WHITE, Thomas Robert, 1940--
A STUDY OF THE VALUES AND ATTITUDES OF
DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS
AS COMPARED TO TWO GROUPS OF POTENTIAL
TEACHER-COORDINATORS.

The Ohio State University, Ph.D., 1968
Education, teacher training

University Microfilms, Inc., Ann Arbor, Michigan
A STUDY OF THE VALUES AND ATTITUDES OF DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS AS COMPARED TO TWO GROUPS OF POTENTIAL TEACHER-COORDINATORS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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1968

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ACKNOWLEDGMENTS

The writer wishes to express his gratitude to his adviser, Dr. Inez Ray Wells, for her valuable and candid suggestions and for her continued encouragement throughout the study. Her advice and her diligence exceeded the writer's expectations.

Special thanks are given to other individuals who were instrumental to the completion of this study: To Dr. Neal E. Vivian who provided important ideas and excellent criticism, to Dr. William B. Logan who worked with the writer in establishing the initial problem for the study, to Dr. Donald E. Anderson who contributed substantial technical assistance, and to Dr. Bernard C. Nye and Mr. Karl M. Kahler who facilitated the conduct of the study.

Finally, the writer is indebted to his wife and family for their patience, encouragement, and understanding throughout the duration of the study.
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CHAPTER I

NATURE AND SCOPE OF THE STUDY

Introduction

The continuing improvement in the American standard of living is largely dependent upon a well-educated and fully employed work force, which is capable of contributing innovative resources and technological refinements to the production and distribution processes. The role of private business is to determine the needs and wants of consumers, produce goods and services capable of satisfying these needs and wants, and then distribute the goods and services in such ways as to produce customer satisfaction. In today's society the efficient flow of goods and services from producers to consumers demands highly skilled workers at all functions in the business organization hierarchy, at all levels in the channel of distribution, and for all types of goods and services.

Distributive education has been delegated a major responsibility in educating youth and adults for employment in marketing occupations. The increased emphasis on the distributive process in the affluent society is demanding
increasing numbers of skilled workers in the field of distribution.

If distributive education is to help provide the needed skilled employees, more people must be trained for marketing occupations through secondary, post secondary, and adult distributive education programs. This task requires increasing numbers of distributive education personnel, particularly teacher-coordinators. The lack of sufficient personnel in distributive education has consistently handicapped its growth.

As will be cited later in this chapter, the insufficient numbers of distributive education teacher-coordinators has caused concern among many distributive educators. Suggestions for implementing a recruitment program have been made. However, studies of the nature of present and potential personnel have not been undertaken.

**Problem**

The ultimate purpose of the study was to provide insight into the nature of distributive education personnel as shown by their scores on value and attitude scales. A corollary purpose was to compare the values held by individuals outside of distributive education, but representing potential distributive education teacher-coordinators because of their background, with the values of present
teacher-coordinators in an effort to evaluate these outside
groups as potential teacher-coordinators.

The problem investigated in this study involved
the measurement of the values and attitudes of distributive
education teacher-coordinators and two groups of potential
teacher-coordinators by use of standardized instruments.
The value and attitude measurements provided a total of
seven comparisons as indicated in the hypotheses tested.
In addition to teacher-coordinators, the two groups
measured included distributive employees having at least
a baccalaureate degree in business administration and
having at least two years of work experience in a market-
ing or managerial occupation and undergraduates presently
majoring in business administration.

The teacher-coordinators studied were divided into
four subgroups, which represented four broad categories of
backgrounds that present distributive education teacher-
coordinators have. That is, the study was concerned with
those who entered the field by: (a) having majored or
minored in distributive education as undergraduates,
(b) having majored in business administration and then
immediately qualified for certification in distributive
education, (c) having entered distributive education after
business employment, or (d) having entered distributive
education after teaching in another subject area.
The values of distributive education teacher-coordinators were measured in six value-areas: theoretical, economic, aesthetic, social, political, and religious. Comparisons of values were made between the total groups of teacher-coordinators, the distributive employees, and the undergraduates majoring in business administration.

The attitudes toward teaching held by distributive education teacher-coordinators were compared to the norms established for experienced secondary teachers to determine whether significant differences existed. For this comparison both the total group and the four subgroups were utilized.

**Hypotheses**

In this study seven major null hypotheses were tested for significant differences:

1. There is no significant difference in the dispersion of the values held by distributive education teacher-coordinators and those held by selected business employees.

2. There is no significant difference in the dispersion of the values held by distributive education teacher-coordinators and those held by undergraduate business administration majors.

3. There is no significant difference between the mean values held by distributive education teacher-
coordinators and those held by selected business employees.

4. There is no significant difference between the mean values held by distributive education teacher-coordinators and those held by undergraduate business administration majors.

5. There is no significant difference between the mean attitudes toward teaching held by distributive education teacher-coordinators and those held by other secondary teachers.

6. There are no significant differences in the mean attitudes toward teaching among distributive education teacher-coordinators who entered the field from (a) an undergraduate distributive education curriculum, (b) a certification program in distributive education immediately after graduation from business administration, (c) a period of employment in business, or (d) a teaching career in another subject area.

7. There are no significant differences in the mean values among distributive education teacher-coordinators who entered the field from (a) an undergraduate distributive education curriculum, (b) a certification program in distributive education immediately after graduation from business administration, (c) a period of employment in business, or (d) a teaching career in another subject area.
Need for the Study

A major challenge for the improvement of the private enterprise system rests with the distribution function. Ketchum stated:

There are many who do not realize that distribution now represents the largest single segment of our economy, whether measured by income originating in the distribution function, or by the marketing component in retail prices—expressed in terms of either costs or values added.¹

Education has received a high priority in increasing the efficiency of the distribution process. Better methods of distribution of goods and services and better understanding of consumer needs and wants are goals to which education is expected to contribute. The great number of occupations in marketing and distribution demands a correspondingly great number of educated employees—from the salesperson to the marketing executive. Distributive education provides education for those marketing occupations which require less than a baccalaureate degree. The Vocational Education Act of 1963 clearly stated that distributive education, along with the other vocational services, has a responsibility for providing vocational education for all who need, want, and can profit from

Between 1959 and 1966 enrollment in secondary distributive education tripled and a 50 per cent increase is expected between 1968 and 1970.

The growth in the number of distributive education programs has resulted in a serious shortage of qualified distributive education personnel. In 1963 Marks stated that distributive education teacher education has been unable to supply sufficient trained personnel as teacher-coordinators; and she called for a crash program of recruitment, including making provisions for interested individuals who cannot meet the rigid certification requirements. In a 1967 study of three states by Traicoff, it was pointed out that program growth in all three states was hampered by the lack of sufficient numbers of distributive education teacher-coordinators. A U.S. Office of Education publication, Distributive Teacher Education: Its Statistical Data, Distributive Education (Washington: U.S. Office of Education, Distributive Education Unit, December, 1967), p. 2.

