on the survey.

Thank you for your cooperation.

Code Number_____ Age_____ Sex M F Grade Level 9 10 11 12

1.	He is admired by most of his students.	T t f F
2.	He has made his subject alive and interesting for me.	T t f F
3.	He expects a lot from his students and usually gets it.	T t f F
4.	He explains his assignments clearly and completely.	T t f F
5.	He hardly ever gets flustered about anything that happens.	T t f F
6.	He seems to understand the problems students have.	T t f F
7.	He is never stumped by a student's question.	T t f F
8.	Before he decides on a new project, he often asks the students what they think.	T t f F
9.	He usually looks on the bright side of things.	T t f F
10.	He is the best teacher I have ever had.	T t f F
11.	I would like to be like him in some ways.	T t f F
12.	His class is never dull or boring.	T t f F
13.	You can depend on him to be fair with you.	T t f F
14.	He doesn't let the class discussion get too far off the subject.	T t f F
15.	He always seems sure of himself in front of the class.	T t f F
16.	You can tell that he really likes his students.	T t f F
17.	He knows a great deal about his subject.	T t f F
18.	He never seems to order his students around.	T t f F
19.	He smiles most of the time.	T t f F
20.	I wish all my teachers were like him.	T t f F
21.	He sets a good example for his students.	T t f F
22.	He knows how to put his subject across in a lively way.	T t f F

23.	Students respect him because he means what he says.	T	t	f	F
24.	He doesn't try to cover the lesson too fast.	T	t	f	F
25.	He doesn't seem to be afraid of making mistakes.	T	t	f	F
26.	He is always friendly toward his students.	T	t	f	F
27.	He must have studied hard to know so much about his subject.	T	t	f	F
28.	He likes to give the students a choice of how to do an assignment.	T	t	f	F
29.	He always seems cheerful and happy.	T	t	f	F
30.	I would like to have him as a personal friend.	T	t	f	F
31.	He makes learning seem more like fun than work.	T	t	f	F
32.	He doesn't let his students get away with anything.	T	t	f	F
33.	He always seems to know just what he'll do next.	T	t	f	F
34.	He doesn't get confused by unexpected questions.	T	t	f	F
35.	He is as interested in his students as he is in his subject.	T	t	f	F
36.	He seems to know more about his subject than just what is in the book.	T	t	f	F
37.	He is always interested in hearing student's ideas.	T	t	f	F
38.	He is good-natured and easy to get along with.	T	t	f	F

Appendix E

Pupil Observation Survey (POSR)

Female Teacher

Pupil Observation Survey (POSR)

Directions: We want to know how you feel about working with your teacher. Your answers to these questions will be used for research only, and will have nothing to do with your grade. When you answer the questions, it is important to mark the way you really feel.

After you read each question, put a circle around one of the four letters that follow each statement. If you think the statement is completely true, circle the capital T. If you think the statement is more true than it is false, put a circle around the small t. If you think the statement is more false than it is true, circle the small f. If you think the statement is completely false, circle the capital F.

Here is an example:

My teacher has a loud voice	T t f F
If you think she has a very loud voice, you would circle the big T.	(T) t f F
If her voice is a little louder than most people, circle the small t.	T (t) f F
If her voice is a little softer than most people, circle the small f.	T t (f) F
If her voice is very soft, you would circle the big F.	T t f (F)

When you finish the questions, please go back and make sure that you did not accidentally skip any of them. Please answer all of the questions.

Begin by writing your age in the space provided and drawing circles around your grade and sex classifications. It is not necessary to write your name on the survey.

Thank you for your cooperation.

Code Number_____ Age_____ Sex M F Grade Level 9 10 11 12

1.	She is admired by most of her students.	T t f F
2.	She has made her subject alive and interesting for me.	T t f F
3.	She expects a lot from her students and usually gets it.	T t f F
4.	She explains her assignments clearly and completely.	T t f F
5.	She hardly ever gets flustered about anything that happens.	T t f F
6.	She seems to understand the problems students have.	T t f F
7.	She is never stumped by a student's question.	T t f F
8.	Before she decides on a new project, she often asks the students what they think.	T t f F
9.	She usually looks on the bright side of things.	T t f F
10.	She is the best teacher I have ever had.	T t f F
11.	I would like to be like her in some ways.	T t f F
12.	Her class is never dull or boring.	T t f F
13.	You can depend on her to be fair with you.	T t f F
14.	She doesn't let the class discussion get too far off the subject.	T t f F
15.	She always seems sure of herself in front of the class.	T t f F
16.	You can tell that she really likes her students.	T t f F
17.	She knows a great deal about her subject.	T t f F
18.	She never seems to order her students around.	T t f F
19.	She smiles most of the time.	T t f F
20.	I wish all my teachers were like her.	T t f F
21.	She sets a good example for her students.	T t f F
22.	She knows how to put her subject across in a lively way.	T t f F

23.	Students respect her because she means what she says.	T t f F
24.	She doesn't try to cover the lesson too fast.	T t f F
25.	She doesn't seem to be afraid of making mistakes.	T t f F
26.	She is always friendly toward her students.	T t f F
27.	She must have studied hard to know so much about her subject.	T t f F
28.	She likes to give the students a choice of how to do an assignment.	T t f F
29.	She always seems cheerful and happy.	T t f F
30.	I would like to have her as a personal friend.	T t f F
31.	She makes learning seem more like fun than work.	T t f F
32.	She doesn't let her students get away with anything.	T t f F
33.	She always seems to know just what she'll do next.	T t f F
34.	She doesn't get confused by unexpected questions.	T t f F
35.	She is as interested in her students as she is in her subject.	T t f F
36.	She seems to know more about her subject than just what is in the book.	T t f F
37.	She is always interested in hearing student's ideas.	T t f F
38.	She is good-natured and easy to get along with.	T t f F

Appendix F

A Scale for Measuring Attitude Toward Any Teacher

A Scale for Measuring Attitude Toward Any Teacher

L. D. Hoshaw Edited by H. H. Remmers

Please fill in the blanks below.

Sex of teacher Male Female (Encircle one)

Sex of student Male Female (Encircle one)

Age_____ Grade_____ School_____

Directions: The following is a list of statements about teachers. Place a plus sign (+) before each statement with which you agree with reference to the teacher whom you are evaluating. Mark only those statements which you know to be true about the teacher. Your score will in no way affect your grade in any course.

_____ 1. Knows the subject.

_____ 2. Grades fairly.

_____ 3. Uses good English.

_____ 4. Makes cheating seem undesirable to the student.

_____ 5. Gives individual help willingly.

_____ 6. Can see a question from the pupil's point of view.

_____ 7. Gives test questions which are clearly understood.

_____ 8. Understands young people.

_____ 9. Is a natural leader.

_____ 10. Is uniformly well liked.

_____ 11. Uses a vocabulary best suited to the average student.

_____ 12. Can talk well on many subjects.

_____ 13. Has a keen sense of humor.

_____ 14. Weighs facts before making decisions.

_____ 15. Inspires students with confidence in their own abilities.

_____ 16. Recognizes the right to difference of opinion.

_____ 17. Seems never to tire of teaching.

_____ 18. Is a good entertainer outside of class.

_____ 19. Satisfies only the dull students.

_____ 20. Uses meaningful gestures.

_____ 21. Exalts accuracy with no regard for speed.

_____ 22. Has no hobby in life.

_____ 23. Uses personal illustrations too often.

_____ 24. Does not follow the text book closely enough.

_____ 25. Is too lenient.

_____ 26. Is not serious enough.

_____ 27. Depends too much on text books.

_____ 28. Is too reluctant to change.

_____ 29. Is frequently impatient.

_____ 30. Becomes greatly concerned over petty disturbances.

_____ 31. Frequently makes unreasonable requests.

_____ 32. Causes the student to feel inferior.

_____ 33. Frequently shows lack of preparation.

_____ 34. Makes vague assignments.

_____ 35. Does nothing to correct the poor study habits of the students.

_____ 36. Fails to teach students how to study.

_____ 37. Is a poor sport.

_____ 38. Is a bore.

_____ 39. Is not interested in the subject taught.

_____ 40. Does nothing to interest the student.

_____ 41. Frequently seeks to embarrass the slow student because of his lack of ability.

_____ 42. Becomes angry if anyone differs with him or her.

_____ 43. Is frequently "two-faced."

_____ 44. Is a disgrace to the community.

_____ 45. Grades unfairly.

Scale to Measure Attitude Toward Any Teacher

Directions for Scoring. The median scale value of the statements marked with a plus is the attitude score. If an odd number of statements is thus endorsed, the scale value of the middle item of those endorsed gives the score. For example, if nine statements are endorsed of which the fifth one is item 13, the score for the pupil is 9.1, the scale value of item 13. If an even number of items is endorsed, the pupil's score is the scale value half-way between the two middle items. Example: If ten items are endorsed of which items 11 and 15 are the fifth and sixth in order, the pupil's score will be the scale value of item 15 plus the difference between 9.0 (scale value for item 15) and 9.3 (scale value for item 11), divided by 2, or 9.15.

A high scale value means a favorable attitude, and a low scale value means an unfavorable attitude.

Statement	Score
1.	10.9
2.	10.2
3.	10.0
4.	9.9
5.	9.8
6.	9.8
7.	9.7
8.	9.6
9.	9.5
10.	9.4
11.	9.3
12.	9.2
13.	9.1
14.	9.0
15.	9.0
16.	8.9
17.	8.9
18.	8.7
19.	8.1
20.	7.8
21.	6.0
22.	4.7
23.	4.2
24.	4.0
25.	3.8
26.	3.7
27.	3.5
28.	3.1
29.	3.0
30.	2.9
31.	2.4
32.	2.4
33.	2.3
34.	2.1
35.	2.0
36.	2.0
37.	1.7
38.	1.7
39.	1.6
40.	1.5
41.	1.3
42.	1.3
43.	0.9
44.	0.9
45.	0.9

Appendix G

Raw Scores Obtained from the Pupil Observation Survey (POSR) and the Attitude Questionnaires

Table 4. Raw scores obtained from the Pupil Observation Survey (POSR) and the attitude questionnaires

Teacher Identification Number	(POSR) Questionnaire					Attitude Questionnaire
	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI
1	44	58	30	36	56	9.30
	43	50	44	52	40	9.20
	49	56	44	44	24	9.20
	44	54	48	56	40	9.15
	47	38	50	52	40	9.80
	43	48	40	44	32	8.90
2	61	58	56	56	48	2.95
	43	48	26	48	40	9.55
	59	58	52	64	16	9.30
	52	38	18	40	16	9.60
	22	40	20	48	16	9.70
	50	42	40	48	56	9.20
	63	64	60	60	56	9.20
	48	52	34	44	32	9.60
	50	56	42	48	32	9.40
	56	58	54	44	40	9.35
	52	58	60	60	56	9.25
	55	50	42	36	64	9.30
	53	48	48	44	40	3.00
	56	62	50	52	32	9.50
	51	56	40	52	48	8.95
	47	46	28	40	48	9.40
	54	44	38	36	48	8.90
	64	64	64	64	64	9.30
	51	34	24	40	32	8.10
	52	52	48	56	56	7.00
	47	40	44	36	56	9.20
	45	54	30	52	24	9.35
	18	16	16	16	16	9.40
	34	28	20	32	16	9.35
	53	52	44	52	24	9.45
	43	42	36	44	32	8.90
	56	58	44	52	24	9.25
	54	52	44	52	32	9.40
	40	38	38	36	32	9.35
	44	50	28	48	16	9.40
	55	54	30	56	32	9.25
	43	44	42	36	40	9.40
	34	40	30	32	48	9.70

Table 4. Continued

Teacher Identification Number	(POSR) Questionnaire					Attitude Questionnaire
	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI
2	57	58	44	36	48	9.60
	43	40	40	40	32	9.35
	47	52	30	40	32	9.40
	51	50	38	44	32	9.20
	53	50	44	52	48	9.25
	29	22	16	40	16	8.10
	59	56	38	48	24	9.10
	48	42	34	40	48	9.35
	57	60	54	48	48	9.35
	54	52	48	48	24	9.40
	51	48	42	48	40	9.35
	56	62	50	60	40	6.00
	62	62	50	60	40	3.30
	50	58	40	56	16	9.35
	62	58	54	56	48	9.60
	46	38	34	40	40	9.40
	45	48	40	44	16	9.25
	39	52	44	56	32	9.00
	33	22	18	32	16	9.50
	62	62	56	56	48	9.35
	47	48	38	44	32	9.15
	53	52	48	44	24	9.60
3	33	32	28	36	56	3.75
	44	44	38	40	32	7.35
	41	30	42	28	64	4.20
	60	44	38	32	16	8.35
	53	50	42	44	56	8.90
	56	60	48	56	48	8.90
	49	52	56	48	64	8.10
	48	58	46	48	24	9.40
	40	42	32	40	56	9.05
	46	48	34	36	48	9.50
	48	52	46	56	56	9.30
	42	40	38	36	64	9.20
	55	48	50	52	40	9.15
	48	42	46	44	40	9.20
	51	46	44	40	64	9.20
	62	60	62	52	64	9.00
	49	58	56	44	48	9.00
	57	54	52	40	64	9.35
	56	62	62	56	56	9.40

Table 4. Continued

Teacher Identification Number	(POSR) Questionnaire					Attitude Questionnaire
	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI
3	56	60	46	52	48	9.10
	49	50	44	44	56	9.25
	48	46	36	32	56	9.60
	51	50	44	48	64	9.40
	59	60	56	60	56	9.00
	50	52	48	52	40	9.15
4	52	50	48	36	64	9.30
	50	50	38	40	40	9.20
	50	40	42	28	48	9.35
	46	48	36	40	40	9.25
	51	42	42	44	48	9.45
	52	54	44	44	56	9.00
	45	44	36	52	32	9.40
	49	50	40	40	56	9.25
	45	48	44	52	48	9.45
	47	44	34	40	56	9.10
	59	56	56	44	56	9.40
	49	58	30	44	64	8.90
	49	50	44	48	56	9.20
5	48	52	38	56	32	9.75
	64	64	64	64	64	9.60
	51	54	42	44	56	9.50
	59	62	56	48	48	9.80
	50	58	34	48	40	9.20
	46	56	30	56	40	9.40
	25	48	28	44	32	9.95
	44	46	36	48	40	9.55
	57	64	44	56	32	9.50
	61	64	58	64	40	9.40
	51	56	62	44	48	9.50
	45	56	30	52	24	9.80
	47	62	40	48	40	6.25
	45	56	40	60	32	6.00
	52	52	44	44	40	9.45
	41	58	46	56	24	9.10
	45	40	34	40	32	9.80
	46	54	40	44	64	9.10
	41	48	24	56	32	8.90
	45	52	46	48	24	9.30
	48	64	40	56	16	3.50

Table 4. Continued

Teacher Identification Number	(POSR) Questionnaire					Attitude Questionnaire
	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI
5	44	46	36	52	32	9.00
	62	64	46	60	56	4.00
	50	56	42	60	40	8.90
	39	50	34	48	32	8.70
	47	52	30	40	48	9.40
	40	60	34	48	40	9.00
	45	56	34	36	48	8.90
	50	52	38	40	32	8.90
	63	62	52	60	48	9.40
	37	50	42	44	32	8.90
	47	62	34	60	16	9.30
	43	60	48	52	48	9.30
	43	56	22	52	16	9.20
	49	50	38	52	48	9.40
	27	54	34	48	48	9.20
	51	50	44	48	24	9.00
	57	62	44	52	64	9.35
	38	64	30	56	56	9.00
	41	52	34	44	16	9.60
	55	62	50	52	56	9.10
	47	58	30	48	48	9.20
	47	54	46	36	56	7.05
	52	46	44	44	32	9.00
	56	60	54	64	64	9.45
	57	60	50	56	48	9.30
	42	46	32	48	56	9.00
	46	42	42	40	48	8.80
	53	60	48	48	56	9.40
	55	62	54	52	48	9.10
6	51	56	50	44	56	8.95
	44	56	42	44	48	9.10
	45	46	40	36	24	9.35
	56	58	52	44	48	9.00
	22	64	18	40	16	9.40
	52	52	46	48	48	9.20
	42	54	34	40	56	9.35
	56	54	56	44	64	9.15
	52	46	50	32	40	9.45
	52	52	52	44	24	9.45
	59	60	54	44	48	9.50

Table 4. Continued

Teacher Identification Number	(POSR) Questionnaire					Attitude Questionnaire
	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI
6	49	52	46	48	32	8.25
	42	54	34	52	48	9.20
	52	58	54	40	40	9.30
7	56	40	48	36	56	6.00
	54	46	48	44	56	7.95
	49	44	34	40	40	8.90
	39	44	30	32	24	9.65
	57	48	40	44	32	3.80
	42	46	32	20	40	9.00
	49	48	46	48	56	3.05
	29	50	24	28	16	2.10
	46	40	34	40	56	9.45
	33	32	26	32	32	2.00
	45	46	34	32	48	9.40
	16	22	18	16	16	9.35
	58	56	54	44	64	9.00
	23	22	20	32	16	9.25
	47	46	46	48	48	9.10
	49	54	40	48	32	9.35
	37	46	36	44	40	8.35
	32	50	28	40	16	9.25
	53	46	40	40	56	9.25
	62	64	58	56	64	9.50
	48	50	46	28	56	9.45
	54	44	40	40	40	9.10
	42	40	24	36	64	7.80
	44	48	40	40	48	9.30
	57	56	48	44	64	9.30
	37	48	38	44	16	9.90
	54	58	48	40	64	9.30
	52	48	44	36	48	9.00
8	47	50	44	44	48	9.25
	44	48	42	48	48	9.30
	50	50	46	36	48	9.30
	53	52	48	40	32	9.20
	48	46	44	40	40	9.15
	47	46	44	40	48	9.35
	47	54	36	32	56	9.40
	54	54	44	40	40	9.75
	52	44	42	40	48	9.35