Ralph E. Mason and Peter G. Haines, Cooperative Occupational Education (Danville, Ill.: The Interstate Printers, 1965), pp. 509-519.


Role and Services, further emphasized the problem: "The shortage of well-trained and well-qualified teacher-coordinators, administrators, researchers, and teacher-educators is accentuated at a time of great program expansion."¹ This publication identified teacher recruitment in distributive education in two of its eight organizational goals.

Each year many distributive education programs are either not begun or not continued due to the lack of certificable personnel. The result of the shortage of the teacher-coordinators is a failure to provide distributive education to all who need, want, and can profit from it.

An indication of the gross need for distributive education personnel is shown in The Demand for Teachers in Vocational and Technical Education.² The annual turnover in distributive education teachers is 28.2 per cent of the total number employed. This figure represents both additional personnel in new programs and teacher replacements in existing programs. An estimation by state supervisors of distributive education showed an increase from 2,818 teacher-coordinators in 1965 to 4,205 in 1968.³ The

²The Demand for Teachers in Vocational and Technical Education (The Ohio State University, Center for Vocational and Technical Education, March, 1967), p. 3.
³Ibid., p. 30.
estimate for Ohio showed that 220 teacher-coordinators would be needed in 1968, compared to 129 in 1965.\(^1\) In actuality, 201 distributive education teacher-coordinators were employed at the secondary level in Ohio in the 1967-68 school year. Thus, the demand for personnel in distributive education has received considerable attention by leaders in the field. Traditionally, however, the demand for teacher-coordinators has exceeded the supply.

Typically, the certification standards for distributive education personnel have been rigid, requiring a variety of educational and occupational experiences deemed necessary for the teacher-coordinator to fulfill the varied activities of his job. Many state certification patterns require that the distributive education teacher-coordinator possess at least a baccalaureate degree and have completed stated technical courses in business administration and professional courses in education, including administration, teaching methods, supervision, and coordination of distributive education. In addition, certification is predicated upon the attainment of occupational competency in a recognized distributive occupation, as indicated in most state plans for distributive education.

With these rigorous requirements it is understand-

\(^1\)Ibid., p. A - 2.
able that the number of potential teacher-coordinators is limited. The combination of specialized education and specialized work experience in distribution is typical neither for college students nor for employees in distributive or marketing occupations. As a result, there is a critical need for distributive education personnel at the secondary level, as it is at this level that beginning teacher-coordinators normally enter the field.

Generally, distributive education teacher-coordinators enter the field in one of four ways: (a) having selected distributive education teacher training as an undergraduate, (b) having entered distributive education after having prepared for business employment in a collegiate school of business, (c) having entered distributive education teaching from business employment, and (d) having moved from another area of teaching into distributive education. While Chester O. Mills in 1967 tabulated and evaluated the sources of personnel by means of an opinionnaire sent to distributive teacher-educators and state supervisors,¹ no research has been attempted which compares the relative merits of the sources of teachers or studies the personal characteristics or traits of teacher-coordinators who have made an occupational choice of a career in

distributive education. Such investigations would have implications for the development of future sources of teacher-coordinators of distributive education.

**Importance of the Study**

Those individuals who have decided upon a career in distributive education have made certain identifiable decisions regarding their occupational or vocational choices and have indicated willingness to meet the certification requirements. Their decisions, as are all occupational decisions, are based, at least in part, upon the values which they personally hold. Like their attitudes toward teaching, no research has been uncovered pertaining to the values which distributive education personnel hold.

On the other hand, considerable research has been conducted and several theories advanced concerning the process of vocational development or occupational choice. For example, Ginzberg's theory of vocational development states that occupational choice is a process which is largely irreversible and that final choice is made only after compromise.¹ This compromise during the process reflects the impact of interests, capacities, attitudes, 

and values. Moreover, Super has pointed out that values often serve as conscious or unconscious motives as an individual makes an occupational choice.\(^1\) Hence, values and attitudes have great significance in vocational development. Counselors for many years have utilized value and attitude patterns of individuals in counseling for specific careers, since it follows that individuals having similar value and attitude patterns may find success in similar occupations.

A knowledge of the values of distributive education teacher-coordinators, therefore, may have significant implications for recruiting personnel into the field, especially as teacher-coordinator values are compared to the values of groups which have similar experiential backgrounds, either educationally or occupationally.

Moreover, attitudes toward teaching have been emphasized as important factors in the success of teachers. To understand how the attitudes of distributive education personnel compare to the attitudes of other teachers, it is necessary to consider the attitudes of teacher-coordinators in the light of established norms. While an understanding of attitudes toward teaching is necessarily limited to those who have experienced teacher education

and/or actual teaching, this knowledge is vital since many distributive education teacher-coordinators enter the field from other areas of teaching.

**Definition of Terms**

*Distributive education* is a vocational education program designed to prepare youth and adults for entry into and advancement within distributive occupations, which include, but are not limited to, occupations dealing with the marketing and merchandising of goods and services in retail, wholesale, and service establishments.

*Distributive education teacher-coordinator* identifies the individual employed by the local board of education for the purpose of teaching related instruction in marketing and distribution and coordinating on-the-job experiences of students enrolled in distributive education. Students enrolled in distributive education have declared an occupational objective of a career in a distributive occupation. In this study the terms "teacher-coordinator" and "coordinator" are used synonymously with "distributive education teacher-coordinator."

*Experienced distributive education teacher-coordinator* identifies a teacher-coordinator who has taught at least one full year in distributive education.

*Business administration students* in this study are those undergraduate students in some curriculum in a collegiate school of business.
Values are defined as the six basic interests or motives in personality, as described by Eduard Spranger in *Types of Men.* These six values include: theoretical, economic, aesthetic, social, political, and religious. The Study of Values inventory is based on Spranger's contention that every man's personality is indicated by the degree of presence or absence of the six values.

To understand the philosophical basis for the Study of Values, it is important to be cognizant of the definition of each of the six values purported to be measured. Therefore, each value will be described as found in the Manual of the Study of Values.\(^2\)

The theoretical individual is primarily concerned with the determination of truth. His means are observation and reason and, therefore, he divests himself of all considerations involving utilitarian or artistic values. He is motivated to organize his knowledge systematically.

An individual inclined toward economic values is interested in the utility and practicality of all things. He is characterized by an interest in the business world, including production, marketing, and consumption of goods and services, and is typical of the business person.


\(^2\) Ibid.
The aesthetic individual, frequently in conflict with theoretical and economic individuals, is interested in form and harmony in all his life's experiences. Each event in the life of the aesthetic man is an entity in itself and is viewed as such.

Love of people is the primary characteristic of the social individual. This individual is usually kind and unselfish, accepting people as ends rather than means. This individual often may be described as altruistic or philanthropic and may be contrasted sharply with the economic man or compared favorably with the religious man.