Table 4. Continued

Teacher Identification Number	(POSR) Questionnaire					Attitude Questionnaire
	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI
8	42	50	38	44	16	9.20
9	54	48	56	44	56	8.85
	43	44	34	40	48	8.90
	26	38	20	56	24	9.30
	51	50	34	48	64	9.30
	51	62	46	52	56	7.80
	61	52	54	32	64	2.65
	43	44	36	44	48	3.80
	35	42	32	44	56	4.70
	42	52	30	56	40	8.90
	42	50	36	40	48	4.00
	37	34	22	44	48	9.20
	47	44	46	52	40	9.25
	50	52	38	48	48	9.00
	38	50	30	40	48	8.40
	51	44	34	44	56	9.25
	48	40	38	40	64	9.10
	39	42	26	44	32	5.10
	42	44	30	40	48	9.00
	58	52	46	44	64	5.80
	42	28	36	44	24	6.90
	47	44	34	32	32	3.35
	41	48	20	40	48	4.20
	35	28	28	32	40	4.00
	49	44	28	44	48	9.40
	51	50	42	48	64	9.35
	61	54	50	52	56	9.25
	51	46	28	40	64	9.20
	55	54	54	52	48	9.00
	39	46	30	40	40	6.00
	60	64	52	60	64	8.70
10	51	48	36	56	24	8.95
	48	54	32	36	16	9.35
	54	58	50	44	40	9.05
	51	54	48	48	48	9.20
	30	44	28	44	16	9.00
	42	44	34	36	32	9.25
	53	60	38	52	56	6.55
	63	62	58	48	64	9.05
	43	52	38	56	32	9.35

Table 4. Continued

Teacher Identification Number	(POSR) Questionnaire					Attitude Questionnaire
	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI
10	36	48	32	44	32	9.30
	56	64	56	56	56	9.30
	42	48	24	40	16	6.00
	57	62	34	40	24	9.10
	48	50	32	44	16	8.90
	55	56	50	48	56	9.20
	58	52	36	36	40	9.20
	43	56	36	48	24	8.90
	60	64	54	48	64	8.95
	50	56	48	60	40	9.20
	48	56	40	32	16	8.90
	47	48	26	60	24	9.55
	41	48	34	44	48	9.35
	51	56	40	44	32	8.90
	45	52	42	44	64	9.35
	61	60	54	44	56	9.15
	48	62	40	24	24	8.95
	40	56	30	44	24	8.95
	64	64	58	52	48	9.30
	44	60	26	40	16	8.95
11	55	56	50	48	56	9.20
	48	50	32	44	16	8.90
	57	62	34	40	24	9.10
	42	48	24	40	16	6.00
	56	64	56	56	56	9.30
	36	48	32	44	32	9.30
	43	52	38	56	32	9.35
	63	62	58	48	64	9.05
	53	60	38	52	56	6.55
	42	44	34	36	32	9.25
	30	44	28	44	16	9.00
	51	54	48	48	48	9.20
	54	58	50	44	40	9.05
	48	54	32	36	16	9.35
	51	48	36	56	24	8.95

Appendix H

Findings for Null Hypotheses

Findings for Null Hypotheses

Findings for Null Hypothesis #1 (Teacher Age)

Null hypothesis #1 relating to Factor I. (Friendly, cheerful, admired)

The null hypothesis tested was:

> There will be no difference between teachers under 30 years of age and teachers over 30 years of age with respect to student scores on Factor I. (Friendly, cheerful, admired).

Table 5 presents the findings on the above null hypothesis related to Factor I. Student perception score means were calculated as 48.14 for the teachers under 30 years of age and as 47.47 for the teachers over 30 years of age.

There was no significant difference found between student perception scores of teachers under 30 years of age and teachers over 30 years of age with respect to Factor I. (Friendly, cheerful, admired). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor I.

Table 5. One-way analysis of variance between teachers under 30 years of age and teachers over 30 years of age for hypothesis #1 relating to Factor I. (Friendly, cheerful, admired)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.9806	.9806	.3006
Error	9	29.3603	3.2623	
Total	10	30.3409		

Treatment Group Means:	Teachers under 30 years of age	48.14
	Teachers over 30 years of age	47.47

Null hypothesis #1 relating to Factor II. (Knowledgeable, poised)

The null hypothesis tested was:

> There will be no difference between teachers under 30 years of age and teachers over 30 years of age with respect to student scores on Factor II. (Knowledgeable, poised).

Table 6 presents the findings on the above null hypothesis related to Factor II. Student perception score means were calculated as 49.73 for the teachers under 30 years of age and as 53.36 for the teachers over 30 years of age.

There was no significant difference found between student perception scores of teachers under 30 years of age and teachers over 30 years of age with respect to Factor II. (Knowledgeable, poised). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor II.

Table 6. One-way analysis of variance between teachers under 30 years of age and teachers over 30 years of age for hypothesis #1 relating to Factor II. (Knowledgeable, poised)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	28.6968	28.6968	2.9388
Error	9	87.8831	9.7648	
Total	10	116.5799		

Treatment Group Means:	Teachers under 30 years of age	49.73
	Teachers over 30 years of age	53.36

Null hypothesis #1 relating to Factor III. (Interesting, preferred)

The null hypothesis tested was:

> There will be no difference between teachers under 30 years of age and teachers over 30 years of age with respect to student scores on Factor III. (Interesting, preferred)

Table 7 presents the findings on the above null hypothesis related to Factor III. Student perception score means were calculated as 40.45 for the teachers under 30 years of age and as 42.44 for the teachers over 30 years of age.

There was no significant difference found between student perception scores of teachers under 30 years of age and teachers over 30 years of age with respect to Factor III. (Interesting, preferred). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor III.

Table 7. One-way analysis of variance between teachers under 30 years of age and teachers over 30 years of age for hypothesis #1 relating to Factor III. (Interesting, preferred)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	8.6837	8.6837	1.1537
Error	9	67.7394	7.5266	
Total	10	76.4231		

Treatment Group Means:	Teachers under 30 years of age	40.45
	Teachers over 30 years of age	42.44

Null hypothesis #1 relating to Factor IV. (Strict control)

The null hypothesis tested was:

> There will be no difference between teachers under 30 years of age and teachers over 30 years of age with respect to student scores on Factor IV. (Strict control)

Table 8 presents the findings on the above null hypothesis related to Factor IV. Student perception score means were calculated as 44.16 for the teachers under 30 years of age and as 45.14 for the teachers over 30 years of age.

There was no significant difference found between student perception scores of teachers under 30 years of age and teachers over 30 years of age with respect to Factor IV. (Strict control). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor IV.

Table 8. One-way analysis of variance between teachers under 30 years of age and teachers over 30 years of age for hypothesis #1 relating to Factor IV. (Strict control)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	2.1312	2.1312	.1759
Error	9	109.0187	12.1132	
Total	10	111.1499		

Treatment Group Means:	Teachers under 30 years of age	44.16
	Teachers over 30 years of age	45.14

Null hypothesis #1 relating to Factor V. (Democratic control)

The null hypothesis tested was:

> There will be no difference between teachers under 30 years of age and teachers over 30 years of age with respect to student scores on Factor V. (Democratic procedure)

Table 9 presents the findings on the above null hypothesis related to Factor V. Student perception score means were calculated as 43.68 for the teachers under 30 years of age and as 39.03 for the teachers over 30 years of age.

There was no significant difference found between student perception scores of teachers under 30 years of age and teachers over 30 years of age with respect to Factor V. (Democratic procedure). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor V.

Table 9. One-way analysis of variance between teachers under 30 years of age and teachers over 30 years of age for hypothesis #1 relating to Factor V. (Democratic procedure)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	47.0074	47.0074	1.3972
Error	9	302.7985	33.6443	
Total	10	349.8059		

Treatment Group Means:	Teachers under 30 years of age	43.68
	Teachers over 30 years of age	39.03

Null hypothesis #1 relating to Factor VI. (Student attitude score)

The null hypothesis tested was:

> There will be no difference between teachers under 30 years of age and teachers over 30 years of age with respect to student scores on Factor VI. (Student attitude score)

Table 10 presents the findings on the above null hypothesis related to Factor VI. Student attitude score means were calculated as 8.65 for the teachers under 30 years of age and as 9.13 for the teachers over 30 years of age.

There was no significant difference found between student attitude scores of teachers under 30 years of age and teachers over 30 years of age with respect to Factor VI. (Student attitude score). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor VI.

Table 10. One-way analysis of variance between teachers under 30 years of age and teachers over 30 years of age for hypothesis #1 relating to Factor VI. (Student attitude score)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.5053	.5053	1.5883
Error	9	2.8633	.3181	
Total	10	3.3686		

Treatment Group Means:		
	Teachers under 30 years of age	8.65
	Teachers over 30 years of age	9.13

Findings for Null Hypothesis #2 (Teacher Sex)

Null hypothesis #2 relating to Factor I. (Friendly, cheerful, admired)

The null hypothesis tested was:

> There will be no difference between male and female teachers with respect to student scores on Factor I. (Friendly, cheerful, admired)

Table 11 presents the findings on the above null hypothesis related to Factor I. Student perception score means were calculated as 47.74 for the male teachers and as 48.94 for the female teachers.

There was no significant difference found between student perception scores of male teachers and female teachers with respect to Factor I. (Friendly, cheerful, admired). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor I.

Table 11. One-way analysis of variance between male and female teachers for hypothesis #2 relating to Factor I. (Friendly, cheerful, admired)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	2.3433	2.3433	.7533
Error	9	27.9976	3.1108	
Total	10	30.3409		

Treatment Group Means:	Male teachers	47.74
	Female teachers	48.94

Null hypothesis #2 relating to Factor II. (Knowledgeable, poised)

The null hypothesis tested was:

> There will be no difference between male and female teachers with respect to student scores on Factor II. (Knowledgeable, poised)

Table 12 presents the findings on the above null hypothesis related to Factor II. Student perception score means were calculated as 49.93 for the male teachers and as 54.29 for the female teachers.

There was no significant difference found between student perception scores of male teachers and female teachers with respect to Factor II. (Knowledgeable, poised). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor II.

Table 12. One-way analysis of variance between male and female teachers for hypothesis #2 relating to Factor II. (Knowledgeable, poised)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	31.0828	31.0828	3.2720
Error	9	85.4971	9.4997	
Total	10	116.5799		

Treatment Group Means:	Male teachers	49.93
	Female teachers	54.29

Null hypothesis #2 relating to Factor III. (Interesting, preferred)

The null hypothesis tested was:

> There will be no difference between male and female teachers with respect to student scores on Factor III. (Interesting, preferred)

Table 13 presents the findings on the above null hypothesis related to Factor III. Student perception score means were calculated as 41.31 for the male teachers and as 39.56 for the female teachers.

There was no significant difference found between student perception scores of male teachers and female teachers with respect to Factor III. (Interesting, preferred). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor III.

Table 13. One-way analysis of variance between male and female teachers for hypothesis #2 relating to Factor III. (Interesting, preferred)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	4.9923	4.9923	.6290
Error	9	71.4308	7.9368	
Total	10	76.4231		

Treatment Group Means:		
	Male teachers	41.31
	Female teachers	39.56

Null hypothesis #2 relating to Factor IV. (Strict control)

The null hypothesis tested was:

> There will be no difference between male and female teachers with respect to student scores on Factor IV. (Strict control)

Table 14 presents the findings on the above null hypothesis related to Factor IV. Student perception score means were calculated as 44.14 for the male teachers and as 45.69 for the female teachers.

There was no significant difference found between student perception scores of male teachers and female teachers with respect to Factor IV. (Strict control). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor IV.

Table 14. One-way analysis of variance between male and female teachers for hypothesis #2 relating to Factor IV. (Strict control)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	3.8836	3.8836	.3258
Error	9	107.2663	11.9184	
Total	10	111.1499		

Treatment Group Means: Male teachers 44.14
Female teachers 45.69

Null hypothesis #2 relating to Factor V. (Democratic procedure)

The null hypothesis tested was:

> There will be no difference between male and female teachers with respect to student scores on Factor V. (Democratic procedure)

Table 15 presents the findings on the above null hypothesis related to Factor V. Student perception score means were calculated as 43.91 for the male teachers and as 35.67 for the female teachers.

There was no significant difference found between student perception scores of male teachers and female teachers with respect to Factor V. (Democratic procedure). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor V.

Table 15. One-way analysis of variance between male and female teachers for hypothesis #2 relating to Factor V. (Democratic procedure)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	111.0153	111.0153	4.1842
Error	9	238.7906	26.5323	
Total	10	349.8059		

Treatment Group Means: Male teachers 43.91
Female teachers 35.67

Null hypothesis #2 relating to Factor VI. (Student attitude score)

The null hypothesis tested was:

> There will be no difference between male and female teachers with respect to student scores on Factor VI. (Student attitude score)

Table 16 presents the findings on the above null hypothesis related to Factor VI. Student attitude score means were calculated as 8.76 for the male teachers and as 8.86 for the female teachers.

There was no significant difference found between student attitude scores of male teachers and female teachers with respect to Factor VI. (Student attitude score). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor VI.

Table 16. One-way analysis of variance between male and female teachers for hypothesis #2 relating to Factor VI. (Student attitude score)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.0138	.0138	.0369
Error	9	3.3548	.3728	
Total	10	3.3686		

Treatment Group Means:	Male teachers	8.76
	Female teachers	8.86

Findings for Null Hypothesis #3 (Teaching Experience)

Null hypothesis #3 relating to Factor I. (Friendly, cheerful, admired)

The null hypothesis tested was:

> There will be no difference between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect to student scores on Factor I. (Friendly, cheerful, admired)

Table 17 presents the findings on the above null hypothesis related to Factor I. Student perception score means were calculated as 46.90 for teachers with less than three years' teaching experience. Student perception score means were calculated as 48.36 for teachers with three or more years' teaching experience.

There was no significant difference found between student perception scores of teachers with less than three years' teaching experience

and teachers with three or more years' teaching experience with respect to Factor I. (Friendly, cheerful, admired). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor I.

Table 17. One-way analysis of variance between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience for hypothesis #3 relating to Factor I. (Friendly, cheerful, admired)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	4.6720	4.6720	1.6381
Error	9	25.6689	2.8521	
Total	10	30.3409		

Treatment Group Means:	Teachers with less than three years' teaching experience	46.90
	Teachers with three or more years' teaching experience	48.36

Null hypothesis #3 relating to Factor II. (Knowledgeable, poised)

The null hypothesis tested was:

> There will be no difference between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect to student scores on Factor II. (Knowledgeable, poised)

Table 18 presents the findings on the above null hypothesis related to Factor II. Student perception score means were calculated as 47.00 for teachers with less than three years' teaching experience. Student

perception score means were calculated as 52.12 for teachers with three or more years' teaching experience.

A significant difference was found between student perception scores of teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect to Factor II. (Knowledgeable, poised). Thus, the evidence leads the investigator to reject the null hypothesis relating to Factor II.

Table 18. One-way analysis of variance between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience for hypothesis #3 relating to Factor II. (Knowledgeable, poised)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	57.1578	57.1578	8.6571*
Error	9	59.4221	6.6025	
Total	10	116.5799		

*Significant Difference at .05 level (F-Ratio = 5.12)

Treatment Group Means:		
	Teachers with less than three years' teaching experience	47.00
	Teachers with three or more years' teaching experience	52.12

Null hypothesis #3 relating to Factor III. (Interesting, preferred)

The null hypothesis tested was:

There will be no difference between teachers with less than three years' teaching experience and teachers with three

or more years' teaching experience with respect to student scores on Factor III. (Interesting, preferred)

Table 19 presents the findings on the above null hypothesis related to Factor III. Student perception score means were calculated as 38.05 for teachers with less than three years' teaching experience. Student perception score means were calculated as 42.09 for teachers with three or more years' teaching experience.

A significant difference was found between student perception scores of teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect to Factor III. (Interesting, preferred). Thus, the evidence leads the investigator to reject the null hypothesis relating to Factor III.

Table 19. One-way analysis of variance between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience for hypothesis #3 relating to Factor III. (Interesting, preferred)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	35.6328	35.6328	7.8620*
Error	9	40.7903	4.5323	
Total	10	76.4231		

*Significant Difference at .05 level (F-Ratio = 5.12)

Treatment Group Means:		
	Teachers with less than three years' teaching experience	38.05
	Teachers with three or more years' teaching experience	42.09

Null hypothesis #3 relating to Factor IV. (Strict control)

The null hypothesis tested was:

> There will be no difference between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect to student scores on Factor IV. (Strict control)

Table 20 presents the findings on the above null hypothesis related to Factor IV. Student perception score means were calculated as 43.10 for teachers with less than three years' teaching experience. Student perception score means were calculated as 44.92 for teachers with three or more years' teaching experience.

There was no significant difference found between student perception scores of teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect to Factor IV. (Strict control). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor IV.

Table 20. One-way analysis of variance between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience for hypothesis #3 relating to Factor IV. (Strict control)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	7.2735	7.2735	.6302
Error	9	103.8764	11.5418	
Total	10	111.1499		

Treatment Group Means:	Teachers with less than three years' teaching experience	43.10
	Teachers with three or more years' teaching experience	44.92

Null hypothesis #3 relating to Factor V. (Democratic procedure)

The null hypothesis tested was:

> There will be no difference between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect to student scores on Factor V. (Democratic procedure)

Table 21 presents the findings on the above null hypothesis related to Factor V. Student perception score means were calculated as 42.80 for teachers with less than three years' teaching experience. Student perception score means were calculated as 42.26 for teachers with three or more years' teaching experience.

There was no significant difference found between student perception scores of teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect

to Factor V. (Democratic procedure). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor V.

Table 21. One-way analysis of variance between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience for hypothesis #3 relating to Factor V. (Democratic procedure)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.6303	.6303	.0162
Error	9	349.1756	38.7972	
Total	10	349.8059		

Treatment Group Means:		
	Teachers with less than three years' teaching experience	42.80
	Teachers with three or more years' teaching experience	42.26

Null hypothesis #3 relating to Factor VI. (Student attitude score)

The null hypothesis tested was:

> There will be no difference between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect to student scores on Factor VI. (Student attitude score)

Table 22 presents the findings on the above null hypothesis related to Factor VI. Student attitude score means were calculated as 8.11 for teachers with less than three years' teaching experience. Student attitude score means were calculated as 9.03 for teachers with three or more years' teaching experience.