The political man is motivated by power, a characteristic often found in leaders. It should be understood that the political man is not limited to the popular understanding of politics, but is interested in all kinds of power and competition. Thus, the political man may be compared favorably with the economic man.

The religious man is best described in the Manual:

The highest value of the religious man may be called unity. He is mystical, and seeks to comprehend the cosmos as a whole, to relate himself to its embracing totality. Spranger defines the religious man as one "whose mental structure is permanently directed to the creation of the highest and absolutely satisfying value experience." ¹

It is important to observe that no individual definitively characterizes any one of the values. Instead,

¹Ibid., p. 5.
every person's value system reflects a combination of the six values. Thus, a profile of values can be constructed for every individual.

Attitudes or attitudes toward teaching are the result of a variety of factors, which include personality, social and academic intelligence, general knowledge and abilities, values, social skills, and teaching techniques.\(^1\) A favorable attitude toward teacher-pupil relations characterizes a good teacher. Such a teacher maintains a high degree of pupil interest and motivation, working with students in a cooperative atmosphere, and respecting the feelings and abilities of pupils.\(^2\) On the other hand, the poor teacher is characterized by being insecure—seeking to dominate the class through the use of a variety of negative motivational tools, such as fear, threat, and disciplinary measures.

Limitations of the Study

For purposes of facilitating the conduct of the study, managing the data, and controlling any variables not being measured, the following limitations in the scope of the study have been recognized:

1. The teacher-coordinators of distributive


\(^2\)Ibid.
education have been limited to those experienced teacher-coordinators in the State of Ohio. Experienced teacher-coordinators were selected in order to hold constant any effect teacher training may have on attitudes and values, since the effect of teacher training is not being measured in this study. First-year teacher-coordinators may teach in Ohio on a temporary certificate in distributive education with little or no professional education. However, they must meet minimum certification standards through teacher training prior to the second year. Thus, experienced teacher-coordinators have had teacher training.

Ohio was selected as the geographical boundary for the study for three reasons. First, it is a leading state in terms of numbers of secondary distributive education programs, providing a total of 135 experienced teacher-coordinators. Second, cooperation of the teacher-coordinators to be studied could be secured through the Ohio State Department of Education, Division of Distributive Education. Third, the effect of differences in certification standards among the states was eliminated, and accordingly, the effect these differences may have on values and attitudes was removed.

2. Secondary distributive education teacher-coordinators were selected to provide a homogeneous group for measurement. It is at this level that most distribu-
tive education personnel enter the field and where the largest number are employed.

3. Undergraduates majoring in business administration were limited to juniors and seniors enrolled in marketing courses during the Spring and Summer Quarters, 1968, at The Ohio State University.

4. Employees in marketing or distributive occupations were limited to individuals meeting the following criteria: employment in a distributive occupation for at least two years, employment in the State of Ohio, at least a baccalaureate degree in business administration or a related field, and forty years old or younger. These restrictions were imposed on this sample to provide a representative group of individuals whose backgrounds approximate those of present distributive education teacher-coordinators who entered the field from business employment.

5. Considerable variation in meanings of the terms "values" and "attitudes" exists in the literature. In this study the term "values" is limited to the definition indicated in the manual of the Study of Values and the term "attitudes" is limited to the definition indicated in the manual of the Minnesota Teacher Attitude Inventory.

Methodology of the Study

The methodology of this study involved the use of standardized instruments to measure the values and
attitudes of selected groups of individuals. Statistical treatment of the data was utilized to determine the significance of the results of administering the instruments to the selected groups and for comparing the scores of the groups. Basically, the study involved comparing the relationships among the values of groups of distributive education teacher-coordinators with varying backgrounds and discerning the relationships between the attitudes of distributive education personnel and groups of potential teacher-coordinators.

Groups studied.—All experienced distributive education teacher-coordinators in Ohio formed the population of distributive education personnel. Coordinators who participated in the study were categorized in terms of their backgrounds prior to entering distributive education, which provided four subgroups of distributive education personnel.

Two additional groups were measured for comparison with the distributive education group and subgroups. First, juniors and seniors majoring in business administration at The Ohio State University were administered the Study of Values. Second, business employees having a baccalaureate degree in business administration and having at least two years work experience in a marketing or related occupation were also administered the Study of Values.
Instruments used in the study.—Two standardized instruments were used to measure values and attitudes in the study: the Allport-Vernon-Lindzey Study of Values and the Cook, Leeds, and Callis Minnesota Teacher Attitude Inventory (MTAI). Research conducted using both instruments is discussed in Chapter II. However, it is important here to describe the salient features of the instruments and the reasons for selecting them.

The Study of Values is a self-administered inventory of an individual's values in six areas, as described earlier. The instrument requires that a participant make forced choices about statements indicative of his values. The construction of the instrument is such that, as a person scores higher in one of the value areas, he does so at the expense of another area. Thus, the development of a profile for the individual is possible. The 120 items in the inventory are weighted by the authors and norms for occupational groupings have been established, as well as norms for collegiate groups. Research completed over the 37-year history of the Study of Values points to its validity in discriminating among individuals in various occupations.¹ Similarly, reliability has been established using the split-half method.²

¹Allport, loc. cit.
²Ibid.
While evidence shows that the Study of Values does measure that which it purports to measure, it is important to note that the inventory is based on a specific understanding of the meaning of values. Therefore, definitions of values not consistent with those of the authors of the Study of Values may lead a reader to incorrect conclusions. An additional caution stated by the authors is the careful use of statistical techniques since the values are interdependent.¹

The Minnesota Teacher Attitude Inventory is also a self-administered inventory. It is used principally to measure the attitudes which tend to show how well a teacher will adapt to teacher-student relationships. The MTAI indirectly measures how well the teacher will be satisfied with the teaching profession and, therefore, the authors and some researchers claim the MTAI may be used to predict teaching success.² The instrument contains 150 items, requires 25 minutes for completion, and has a variety of norms for teachers and teachers in training. The norms relevant to this study are for experienced non-academic secondary teachers having four and five years of training. Non-academic teachers include business, art, music, physical education, and industrial arts teachers.

¹Ibid.
²Cook, loc. cit.
The authors indicate several significant considerations in understanding the MTAI. First, the length of teaching experience is not significantly related to teacher attitudes. Second, the amount of education is positively related to inventory scores with teachers having more than four years training scoring higher. Third, the subject taught is significantly related to the MTAI scores with academic teachers scoring higher on all norms and in all, except one, groups tested.¹ The range of possible scores on the MTAI is from plus 150 to minus 150 with a higher score indicating a more favorable attitude toward teaching.

Considerable research has been undertaken using the Minnesota Teacher Attitude Inventory for a wide variety of purposes. Because the MTAI is purported to measure so difficult a variable to comprehend—attitude—the Minnesota Teacher Attitude Inventory has been the subject of much validation study and some criticism. Nevertheless, it is widely used in teacher-training institutions and has provided much insight into the nature of attitudes.