A significant difference was found between student attitude scores of teachers with less than three years' teaching experience and teachers with three or more years' teaching experience with respect to Factor VI. (Student attitude score). Thus, the evidence leads the investigator to reject the null hypothesis relating to Factor VI.

Table 22. One-way analysis of variance between teachers with less than three years' teaching experience and teachers with three or more years' teaching experience for hypothesis #3 relating to Factor VI. (Student attitude score)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	1.8333	1.8333	10.7473*
Error	9	1.5353	.1706	
Total	10	3.3686		

*Significant Difference at .01 level (F-Ratio = 10.56)

Treatment Group Means:		
	Teachers with less than three years' teaching experience	8.11
	Teachers with three or more years' teaching experience	9.03

Findings for Null Hypothesis #4 (Teaching Assignment)

Null hypothesis #4 relating to Factor I. (Friendly, cheerful, admired)

The null hypothesis tested was:

> There will be no difference between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects with respect to student scores on Factor I. (Friendly, cheerful, admired)

Table 23 presents the findings on the above null hypothesis related to Factor I. Student perception score means were calculated as 47.92 for teachers of only non-skills subjects. Student perception score means were calculated as 48.03 for teachers of both non-skills and skills subjects.

There was no significant difference found between student perception scores of teachers of only non-skills subjects and teachers of both non-skills and skills subjects with respect to Factor I. (Friendly, cheerful, admired). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor I.

Table 23. One-way analysis of variance between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects for hypothesis #4 relating to Factor I. (Friendly, cheerful, admired)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.0322	.0322	.0096
Error	9	30.3087	3.3676	
Total	10	30.3409		

Treatment Group Means:	Teachers of non-skills subjects	47.92
	Teachers of non-skills and skills subjects	48.03

Null hypothesis #4 relating to Factor II. (Knowledgeable, poised)

The null hypothesis tested was:

> There will be no difference between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects with respect to student scores on Factor II. (Knowledgeable, poised)

Table 24 presents the findings on the above null hypothesis related to Factor II. Student perception score means were calculated as 49.97 for teachers of only non-skills subjects. Student perception score means were calculated as 52.03 for teachers of both non-skills and skills subjects.

There was no significant difference found between student perception scores of teachers of only non-skills subjects and teachers of both non-skills and skills subjects with respect to Factor II. (Knowledgeable, poised). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor II.

Table 24. One-way analysis of variance between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects for hypothesis #4 relating to Factor II. (Knowledgeable, poised)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	10.7607	10.7607	.9152
Error	9	105.8192	11.7577	
Total	10	116.5799		

Treatment Group Means:	Teachers of non-skills subjects	49.97
	Teachers of non-skills and skills subjects	52.03

Null hypothesis #4 relating to Factor III. (Interesting, preferred)

The null hypothesis tested was:

> There will be no difference between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects with respect to student scores on Factor III. (Interesting, preferred)

Table 25 presents the findings on the above null hypothesis related to Factor III. Student perception score means were calculated as 41.32 for teachers of only non-skills subjects. Student perception score means for teachers of both non-skills and skills subjects were calculated as 40.40.

There was no significant difference found between student perception scores of teachers of only non-skills and skills subjects with respect to Factor III. (Interesting, preferred). Thus, the evidence leads the

investigator to fail to reject the null hypothesis relating to Factor III.

Table 25. One-way analysis of variance between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects for hypothesis #4 relating to Factor III. (Interesting, preferred)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	2.1628	2.1628	.2621
Error	9	74.2603	8.2511	
Total	10	76.4231		

Treatment Group Means:	Teachers of non-skills subjects	41.32
	Teachers of non-skills and skills subjects	40.40

Null hypothesis #4 relating to Factor IV. (Strict control)

The null hypothesis tested was:

> There will be no difference between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects with respect to student scores on Factor IV. (Strict control)

Table 26 presents the findings on the above null hypothesis related to Factor IV. Student perception score means were calculated as 43.36 for teachers of only non-skills subjects. The student perception score means for the teachers of non-skills and skills subjects were calculated as 46.29.

There was no significant difference found between student perception scores of teachers of only non-skills subjects and teachers of both non-skills and skills subjects with respect to Factor IV. (Strict control). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor IV.

Table 26. One-way analysis of variance between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects for hypothesis #4 relating to Factor IV. (Strict control)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	21.9325	21.9325	2.2125
Error	9	89.2174	9.9130	
Total	10	111.1499		

Treatment Group Means:	Teachers of non-skills subjects	43.36
	Teachers of non-skills and skills subjects	46.29

Null hypothesis #4 relating to Factor V. (Democratic procedure)

The null hypothesis tested was:

> There will be no difference between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects with respect to student scores on Factor V. (Democratic procedure)

Table 27 presents the findings on the above null hypothesis related to Factor V. Student perception score means were calculated as 45.79

for teachers of only non-skills subjects while the student perception score means for teachers of both non-skills and skills subjects were calculated as 36.49.

A significant difference was found between student perception scores of teachers of only non-skills subjects and teachers of both non-skills and skills subjects with respect to Factor V. (Democratic procedure). Thus, the evidence leads the investigator to reject the null hypothesis relating to Factor V.

Table 27. One-way analysis of variance between teachers who teach only non-skills subjects and teachers who teach both non-skills and skills subjects for hypothesis #4 relating to Factor V. (Democratic procedure)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	220.5962	220.5962	15.3655*
Error	9	129.2097	14.35566	
Total	10	349.8059		

*Significant Difference at .01 level (F-Ratio = 10.56)

Treatment Group Means:		
	Teachers of non-skills subjects	45.79
	Teachers of non-skills and skills subjects	36.49

Null hypothesis #4 relating to Factor VI. (Student attitude score)

The null hypothesis tested was:

There will be no difference between teachers who teach

Findings for Null Hypothesis #5 (Occupational Experience - Time)

Null hypothesis #5 relating to Factor I. (Friendly, cheerful, admired)

The null hypothesis tested was:

> There will be no difference between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to student scores on Factor I. (Friendly, cheerful, admired)

Table 29 presents the findings on the above null hypothesis related to Factor I. Student perception score means for teachers with less than two years' occupational experience were calculated as 49.39. The student perception score means for teachers with two or more years' occupational experience were calculated as 47.42.

There was no significant difference found between student perception scores of teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to Factor I. (Friendly, cheerful, admired). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor I.

Table 29. One-way analysis of variance between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience for hypothesis #5 relating to Factor I. (Friendly, cheerful, admired)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	8.4638	8.4638	3.4819
Error	9	21.8771	2.4308	
Total	10	30.3409		

Treatment Group Means:		
	Teachers with less than two years' occupational experience	49.39
	Teachers with two or more years' occupational experience	47.42

Null hypothesis #5 relating to Factor II. (Knowledgeable, poised)

The null hypothesis tested was:

> There will be no difference between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to student scores on Factor II. (Knowledgeable, poised)

Table 30 presents the findings on the above null hypothesis related to Factor II. The student perception score means for teachers with less than two years' occupational experience were calculated as 50.66 while the student perception score means for teachers with two or more years' occupational experience were calculated as 50.74.

There was no significant difference found between student perception scores of teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to

Factor II. (Knowledgeable, poised). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor II.

Table 30. One-way analysis of variance between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience for hypothesis #5 relating to Factor II. (Knowledgeable, poised)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.0161	.0161	.0012
Error	9	116.5638	12.9515	
Total	10	116.5799		

Treatment Group Means:	Teachers with less than two years' occupational experience	50.66
	Teachers with two or more years' occupational experience	50.74

Null hypothesis #5 relating to Factor III. (Interesting, preferred)

The null hypothesis tested was:

> There will be no difference between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to student scores on Factor III. (Interesting, preferred)

Table 31 presents the findings on the above null hypothesis related to Factor III. The student perception score means for teachers with less than two years' occupational experience were calculated as 41.92. The student perception score means for teachers with two or more years' occupational experience were calculated as 40.64.

There was no significant difference found between student perception scores of teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to Factor III. (Interesting, preferred). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor III.

Table 31. One-way analysis of variance between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience for hypothesis #5 relating to Factor III. (Interesting, preferred)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	3.6003	3.6003	.4450
Error	9	72.8228	8.0914	
Total	10	76.4231		

Treatment Group Means:	Teachers with less than two years' occupational experience	41.92
	Teachers with two or more years' occupational experience	40.64

Null hypothesis #5 relating to Factor IV. (Strict control)

The null hypothesis tested was:

> There will be no difference between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to student scores on Factor IV. (Strict control)

Table 32 presents the findings on the above null hypothesis related to Factor IV. The student perception score means for teachers with less than two years' occupational experience were calculated as 44.41. The student perception score means for teachers with two or more years' occupational experience were calculated as 44.43.

There was no significant difference found between student perception scores of teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to Factor IV. (Strict control). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor IV.