This combination of instruments was selected because of the reputations of both instruments, the relatively short time required for completion of each, the compatibility of information provided on the two instruments, and the amount of data available concerning both

¹Ibid., p. 10.
the Study of Values and the Minnesota Teacher Attitude Inventory.

**Procedures.**—A letter describing the study and asking for participation was sent to all experienced distributive education teacher-coordinators in Ohio. A copy of this letter appears in Appendix A. A post card was included with each of the 135 letters asking the teacher-coordinator to indicate his willingness to participate and requesting him to check the statement on the card which best described his background before entering the field. Of the 135 teacher-coordinators contacted, 93 indicated they would participate.

A cover letter explaining the procedures to be followed in completing the instruments (Appendix A), a Study of Values booklet, a Minnesota Teacher Attitude Inventory and answer sheet, and a stamped return envelope were sent to 93 teacher-coordinators. From this group, 75 usable Study of Values instruments and 78 usable Minnesota Teacher Attitude Inventory answer sheets were received. The difference in numbers received for each of the instruments was due to several respondents correctly completing one instrument and incorrectly completing the other instrument.

The Study of Values was administered to 52 juniors and seniors enrolled in a business administration major during the Spring and Summer Quarters, 1968, at The Ohio
State University. All completed instruments were usable.

In order to obtain the desired participants for the business employee sample of the study, the researcher conferred with Mr. Karl Kahler, Executive Assistant of the Ohio State Council of Retail Merchants. Mr. Kahler provided a list of personnel directors of firms having employees who could meet the requirements of the study. Appendix B contains a copy of the letter sent to the personnel directors. The letter was sent to 34 personnel directors and requested them to select one, two, or three employees of their firm who would participate in the study. A total of 50 employees participated from 23 firms.

Statistical analysis.—The data gathered from administering the Study of Values and the Minnesota Teacher Attitude Inventory were recorded and tabulated as follows:

1. Means and standard deviations were computed from the results of the Study of Values for the selected business employees, undergraduates majoring in business administration, and distributive education teacher-coordinators. Separate calculations were made for each of the six values measured by this instrument.

2. Means and standard deviations were computed from the results of the Minnesota Teacher Attitude Inventory for the distributive education teacher-coordinators and each of the four subgroups of teacher-coordinators.

An F ratio was computed for the purpose of
determining whether the dispersion in the scores of the groups participating in the Study of Values was significantly different. This measure, therefore, provided insight into the nature of the variance or dispersion and showed whether any two groups had similar variances, at the .05 level of significance.

Similarly, the t test was employed to determine whether significant differences existed among the means of the various groups, at the .05 level of significance. These computations were made for each of the six values. For example, the t test indicated whether a significant difference in the mean scores of the social value existed among distributive education coordinators, the four subgroups of teacher-coordinators, the business employees, and the undergraduate business administration majors. The other five values were tested similarly. For the results of the Minnesota Teacher Attitude Inventory the t test was used to determine whether there were significant differences among the distributive education teacher-coordinators and the four subgroups, and among distributive education teacher-coordinators and other experienced secondary teachers.

More specifically, each hypothesis was tested as follows:

1. An F ratio was used to indicate whether a significant difference in variance existed between the total
26

groups of distributive education teacher-coordinators and
the selected business employees in terms of the values
held by both groups. Each value held by the teacher-
coordinators was matched with the corresponding value of
the business employees and tested for variance or disper-
sion. Thus, six F ratios were calculated.

2. An F ratio was used to indicate whether a
significant difference in variance existed between the
total groups of distributive education teacher-coordinators
and the undergraduate business administration majors in
terms of the values held by both groups. Calculations
testing this hypothesis were identical to those of the
preceding hypothesis.

3. The t test was utilized to show whether a
significant difference existed between the mean value
scores of the total group of distributive education teach-
er-coordinators and the group of selected business em-
ployees. Each value held by the teacher-coordinators was
matched with the corresponding value of the business
employees and tested for significant differences. Hence,
six t tests were computed for this hypothesis.

4. The t test was utilized to show whether a sig-
ificant difference existed between the mean value scores
of the total groups of distributive education teacher-
coordinators and the group of business administration
majors. Calculations testing this hypothesis were identi-
cal to those of the preceding hypothesis.

5. The t test was used to indicate whether there
was a significant difference in the attitudes toward
teaching held by distributive education teacher-coordi-
nators and other experienced non-academic secondary
teachers based on the mean scores of both groups.

6. The t test was employed to determine whether
significant differences existed in the attitudes toward
teaching held by distributive education teacher-coordi-
nators who entered the field from different backgrounds.
Therefore, the following comparisons were made:

a. coordinators having majored or minored
in distributive education as under-
graduates and coordinators having
qualified for certification in distribu-
tive education immediately after receiv-
ing a baccalaureate degree in business
administration,

b. coordinators having majored or minored
in distributive education and coordi-
nators having entered distributive
education from business employment,

c. coordinators having majored or minored
in distributive education and coordi-
nators having entered distributive
education from another area of teaching,

d. coordinators having qualified for
certification in distributive education
immediately after receiving a baccala-
ureate degree in business administration
and coordinators having entered distribu-
tive education from business employment,

e. coordinators having qualified for cer-
tification in distributive education
immediately after receiving a bac-
calaureate degree in business
administration and coordinators
having entered distributive educa-
tion from another area of teaching,
f. coordinators having entered distribu-
tive education from business employ-
ment and coordinators having entered
distributive education from another
area of teaching.

Each of the above six comparisons was tested for signif-
icant differences using the Minnesota Teacher Attitude
Inventory score.

7. The t test was employed to determine whether
significant differences existed in the values held by
distributive education teacher-coordinators who entered
the field from different backgrounds. The same comparisons
of subgroups were made to test Hypothesis 7 as were made
to test Hypothesis 6. However, since the Study of Values
was comprised of six value areas, a total of 36 comparisons
were made.

The statistical treatment of the data tested each
of the seven hypotheses. On the basis of the findings of
the study, conclusions were drawn and recommendations made.
No attempt was made to predict the effectiveness of dis-
tributive education teacher-coordinators on the basis of
test results. Rather, the study was limited to a com-
parison of the values and attitudes of distributive
education personnel to other groups having similar back-
grounds and occupations.
Organization of the Study

The nature and importance of the problem investigated, the hypotheses tested, and the statistical methods utilized are presented in this chapter. In addition, terms are defined, limitations of the study are cited, and analytical procedures are described.

A review of the related literature and research is located in the following chapter. Specifically, the chapter deals with literature and research pertaining to teacher recruitment and values and attitudes in vocational choice, as shown by research using the Study of Values and the Minnesota Teacher Attitude Inventory.

In Chapter III the data and findings of the study are reported. The acceptance and/or rejection of the hypotheses is presented in this chapter. Due to the number of tests required in testing each hypothesis, some parts of hypotheses are accepted while other parts are rejected. No statistical method is available for analyzing each hypothesis in total.

Chapter IV is devoted to a summary of the findings, conclusions, and recommendations. Conclusions and recommendations are based on the acceptance and/or rejection of the various parts of the hypotheses.
CHAPTER II

REVIEW OF RELATED LITERATURE

A review of literature and research pertinent to this study is presented in this chapter. Since this study involves an investigation of two of the factors influencing the vocational choice of distributive education personnel, the review of research and literature is divided into two sections: teacher recruitment, and values and attitudes in vocational choice.

The primary purpose of the study was to provide evaluative information concerning present and potential distributive educators. Therefore, the literature was surveyed for information relative to teacher recruitment which would provide insight into the nature of the teacher supply problem. In this section literature pertaining to recruitment and teacher need is reviewed for distributive education, vocational education, and the total educational field.

Values and attitudes are integral factors in vocational choice. Since this study is concerned with values and attitudes as they affect the vocational choices of distributive education personnel, an overview of the
nature of vocational development is presented and research related to the two standardized instruments used in this study is reviewed. The latter studies include both instrument validation and instrument implementation research.

From the review of the literature this researcher reached two conclusions. First, there is a critical need for research and/or demonstration projects of recruitment in distributive education. Second, values and attitudes provide a viable means for understanding the nature of the teacher supply problem.

**Literature Pertaining to Teacher Recruitment**

The failure of education to undertake an active and effective program of teacher recruitment is evidenced by the shortage of teaching personnel. The literature abounds with expressions of the need for teachers, but the existence of a unified program of recruitment in any of the educational disciplines is not evident from the literature reviewed by this researcher.

This section of the chapter contains a review of the literature on teacher recruitment in distributive education, vocational education, and all of education, in that order. The term "teacher recruitment" has been defined by Page as, "... the effort to increase the numbers
of qualified persons who would be willing to accept teaching positions."^1

Mills's study in 1967 is the most recent and most comprehensive attempt to determine the numerical need for and possible sources of distributive education teacher-coordinators. The state supervisors and teacher-educators of distributive education were polled for their reactions to questions concerning the personnel need. With minor exceptions both groups were in agreement. Thus, the study showed that there is an inadequate supply of teacher-coordinators and that the most important sources of supply for teacher-coordinators were business education students, business administration students, retail employees, and other high school teachers. The three most preferred methods of recruiting personnel were personal interviews, brochures, and group presentations. From this study it was evident that the current beliefs held by distributive educators were largely substantiated.

In citing the personnel need in distributive education, Knouse indicated that the development and use of criteria for selection of prospective distributive education personnel is one of the five areas needing


^2Mills, ibid., pp. 9-18.
attention. According to Peter Haines, "educational malnutrition" will be the outcome of program expansion without a corresponding increase in distributive education personnel at all levels. One year later, Ferguson wrote that there is a critical need for distributive education teachers in most states and that many positions go unfilled each year. From an earlier survey of teacher-educators, Ferguson found that only eleven teacher-educators used recruitment brochures.

A similar acknowledgment of the scarcity of teaching personnel is noted in the other vocational education services. Bender explained that one of the most challenging problems facing vocational education is the development of sufficient numbers of personnel and that this will be the determinant of how well vocational education will be maintained and expanded.

In opening remarks to the 1967 Vocational-Technical

1Reno Knouse, "Needed Improvements in Distributive Education Teacher Education" (Ph.D. dissertation, Michigan State University, 1962).


Teacher Education Seminar, Taylor conveyed the current concern for personnel:

Perhaps the most serious deterrent to the continued improvement and expansion of vocational and technical education is the growing shortage of well-qualified teachers and other leadership personnel. . . . Thus, the improvement and expansion of teacher education programs becomes an activity of highest priority in a period when employment opportunities will be the brightest for those who possess sound occupational preparation.¹

Taylor's concern of the increasing shortage of personnel was reinforced in the same meeting by Grant Venn, who emphasized the urgent need for both quantity and quality in vocational education teachers as he described seven important demands for teacher education.²

It is apparent, then, that the national leaders of vocational education are concerned with the inability of the vocational education disciplines to provide teachers in sufficient numbers. Van Trump analyzed the teacher supply problem in trade and technical education and cited the advantages and disadvantages of various sources.³

While trade and industrial education teachers come from


²Grant Venn, "Urgency of the Demand for Vocational-Technical Teachers," ibid., pp. 6-9.

teacher education institutions, engineering schools, and industry, he asserted that there are few examples where teacher education programs have offered any solution to the teacher supply problem. Further, he pointed out the irony of the situation: vocational education has consistently sought to serve employment and training problems of others but cannot solve its own.

In a recent study of the various sources of personnel for trade and industrial education, it was shown that 70 per cent of the new teachers came from industry and just over 10 per cent came from both non-vocational teaching and directly from college.\(^1\) The significance of the study developed from the fact that it was an empirical measure of the actual sources of supply of trade and industrial education teachers.

It has been recognized by vocational home economics education that the demand for teachers cannot be met if rigid occupational requirements for certification are adhered to. Leaders in home economics are beginning to investigate the backgrounds of personnel in order to determine what requirements should be established for new

personnel.\textsuperscript{1} Moreover, East reported that vocational home economics is inducting previously non-certificable personnel into their programs.\textsuperscript{2} The concept of reviewing and possibly altering certification requirements has also been advanced by writers outside of vocational education as will be evidenced later in this section.

A variety of sources were examined to seek previous research related to teacher recruitment for the total field of education. Although there is extensive material emphasizing the need for active programs of teacher recruitment, comparatively little experimental research or few demonstration projects were discovered.

After a review of the literature pertaining to teacher recruitment, Durflinger stated there was a desperate need for research in teacher recruitment.\textsuperscript{3} In 1963 he cited statistics showing an approximate annual need for 200,000 new teachers each year during the 1963 to 1973 decade. This estimation was based on the fact that about 150,000 teachers leave teaching each year and an additional

\textsuperscript{1}Flossie M. Byrd, Selection of Teachers—Basic Competencies Needed (The Ohio State University, Center for Vocational and Technical Education), pp. 1-3.

\textsuperscript{2}Marjorie East, Changes Needed in State Certification Requirements (The Ohio State University, Center for Vocational and Technical Education), p. 3.

50,000 new teachers will be needed each year to serve the increase in the number of school-age children. In addition, he pointed out that about 100,000 current teachers have sub-standard credentials, indicating a need for additional professional preparation.