Table 32. One-way analysis of variance between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience for hypothesis #5 relating to Factor IV. (Strict control)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.0009	.0009	.00007
Error	9	111.1490	12.3499	
Total	10	111.1499		

Treatment Group Means:	Teachers with less than two years' occupational experience	44.41
	Teachers with two or more years' occupational experience	44.43

Null hypothesis #5 relating to Factor V. (Democratic procedure)

The null hypothesis tested was:

> There will be no difference between teachers with less than two years' occupational experience and teachers with two or more year's occupational experience with respect to student scores on Factor V. (Democratic procedure)

Table 33 presents the findings on the above null hypothesis related to Factor V. The student perception score means for teachers with less than two years' occupational experience were calculated as 45.83. The student perception score means for teachers with two or more years' occupational experience were calculated as 41.13.

There was no significant difference found between student perception scores of teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to Factor V. (Democratic procedure). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor V.

Table 33. One-way analysis of variance between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience for hypothesis #5 relating to Factor V. (Democratic procedure)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	48.1793	48.1793	1.4376
Error	9	301.6266	33.5141	
Total	10	349.8059		

Treatment Group Means:	Teachers with less than two years' occupational experience	45.83
	Teachers with two or more years' occupational experience	41.13

Null hypothesis #5 relating to Factor VI. (Student attitude score)

The null hypothesis tested was:

> There will be no difference between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to student scores on Factor VI. (Student attitude score)

Table 34 presents the findings on the above null hypothesis related to Factor VI. The student attitude score means for teachers with less than two years' occupational experience were calculated as 8.88. The student attitude score means for teachers with two or more years' occupational experience were calculated as 8.74.

There was no significant difference found between student attitude scores of teachers with less than two years' occupational experience and teachers with two or more years' occupational experience with respect to

Factor VI. (Student attitude score). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor VI.

Table 34. One-way analysis of variance between teachers with less than two years' occupational experience and teachers with two or more years' occupational experience for hypothesis #5 relating to Factor VI. (Student attitude score)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.0440	.0440	.1192
Error	9	3.3246	.3694	
Total	10	3.3686		

Treatment Group Means:	Teachers with less than two years' occupational experience	8.88
	Teachers with two or more years' occupational experience	8.74

Findings for Null Hypothesis #6 (Occupational Experience - Field)

Null Hypothesis #6 relating to Factor I. (Friendly, cheerful, admired)

The null hypothesis tested was:

> There will be no difference among teachers who have had occupational experience in the fields of Food Retailing, Retailing-Department Stores, Petroleum Services, Insurance, and Real Estate with respect to student scores on Factor I. (Friendly, cheerful, admired)

Table 35 presents the findings on the above null hypothesis related to Factor I. Student perception score means of the teachers were

calculated as follows: Teachers with Food Retailing experience, 47.71; teachers with Retailing-Department Stores experience, 47.68; teachers with Petroleum Services experience, 48.14; teachers with Insurance experience, 48.14; and teachers with Real Estate experience, 49.28.

The analysis of student perception scores revealed no significant difference among the teachers with various occupational experiences with respect to Factor I. (Friendly, cheerful, admired). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor I.

Table 35. One-way analysis of variance among teachers who have had occupational experience in different occupational fields for hypothesis #6 relating to Factor I. (Friendly, cheerful, admired)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	4	2.3301	.5825	.1248
Error	6	28.0107	4.6685	
Total	10	30.3408		

Treatment Group Means: Occupational fields experience:

Food Retailing	47.71
Retailing-Department Stores	47.68
Petroleum Services	48.14
Insurance	48.14
Real Estate	49.28

Null hypothesis #6 relating to Factor II. (Knowledgeable, poised)

The null hypothesis tested was:

> There will be no difference among teachers who have had occupational experience in the fields of Food Retailing, Retailing-Department Stores, Petroleum Services, Insurance, and Real Estate with respect to student scores on Factor II. (Knowledgeable, poised)

Table 36 presents the findings on the above null hypothesis related to Factor II. Student perception score means of the teachers were calculated as follows: Teachers with Food Retailing experience, 51.01; teachers with Retailing-Department Stores experience, 47.65; teachers with Petroleum Services experience, 54.43; teachers with Insurance experience, 52.44; and teachers with Real Estate experience, 54.97.

The analysis of student perception scores revealed no significant difference among the teachers with various occupational experiences with respect to Factor II. (Knowledgeable, poised). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor II.

Table 36. One-way analysis of variance among teachers who have had occupational experience in different occupational fields for hypothesis #6 relating to Factor II. (Knowledgeable, poised)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	4	75.7626	18.9406	2.7842
Error	6	40.8173	6.8029	
Total	10	116.5799		

Treatment Group Means: Occupational fields experience:

Food Retailing	51.01
Retailing-Department Stores	47.65
Petroleum Services	54.43
Insurance	52.44
Real Estate	54.97

Null hypothesis #6 relating to Factor III. (Interesting, preferred)

The null hypothesis tested was:

> There will be no difference among teachers who have had occupational experience in the fields of Food Retailing, Retailing-Department Stores, Petroleum Services, Insurance, and Real Estate with respect to student scores on Factor III. (Interesting, preferred)

Table 37 presents the findings on the above null hypothesis related to Factor III. Student perception score means of the teachers were calculated as follows: Teachers with Food Retailing experience, 41.03; teachers with Retailing-Department Stores experience, 39.88; teachers

with Petroleum Services experience, 44.86; teachers with Insurance experience, 41.82; and teachers with Real Estate experience, 39.79.

The analysis of student perception scores revealed no significant difference among the teachers with various occupational experiences with respect to Factor III. (Interesting, preferred). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor III.

Table 37. One-way analysis of variance among teachers who have had occupational experience in different occupational fields for hypothesis #6 relating to Factor III. (Interesting, preferred)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	4	22.7494	5.6873	.6358
Error	6	53.6737	8.9456	
Total	10	76.4231		

Treatment Group Means: Occupational fields experience:

Food Retailing	41.03
Retailing-Department Stores	39.88
Petroleum Services	44.86
Insurance	41.82
Real Estate	39.79

Null hypothesis #6 relating to Factor IV. (Strict control)

The null hypothesis tested was:

> There will be no difference among teachers who have had occupational experience in the fields of Food Retailing, Retailing-Department Stores, Petroleum Services, Insurance, and Real Estate with respect to student scores on Factor IV. (Strict control)

Table 38 presents the findings on the above null hypothesis related to Factor IV. Student perception score means of the teachers were calculated as follows: Teachers with Food Retailing experience, 45.31; teachers with Retailing-Department Stores experience, 43.38; teachers with Petroleum Services experience, 42.86; teachers with Insurance experience, 45.36; and teachers with Real Estate experience, 45.24.

The analysis of student perception scores revealed no significant difference among the teachers with various occupational experiences with respect to Factor IV. (Strict control). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor IV.

Table 38. One-way analysis of variance among teachers who have had occupational experience in different occupational fields for hypothesis #6 relating to Factor IV. (Strict control)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	4	10.7471	2.6868	.1606
Error	6	100.4027	16.7338	
Total	10	111.1498		

Treatment Group Means: Occupational fields experience:

Food Retailing	45.31
Retailing-Department Stores	43.48
Petroleum Services	42.86
Insurance	45.36
Real Estate	45.24

Null hypothesis #6 relating to Factor V. (Democratic procedure)

The null hypothesis tested was:

> There will be no difference among teachers who have had occupational experience in the fields of Food Retailing, Retailing-Department Stores, Petroleum Services, Insurance, and Real Estate with respect to student scores on Factor V. (Democratic procedure)

Table 39 presents the findings on the above null hypothesis related to Factor V. Student perception score means of the teachers were calculated as follows: Teachers with Food Retailing experience, 41.65; teachers with Retailing-Department Stores experience, 44.90; teachers with Petroleum Services experience, 42.29; teachers with Insurance experience, 41.76; and teachers with Real Estate experience, 36.14.

The analysis of student perception scores revealed no significant difference among the teachers with various occupational experiences with respect to Factor V. (Democratic procedure). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor V.

Table 39. One-way analysis of variance among teachers who have had occupational experience in different occupational fields for hypothesis #6 relating to Factor V. (Democratic procedure)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	4	66.7055	16.6764	.3534
Error	6	283.1004	47.1834	
Total	10	349.8059		

Treatment Group Means: Occupational fields experience:

Food Retailing	41.65
Retailing-Department Stores	44.90
Petroleum Services	42.29
Insurance	41.76
Real Estate	36.14

Null hypothesis #6 relating to Factor VI. (Student attitude score)

The null hypothesis tested was:

> There will be no difference among teachers who have had occupational experience in the fields of Food Retailing, Retailing-Department Stores, Petroleum Services, Insurance,

and Real Estate with respect to student scores on Factor VI. (Student attitude score)

Table 40 presents the findings on the above null hypothesis related to Factor VI. Student attitude score means of the teachers were calculated as follows: Teachers with Food Retailing experience, 9.09; teachers with Retailing-Department Stores experience, 8.24; teachers with Petroleum Services experience, 9.19; teachers with Insurance experience, 9.10; and teachers with Real Estate experience, 8.94.

The analysis of student attitude scores revealed no significant difference among the teachers with various occupational experiences with respect to Factor VI. (Student attitude score). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor VI.