Commenting on a study indicating the factors which influence a career decision for teaching, Durflinger cited seven factors which are summarized as follows:

1. desire to work with children and adolescents
2. particular attraction to subject area
3. opportunity to move in and out of profession
4. increasing salary trend
5. scores on inventories of vocational interest
6. possibility of using teaching as a steppingstone
7. membership Future Teachers of America group

Moreover, studies of teacher personality were cited. A variety of standardized instruments were used to establish their predictive value. Unfortunately, the studies undertaken have not been replicated to substantiate their conclusions. Hence, the predictive value of such instruments was concluded to be questionable. For example, studies were cited showing the MTAI as both an effective and ineffective predictor of teaching success. Durflinger stated:

Since no two researchers seem even to use the same test batteries or to make use of populations that could be judged comparable, it is difficult to
ascertain whether any genuine directions in the findings may be detected.\(^1\)

Another review of the literature concerning teacher recruitment was conducted by Hough in 1967.\(^2\) Hough arrived at the following conclusions:

1. Classroom teachers are ultimately responsible for teacher supply and demand since they create in students an initial impression of the job of the teacher.

2. The entire educational profession should strive to present a better impression of teaching as a career.

3. School counselors should encourage good students to enter the teaching profession.

4. A chapter of the Future Teachers of America should be active in every school.

5. Colleges and universities should promote their teacher-education programs.

6. A student education association should be active in all teacher-training institutions and they should be advised by outstanding teachers.

7. Teacher education programs should be structured to challenge students and should be selective enough to encourage students to enroll.

8. To encourage graduates to remain in teaching,

\(^1\)Ibid., p. 366.

effective student-teaching programs should be constructed
with the cooperation of schools and colleges.

9. The state should provide assistance through
attractive salaries, scholarships for outstanding candi­
dates, and sufficient fringe benefits.

Hough challenged the profession to unite at all
levels in an active program of recruitment.

Kilzer added to the suggestions of Hough by em­
phasizing a need to encourage college graduates not
qualified as teachers to accumulate the additional credits
required for a teaching certificate by such means as
correspondence or extension courses.¹ In addition, he
urged that education courses be provided as electives to
interested non-education majors and that programs of
teacher preparation and certification be re-examined in
the light of the national teacher shortage. Moreover, the
need for teacher recruitment was recognized by Phi Delta
Kappa, which organized a national recruitment commission
in 1957.²

Interestingly, over twenty years ago many of the

same suggestions were made by E. S. Evenden who indicated that:

1. teacher training institutions should distribute accurate information about teaching careers,
2. all members of the profession have an obligation for recruitment,
3. better vocational guidance is needed in the high school to encourage students to enter teaching,
4. the profession should place greater emphasis on service than to material well-being, and
5. a nationwide systematic recruitment program is needed.¹

An idea of the nature of the national problem has been indicated by Ray C. Maul, who pointed out that in secondary education the problem of teacher supply and demand is selective and based on such factors as regional area, community, school, and subject area.² This idea was clarified in an editorial in School and Community in 1965.³ The viewpoint presented emphasized the need for school teachers and guidance counselors to acquaint themselves

with teacher shortages in specific disciplines and counsel interested students for careers in the disciplines where the best opportunities for employment exist.

On the sources of new teachers Lambert reported that:

New teachers come from many sources, but only one source—the class of graduating seniors—can be identified, counted, and reported. . . . Of the new teachers inducted into service, it is safe to assume that only a little over one-half will come from the current graduating class.¹

Moreover, Lambert indicated that the insufficiency of funds has handicapped education from actively recruiting new personnel. Another approach has been taken by Sebold and Redfren, who stated that colleges and universities should be doing more market research for uncovering sources of personnel for specific fields where shortages are critical.² Thus, there is the feeling that teacher education institutions should assume more responsibility for recruiting teachers and that funds are needed for this purpose. Vander Werf summarized this contention by stating: "The recruitment program will have to be imaginative


and distinctive, backed up by programs of preparation worthy of the enticements.  

Mayer has taken still another viewpoint by reporting that undergraduates either have not been told about the supply and demand situation or are indifferent to the advice they received. He has advocated having student meetings with personnel directors and superintendents of local school districts.

A more sobering reflection on the supply problem has been presented in a research study by Thistlethwaite in 1963. Studying Merit Scholarship examinees, he found that physical education, agriculture, business, and education attract the least talented entering college students. Therefore, it may be hypothesized that where selective admission policies to colleges and universities have been established, a disproportionately fewer number of students interested in education will be admitted. It should be noted that Thistlethwaite's list includes the

1Lester S. Vander Werf, "Needed Research in Vocational Education," Phi Delta Kappan, XLVI (April, 1965), pp. 405-408.


3Donald L. Thistlethwaite, Recruitment and Retention of Talented College Students (Vanderbilt University, January, 1963).
two fields of study by which undergraduate students enter distributive education: business and education.

In the area of elementary education, a major project was the Yale-Fairfield Study conducted during 1954-55. The goal of this study was to learn how elementary school teaching could be made more attractive to capable young people. Specifically, the project was undertaken to determine what attracted those individuals who have chosen to become elementary teachers, what has prevented individuals from choosing a career in elementary education, why many of those who have prepared to teach failed to do so, and what suggestions experienced teachers have concerning making the career more attractive.

The findings of the study showed that improvements in salaries, upgrading of teacher-preparation programs, and increases in the prestige of teacher education would be necessary to attract more people to careers in elementary education.

The University of Southern California undertook a demonstration project in 1954 to determine the feasibility of recruiting individuals who could be certificated.

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through a summer program of study.\textsuperscript{1} For those recruited, the program guaranteed an intensive summer certification program and employment in a local school district in the following fall.

The recruitment phase of the project involved word-of-mouth communication to prospects through the Parent Teachers Association. There was no open recruiting and the participants indicated they had heard of the project at the participating school, from school people, through the University, and from publicity in the local papers. The project operated for four years and at the end of the project in 1958, 70 per cent of the individuals completing the intensive summer program were still teaching.

Another phase of the project involved sending questionnaires to 1,200 recent UCLA graduates requesting information about their attitudes toward and preparation for a teaching career. The sample showed that 36 per cent of the respondents held teaching certificates and 29 per cent had thought favorably about obtaining a certificate. However, only 58 of the 400 respondents indicated an active and current interest in obtaining certificates. The significance of the study remains with the discovery that

\textsuperscript{1}Charles E. Meyers, Wendell E. Cannon, and D. Welty Lefever, \textit{The Recruitment and Training of Teacher Interns} (University of California at Los Angeles, 1960).
there appears to be some identifiable interest among non-
education graduates for a teaching career and that in-
terested individuals can be given an intensive teacher
preparation program with some degree of success as shown
by their continued employment in education.

A somewhat different approach was used in a project
designed to recruit and select administrative personnel
from the teaching ranks.\textsuperscript{1} The study was concerned prin-
cipally with obtaining individuals for training at the
Southwest School Administration Center in Austin, Texas.
The researchers used personal interviews and letters for
the recruitment phase of the project and letters of recom-
mendation, interviews, and tests in the selection phase.
The following statement reflects the significance of the
study:

Although there is not enough evidence to justify
their use in screening out those individuals with
scores deviating a certain distance from some
point, there is justification for considering such
measures as the Guilford-Martin Inventories and
the Minnesota Teacher Attitude Inventory.\textsuperscript{2}

In summary, then, the literature and research
pertaining to teacher recruitment is extremely limited
insofar as specially designed recruitment programs are
concerned. The need for educational personnel and the

\textsuperscript{1}Kenneth E. McIntyre, \textit{Recruiting and Selecting
Leaders for Education} (Austin, Texas: Southwest School
Administration Center, 1956).