Table 40. One-way analysis of variance among teachers who have had occupational experience in different occupational fields for hypothesis #6 relating to Factor VI. (Student attitude score)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	4	1.8487	.4622	1.8244
Error	6	1.5199	.2533	
Total	10	3.3686		

Treatment Group Means: Occupational fields experience:

Food Retailing	9.09
Retailing-Department Stores	8.24
Petroleum Services	9.19
Insurance	9.10
Real Estate	8.94

Findings for Null Hypothesis #7 (Type of Work Experience)

Null hypothesis #7 relating to Factor I. (Friendly, cheerful, admired)

The null hypothesis tested was:

> There will be no difference between teachers with supervisory work experience and teachers with no supervisory work experience with respect to student scores on Factor I. (Friendly, cheerful, admired)

Table 41 presents the findings on the above null hypothesis related to Factor I. Student perception score means were calculated as 47.99 for teachers with supervisory work experience and as 47.92 for the teachers with no supervisory work experience.

There was no significant difference found between student perception scores of teachers with supervisory work experience and teachers with no supervisory work experience with respect to Factor I. (Friendly, cheerful, admired). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor I.

Table 41. One-way analysis of variance between teachers with supervisory work experience and teachers with no supervisory work experience for hypothesis #7 relating to Factor I. (Friendly, cheerful, admired)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.0125	.0125	.0037
Error	9	30.3284	3.3700	
Total	10	30.3409		

Treatment Group Means:	Teachers with supervisory work experience	47.99
	Teachers with no supervisory work experience	47.92

Null hypothesis #7 relating to Factor II. (Knowledgeable, poised)

The null hypothesis tested was:

> There will be no difference between teachers with supervisory work experience and teachers with no supervisory work experience with respect to student scores on Factor II. (Knowledgeable, poised)

Table 42 presents the findings on the above null hypothesis related to Factor II. The student perception score means were calculated as

52.30 for teachers with supervisory work experience and as 48.82 for teachers with no supervisory work experience.

There was no significant difference found between student perception scores of teachers with supervisory work experience and teachers with no supervisory work experience with respect to Factor II. (Knowledgeable, poised). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor II.

Table 42. One-way analysis of variance between teachers with supervisory work experience and teachers with no supervisory work experience for hypothesis #7 relating to Factor II. (Knowledgeable, poised)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	33.1297	33.1297	3.5730
Error	9	83.4502	9.2722	
Total	10	116.5799		

Treatment Group Means:	Teachers with supervisory work experience	52.30
	Teachers with no supervisory work experience	48.82

Null hypothesis #7 relating to Factor III. (Interesting, preferred)

The null hypothesis tested was:

There will be no difference between teachers with supervisory work experience and teachers with no supervisory work

experience with respect to student scores on Factor III. (Interesting, preferred)

Table 43 presents the findings on the above null hypothesis related to Factor III. Student perception score means were calculated as 41.80 for teachers with supervisory work experience and as 40.02 for teachers with no supervisory work experience.

There was no significant difference found between student perception scores of teachers with supervisory work experience and teachers with no supervisory work experience with respect to Factor III. (Interesting, preferred). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor III.

Table 43. One-way analysis of variance between teachers with supervisory work experience and teachers with no supervisory work experience for hypothesis #7 relating to Factor III. (Interesting, preferred)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	8.6088	8.6088	1.1425
Error	9	67.8143	7.5349	
Total	10	76.4231		

Treatment Group Means:		
	Teachers with supervisory work experience	41.80
	Teachers with no supervisory work experience	40.02

Null hypothesis #7 relating to Factor IV.
(Strict control)

The null hypothesis tested was:

> There will be no difference between teachers with supervisory work experience and teachers with no supervisory work experience with respect to student scores on Factor IV. (Strict control)

Table 44 presents the findings on the above null hypothesis related to Factor IV. Student perception score means were calculated as 45.44 for teachers with supervisory work experience and as 43.21 for teachers with no supervisory work experience.

There was no significant difference found between student perception scores of teachers with supervisory work experience and teachers with no supervisory work experience with respect to Factor IV. (Strict control). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor IV.

Table 44. One-way analysis of variance between teachers with supervisory work experience and teachers with no supervisory work experience for hypothesis #7 relating to Factor IV. (Strict control)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	13.5219	13.5219	1.2465
Error	9	97.6279	10.8476	
Total	10	111.1498		

Treatment Group Means:		
	Teachers with supervisory work experience	45.44
	Teachers with no supervisory work experience	43.21

Null hypothesis #7 relating to Factor V. (Democratic procedure)

The null hypothesis tested was:

> There will be no difference between teachers with supervisory work experience and teachers with no supervisory work experience with respect to student scores on Factor V. (Democratic procedure)

Table 45 presents the findings on the above null hypothesis related to Factor V. Student perception score means were calculated as 39.43 for teachers with supervisory work experience and as 45.99 for teachers with no supervisory work experience.

There was no significant difference found between student perception scores of teachers with supervisory work experience and teachers

with no supervisory work experience with respect to Factor V. (Democratic procedure). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor V.

Table 45. One-way analysis of variance between teachers with supervisory work experience and teachers with no supervisory work experience for hypothesis #7 relating to Factor V. (Democratic procedure)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	117.5433	117.5433	4.5547
Error	9	232.2626	25.8070	
Total	10	349.8059		

Treatment Group Means:	Teachers with supervisory work experience	39.43
	Teachers with no supervisory work experience	45.99

Null hypothesis #7 relating to Factor VI. (Student attitude score)

The null hypothesis tested was:

> There will be no difference between teachers with supervisory work experience and teachers with no supervisory work experience with respect to student scores on Factor VI. (Student attitude score)

Table 46 presents the findings on the above null hypothesis related to Factor VI. Student attitude score means were calculated as 9.07 for teachers with supervisory work experience and as 8.43 for teachers with no supervisory work experience.

There was no significant difference found between student attitude scores of teachers with supervisory work experience and teachers with no supervisory work experience with respect to Factor VI. (Student attitude score). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor VI.

Table 46. One-way analysis of variance between teachers with supervisory work experience and teachers with no supervisory work experience for hypothesis #7 relating to Factor VI. (Student attitude score)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	1.1358	1.1358	4.5781
Error	9	2.2328	.2481	
Total	10	3.3686		

Treatment Group Means:	Teachers with supervisory work experience	9.07
	Teachers with no supervisory work experience	8.43

Findings for Null Hypothesis #8 (Education Degree)

Null hypothesis #8 relating to Factor I. (Friendly, cheerful, admired)

The null hypothesis tested was:

> There will be no difference between teachers with Bachelor's degrees and teachers holding Master's degrees with respect to student scores on Factor I. (Friendly, cheerful, admired)

Table 47 presents the findings on the above null hypothesis related to Factor I. The student perception score means were calculated as 47.67 for the teachers with Bachelor's degrees, and as 48.75 for the teachers holding Master's degrees.

There was no significant difference found between student perception scores of teachers with Bachelor's degrees and teachers holding Master's degrees with respect to Factor I. (Friendly, cheerful, admired). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor I.

Table 47. One-way analysis of variance between teachers with bachelor's degrees and teachers holding master's degrees for hypothesis #8 relating to Factor I. (Friendly, cheerful, admired)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	2.5685	2.5685	.8324
Error	9	27.7724	3.0858	
Total	10	30.3409		

Treatment Group Means:	Teachers holding Bachelor's degrees only	47.67
	Teachers holding Master's degrees also	48.75

Null hypothesis #8 relating to Factor II. (Knowledgeable, poised)

The null hypothesis tested was:

> There will be no difference between teachers with Bachelor's degrees and teachers holding Master's degrees with respect to student scores on Factor II. (Knowledgeable, poised)

Table 48 presents the findings on the above null hypothesis related to Factor II. The student perception score means were calculated as 50.76 for the teachers with Bachelor's degrees and as 50.62 for the teachers holding Master's degrees.

There was no significant difference found between student perception scores of teachers with Bachelor's degrees and teachers holding Master's degrees with respect to Factor II. (Knowledgeable, poised). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor II.

Table 48. One-way analysis of variance between teachers with bachelor's degrees and teachers holding master's degrees for hypothesis #8 relating to Factor II. (Knowledgeable, poised)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.0378	.0378	.0029
Error	9	116.5421	12.9491	
Total	10	116.5799		

Treatment Group Means:	Teachers holding Bachelor's degrees only	50.76
	Teachers holding Master's degrees also	50.62

Null hypothesis #8 relating to Factor III. (Interesting, preferred)

The null hypothesis tested was:

> There will be no difference between teachers with Bachelor's degrees and teachers holding Master's degrees with respect to student scores on Factor III. (Interesting, preferred)

Table 49 presents the findings on the above null hypothesis related to Factor III. The student perception score means were calculated as 41.12 for teachers with Bachelor's degrees and as 40.65 for teachers holding Master's degrees.

There was no significant difference found between student perception scores of teachers with Bachelor's degrees and teachers holding Master's degrees with respect to Factor III. (Interesting, preferred). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor III.

Table 49. One-way analysis of variance between teachers with bachelor's degrees and teachers holding master's degrees for hypothesis #8 relating to Factor III. (Interesting, preferred)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.4743	.4743	.0562
Error	9	75.9488	8.4388	
Total	10	76.4231		

Treatment Group Means:	Teachers holding Bachelor's degrees only	41.12
	Teachers holding Master's degrees also	40.65

Null hypothesis #8 relating to Factor IV. (Strict control)

The null hypothesis tested was:

> There will be no difference between teachers with Bachelor's degrees and teachers holding Master's degrees with respect to student scores on Factor IV. (Strict control)

Table 50 presents the findings on the above null hypothesis related to Factor IV. The student perception score means were calculated as 44.46 for teachers with Bachelor's degrees and as 44.33 for teachers holding Master's degrees.

There was no significant difference found between student perception scores of teachers with Bachelor's degrees and teachers holding Master's degrees with respect to Factor IV. (Strict control). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor IV.

Table 50. One-way analysis of variance between teachers with bachelor's degrees and teachers holding master's degrees for hypothesis #8 relating to Factor IV. (Strict control)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.0343	.0343	.0028
Error	9	111.1156	12.3462	
Total	10	111.1499		

Treatment Group Means:	Teachers holding Bachelor's degrees only	44.46
	Teachers holding Master's degrees also	44.33

Null hypothesis #8 relating to Factor V. (Democratic procedure)

The null hypothesis tested was:

> There will be no difference between teachers with Bachelor's degrees and teachers holding Master's degrees with respect to student scores on Factor V. (Democratic procedure)

Table 51 presents the findings on the above null hypothesis related to Factor V. The student perception score means were calculated as 44.12 for teachers with Bachelor's degrees and as 37.84 for teachers holding Master's degrees.

There was no significant difference found between student perception scores of teachers with Bachelor's degrees and teachers holding Master's degrees with respect to Factor V. (Democratic procedure). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor V.

Table 51. One-way analysis of variance between teachers with bachelor's degrees and teachers holding master's degrees for hypothesis #8 relating to Factor V. (Democratic procedure)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	85.9903	85.9903	2.9335
Error	9	263.8156	29.3128	
Total	10	349.8059		

Treatment Group Means:	Teachers holding Bachelor's degrees only	44.12
	Teachers holding Master's degrees also	37.84

Null hypothesis #8 relating to Factor VI. (Student attitude score)

The null hypothesis tested was:

> There will be no difference between teachers with Bachelor's degrees and teachers holding Master's degrees with respect to student scores on Factor VI. (Student attitude score)

Table 52 presents the findings on the above null hypothesis related to Factor VI. The student attitude score means were calculated as 8.71 for teachers with Bachelor's degrees and as 8.98 for teachers holding Master's degrees.

There was no significant difference found between student attitude scores of teachers with Bachelor's degrees and teachers holding Master's degrees with respect to Factor VI. (Student attitude score). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor VI.

Table 52. One-way analysis of variance between teachers with bachelor's degrees and teachers holding master's degrees for hypothesis #8 relating to Factor VI. (Student attitude score)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.1650	.1650	.4635
Error	9	3.2036	.3560	
Total	10	3.3686		

Treatment Group Means:	Teachers holding Bachelor's degrees only	8.71
	Teachers holding Master's degrees also	8.98

Findings for Null Hypothesis #9 (Type of Professional Training)

Null hypothesis #9 relating to Factor I. (Friendly, cheerful, admired)

The null hypothesis tested was:

> There will be no difference between teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to student scores on Factor I. (Friendly, cheerful, admired)

Table 53 presents the findings on the above null hypothesis related to Factor I. Student perception score means were calculated as 47.75 for the teachers who have taken Distributive Education Principles and Methods courses and as 48.52 for the teachers who have not taken Distributive Education Principles and Methods courses.

There was no significant difference found between student perception scores of teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to Factor I. (Friendly, cheerful, admired). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor I.

Table 53. One-way analysis of variance between teachers who have taken and teachers who have not taken distributive education principles and methods courses for hypothesis #9 relating to Factor I. (Friendly, cheerful, admired)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	1.2894	1.2894	.3995
Error	9	29.0515	3.2279	
Total	10	30.3409		

Treatment Group Means:	Teachers who have taken principles and methods courses	47.75
	Teachers who have not taken principles and methods courses	48.52

Null hypothesis #9 relating to Factor II. (Knowledgeable, poised)

The null hypothesis tested was:

> There will be no difference between teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to student scores on Factor II. (Knowledgeable, poised)

Table 54 presents the findings on the above null hypothesis related to Factor II. Student perception score means were calculated as 49.90 for the teachers who have taken Distributive Education Principles and Methods courses and as 52.89 for the teachers who have not taken Distributive Education Principles and Methods courses.

There was no significant difference found between student perception scores of teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to

Factor II. (Knowledgeable, poised). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor II.

Table 54. One-way analysis of variance between teachers who have taken and teachers who have not taken distributive education principles and methods courses for hypothesis #9 relating to Factor II. (Knowledgeable, poised)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	19.5002	19.5002	1.8078
Error	9	97.0797	10.7866	
Total	10	116.5799		

Treatment Group Means:		
	Teachers who have taken principles and methods courses	49.90
	Teachers who have not taken principles and methods courses	52.89

Null hypothesis #9 relating to Factor III. (Interesting, preferred)

The null hypothesis tested was:

> There will be no difference between teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to student scores on Factor III. (Interesting, preferred)

Table 55 presents the findings on the above null hypothesis related to Factor III. Student perception score means were calculated as 40.51 for the teachers who have taken Distributive Education Principles and Methods courses and as 42.26 for the teachers who have not taken Distributive Education Principles and Methods courses.

There was no significant difference found between student perception scores of teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to Factor III. (Interesting, preferred). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor III.

Table 55. One-way analysis of variance between teachers who have taken and teachers who have not taken distributive education principles and methods courses for hypothesis #9 relating to Factor III. (Interesting, preferred)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	6.6627	6.6627	.8596
Error	9	69.7604	7.7512	
Total	10	76.4231		

Treatment Group Means:	Teachers who have taken principles and methods courses	40.51
	Teachers who have not taken principles and methods courses	42.26

Null hypothesis #9 relating to Factor IV. (Strict control)

The null hypothesis tested was:

> There will be no difference between teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to student scores on Factor IV. (Strict control)

Table 56 presents the findings on the above null hypothesis related to Factor IV. Student perception score means were calculated as 44.13

for the teachers who have taken Distributive Education Principles and Methods courses and as 45.21 for the teachers who have not taken Distributive Education Principles and Methods courses.

There was no significant difference found between student perception scores of teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to Factor IV. (Strict control). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor IV.

Table 56. One-way analysis of variance between teachers who have taken and teachers who have not taken distributive education principles and methods courses for hypothesis #9 relating to Factor IV. (Strict control)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	2.5665	2.5665	.2127
Error	9	108.5834	12.0648	
Total	10	111.1499		

Treatment Group Means:	Teachers who have taken principles and methods courses	44.13
	Teachers who have not taken principles and methods courses	45.21

Null hypothesis #9 relating to Factor V. (Democratic procedure)

The null hypothesis tested was:

There will be no difference between teachers who have taken and teachers who have not taken Distributive Education

Principles and Methods courses with respect to student scores on Factor V. (Democratic procedure)

Table 57 presents the findings on the above null hypothesis related to Factor V. Student perception score means were calculated as 41.50 for the teachers who have taken Distributive Education Principles and Methods courses and as 44.83 for the teachers who have not taken Distributive Education Principles and Methods courses.

There was no significant difference found between student perception scores of teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to Factor V. (Democratic procedure). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor V.

Table 57. One-way analysis of variance between teachers who have taken and teachers who have not taken distributive education principles and methods courses for hypothesis #9 relating to Factor V. (Democratic procedure)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	24.1758	24.1758	.6682
Error	9	325.6301	36.1811	
Total	10	349.8059		

Treatment Group Means:	Teachers who have taken principles and methods courses	41.50
	Teachers who have not taken principles and methods courses	44.83

Null hypothesis #9 relating to Factor IV.
(Student attitude score)

The null hypothesis tested was:

> There will be no difference between teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to student scores on Factor VI. (Student attitude score)

Table 58 presents the findings on the above null hypothesis related to Factor VI. Student attitude score means were calculated as 8.66 for the teachers who have taken Distributive Education Principles and Methods courses and as 9.11 for the teachers who have not taken Distributive Education Principles and Methods courses.

There was no significant difference found between student attitude scores of teachers who have taken and teachers who have not taken Distributive Education Principles and Methods courses with respect to Factor VI. (Student attitude score). Thus, the evidence leads the investigator to fail to reject the null hypothesis relating to Factor VI.

Table 58. One-way analysis of variance between teachers who have taken and teachers who have not taken distributive education principles and methods courses for hypothesis #9 relating to Factor VI. (Student attitude score)

N=11

Source of Variance	Degree of Freedom	Sum of Squares	Mean of Squares	F Ratio
Treatment Groups	1	.4402	.4402	1.3528
Error	9	2.9284	.3254	
Total	10	3.3686		

Treatment Group Means:	Teachers who have taken principles and methods courses	8.66
	Teachers who have not taken principles and methods courses	9.11

VITA

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Candidate for the Degree of

Doctor of Education

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