\textsuperscript{2}\textit{Ibid.}, p. 36.
need for research in teacher recruitment has been stated in many ways by many people. However, this researcher was able to locate no large-scale projects directed toward alleviating the current teacher shortage in distributive education or any other of the educational disciplines. Apparently, the prescriptions for a program of teacher recruitment, as far back as 1946, have had little effect on solving the teacher shortage.

**Literature Pertaining to Values and Attitudes in Vocational Choice**

A review of the literature pertaining to the factors influencing career choice or vocational development is limited by the lack of common terminology. The several researchers working in this field have conducted studies based on their own definitions of values and attitudes. While each writer is consistent within his own research framework, comparisons among writers are difficult without a thorough understanding of their conceptions of the meanings of the terms. To minimize the chance for confusion and maximize the clarity in this study, research studies using the Study of Values and the MTAI have been categorized by the definitions this researcher has adopted for the study. These definitions are consistent with those used by the authors of the two instruments employed in this study.
Studies of values and attitudes are reviewed here. Both terms were defined in Chapter I, but two additional citations will add clarity to the meanings of values and attitudes. Allport has emphasized the importance of values in occupational decision making in *The Nature of Prejudice*. He stated:

> The most important categories a man has are his own personal set of values. He lives by and for his values. Seldom does he think about or weigh them; rather he feels, affirms, and defends them. So important are the value categories that evidence and reason are ordinarily forced to conform to them.¹

While values are basic to personal actions, attitudes also affect an individual's decisions, although somewhat differently. English and English have advanced an operable definition of attitudes which is consistent with the Minnesota Teacher Attitude Inventory. They have defined attitude as:

> . . . an enduring, learned predisposition to behave in a consistent way toward a given class of objects; a persistent mental and/or neural state of readiness to react to a certain object or class of objects, not as they are but as they are conceived to be. It is by the consistency of response to a class of objects that an attitude is identified.²

The complexity of the definitions has been noted

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by Dukes who indicated that often the following terms are used interchangeably by writers in the field: attitude, interest, motive, need, sentiment, valence, and value.¹ Similarly, Stanley and Waldrop found that interest, preference, and value may mean many things to many people.² Generally, however, values are considered to be more basic than the other terms. Super indicated that values appear to be indicative of the things important to individuals, especially after age sixteen.³ Attitudes also have been treated by Super, who established their importance with regard to work, by recalling the Hawthorne studies of the 1930's.⁴ These studies showed the direct relationship between attitudes and productivity and conduct on the job. Super has summarized these concepts by stating:

People with certain attitudes are more likely to be attracted to certain types of work than others; those who have certain values are likely to see more opportunity to achieve in some fields of work than in others.⁵


³Super and others, op. cit., p. 50.

⁴Ibid.

Others view the complexity of the definitions as a part of a very complex decision-making process. Rosenberg stated:

The complexity of the decision process is highlighted by the observation that not only may values influence occupational choices, but choices may influence values as well. This is likely to occur when an individual who has made an occupational choice begins to internalize the values, attitudes, and behavioral patterns characteristic of actual occupational incumbents.

The process of vocational choice or vocational development has been clarified by Super who described the process as consisting of several life stages which include growth, exploration, establishment, maintenance, and decline. Moreover, because of their abilities, interests, and personalities, individuals are qualified for several occupations which require specified patterns of abilities, interests, and personality traits. Hence, individuals have some latitude in choosing occupations due to the overlapping of occupational requirements, including interests, attitudes, and values.

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3 Ibid.
Blau and his associates have attempted to explain the decision-making process by stating:

A choice between various possible courses of action can be conceptualized as motivated by two interrelated sets of factors: the individual's valuation of the rewards offered by different alternatives and his appraisal of his chances of being able to realize each of the alternatives.¹

It is evident from the literature that vocational development is a complex process affected by many factors. Despite differences in terminology among the writers, it is generally accepted that values and attitudes, along with interests, abilities, and situational factors, combine to influence or determine an individual's vocational choice. In addition, several writers have included an individual's perception of his role as being important in the decision-making process. Thus, Woodruff stated:

An individual's attitude toward any object, proposition or circumstance will be favorable if, according to his concepts, that object seems to favor the achievement of his strong positive values.²

It is important, therefore, that, as the process of vocational development is attempted to be understood and explained, the individual himself is not lost sight of


simply because of the multitude of factors which shape his
total being. Simons stated this well when he said:

A man cannot be considered a success because he is a bank president or a failure because he is an unskilled worker. Men achieve success only when they have found the work that brings them happiness.¹

He continued:

Rarely do we think of the man on the assembly line as having a career. Certainly the man on the assembly line does not have a career in the sociological sense of the word. But in what one might refer to as the psychological sense, this man does have a career. His choice of work is the result of many decisions, pressures from home and environment, intelligence, personality, and the like.²

It is apparent that there are no true measures of all the factors which influence an individual’s vocational choice. Some factors, such as pressures from home and environment, cannot be quantified. Other factors contribute varying degrees of influence in different individuals’ choices. Therefore, it is not feasible to construct a model individual typifying a given occupation. Rather, it is feasible to investigate various factors, which are measurable, and postulate that individuals possessing certain patterns of these factors may be

²Ibid., p. 609.
potential candidates for a given occupation providing all other factors are held constant.

Two factors which affect an individual's vocational choice, personal values and attitudes toward teaching, are measured in this study. Moreover, some attempt has been made to hold some other factors constant, for example, age and previous employment.

It is germane at this point to review the literature and research pertaining to values, as reflected by the Study of Values, and attitudes, as reflected by the Minnesota Teacher Attitude Inventory.

Research pertaining to the Study of Values.—An indication of the need for discovering the more basic drives of individuals, such as values, is shown in a 1965 study by LoCascio who attempted to relate vocational preferences or interests in the ninth grade to occupations at age 25.¹ Using a longitudinal approach, LoCascio found that only 44 per cent of the high school graduates had entered by age 25 an occupation for which they had expressed a preference in the ninth grade. Therefore, as LoCascio has indicated, to understand the functioning of the process of vocational development, it is necessary to delve further into the basic drives of individuals.

Superficial vocational preferences or interests do not provide an accurate representation of the factors which influence vocational choice.

The Study of Values is an instrument which measures the basic drives of individuals. It has been reported in The Sixth Mental Measurements Yearbook that the Study of Values is a useful instrument for research where dimensions broader than those measured by the Strong Vocational Interest Blank and the Kuder Preference Record are being studied.\(^1\) Furthermore, it was indicated that the instrument has proved useful in a study concerning recruitment in the banking industry. Thus, the traits measured by the Study of Values are more fundamental than those measured by other similar scales.

In an early study, Cantril and Allport found that the value scores on the six scales were interdependent, indicating the relative prominence each plays in a person's hierarchy of values.\(^2\) It was noted that the instrument is successful in differentiating groups of individuals who have varying occupational interests. From reviewing the

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literature, the authors cited experiments which showed that there is a definite relationship between personal values and actions.

The relation between values and vocational choice was the subject of a study by Kinnane and Suziedelis in 1962.\footnote{J. F. Kinnane and Antanas Suziedelis, "Work Value Orientation and Inventoried Interest," Journal of Counseling Psychology, IX (Summer, 1962), pp. 144-147.} By reviewing the theoretical basis for vocational choice, the authors indicated that values are especially important in the compromise portion of Ginzberg's theory of vocational development. Moreover, it was felt that values are modified through occupational experience.

The Study of Values has been used frequently to study values of teachers and other occupational groups, its wide use attesting to its acceptance as a useful tool for analytical purposes. In a major study in 1955 the Study of Values was used to compare teachers' values with those of the general population.\footnote{M. S. MacLean, May S. Gowan, and J. C. Gowan, "A Teacher Selection and Counseling Service," Journal of Educational Research, XXL (Summer, 1955), pp. 669-677.} The variables of major fields of study and sex of teachers in training at the University of California at Los Angeles were compared to the norms established for the general population. Male teaching candidates scored significantly lower on the economic value scale and significantly higher on the social
scale than the general population. Women enrolled in education were also significantly lower on the economic value scale than the general population. Moreover, they scored higher on the theoretical scale and lower on the religious scale than the general population. The total scores of both male and female teachers in training compared favorably with the established norms for teachers. An additional feature of the study involved a comparison of the values of kindergarten-primary majors and home economics majors. The kindergarten-primary group scored significantly higher on the aesthetic and social value scales, but lower on the economic value scale than the home economics group. The researchers of this study, which involved 1,700 students in education, indicated that the study showed the Study of Values to have important predictive value for vocational decision-making.

The Study of Values was similarly used with teachers in training in a 1946 study by Seagoe, but the dimension of actual teachers in the field was added.¹ The study involved the investigation of the relationship of Study of Values scores with success in student teaching and with success in teaching. The findings of the study showed that success in student teaching correlated

negatively with higher scores on the economic scale, but no significant correlation was found between success in teaching and scores on the economic scale. On the other hand, success in the field correlated positively with higher scores on the social scale, but no significant correlation was found between success in student teaching and scores on the social scale. In no instance did a value correlate with success both in student teaching and in the field. The criteria for success in student teaching were obtained from faculty adviser ratings, and success in teaching was noted from administrators' ratings.

Viewed together, the previous two studies complement each other. In the former study it was noted that teachers do score higher on the social scale, but lower on the economic scale than the general population. In the latter study the significant conclusions from each of the groups studied showed that successful individuals in education also score higher on the social scale, but lower on the economic scale.

In a recent study by Sprinthall and Beaton, the Study of Values was used to make narrower occupational differentiations among teachers.¹ From an extensive review

of the literature, the authors concluded that the investigation of the role of values in occupational choice has been conspicuously lacking. Furthermore, a need for an understanding of the meaning of values was cited, and it was indicated that values are a basic determinant of behavior and should be the subject of extensive study. Logically, then, values were shown to be important determinants of career choice.

The problem investigated in Sprinthall and Beaton's study was the determination of whether significant differences existed in the values held by teachers. The variables of sex and subject matter taught were considered. Using 181 teachers in one northeastern school system, values were determined from scores on the Study of Values. While samples were admittedly small in some subject areas, the researchers concluded that this instrument did differentiate among subject areas. Business teachers, for example, scored higher on the economic scale than did any other group of teachers studied.

Of particular note in the study was the observation that traditional occupational categories were too broad for a detailed analysis of values. Hence, the category of teachers in general should be considered to be made up of specialized areas. The authors felt that if the Study of Values is used in the manner suggested, it can have greater predictive value.
Essentially, the Sprinthall and Beaton study confirmed an earlier study by Cooley.¹ However, the latter study was concerned only with the vocational development of scientists.

A somewhat different, although equally important, study of values was conducted with counselor trainees over a three-year period.² Both the Test of Counselor Attitudes and the Study of Values were administered to NDEA counselor trainees in eight one-year Guidance and Counseling Institutes. The variable tested was the stability of attitudes and values. The instruments were administered at the beginning of the Institutes in 1964, at the end of the Institutes in 1965, and one year later. While the results of the attitudinal changes were inconclusive, it was determined that value changes were minimal. Thus, values apparently have stability of a period of time.

The studies reviewed lend credence to Super and Crites's assertion that the Study of Values does make occupational discriminations.³ These discriminations are


not reflected in studies of occupational success, but rather through basic differences in the value structures of individuals employed in different occupations. Moreover, Super and Crites have reiterated the contention of Sprinthall and Beaton that research has shown that there is a lack of identifiable characteristics common to broad categories of occupations.¹

An extension of the contention that the values of individuals in similar specialized occupations resemble each other was shown in a 1966 study by Alvin L. Anderson.² To determine whether value differences existed among history teachers, 19 pairs of college and high school history teachers were matched by sex and age. With the variables of sex and age controlled, the researcher found very little difference between the values of the two groups as measured by the Study of Values. In only two of the six scales did significant differences occur. College teachers scored higher on the theoretical scale and high school teachers scored higher on the economic scale. Thus, the over-all value profile of the specialized area of history teachers was unified, regardless of the grade level of teaching.

¹Ibid., p. 497.
A different kind of study using the Study of Values was completed in 1964.\(^1\) The purpose of this study was to compare the relationship among the values of teachers and students. The methodology involved the classification of 1,500 high school students into three groups on the basis of School and College Abilities Test results: underachievers, par achievers, and superior achievers. The results of the study showed that the Study of Values distinguished between teacher and student groups with a high degree of accuracy. On the economic scale, teachers scored lowest, superior achievers next lowest, and par achievers and underachievers scored highest. Considering the total study, teachers and superior achievers were most similar, while par achievers and underachievers were similar to each other, but dissimilar to teachers. Thus, this study provided insight into the nature of the values of teachers as compared to those they teach.

A small but important group of studies involved comparisons among values tests. The significance of these studies accrues from the natural tendency to assume that all measures of value and/or interest purport to measure the same things. A comparison of the Study of Values, Kuder Preference Record, and the Strong Vocational Interest

Blank by Stanley and Waldrop showed that the rationales for each instrument were significantly different.\footnote{Stanley and Waldrop, loc. cit.} For example, the Strong blank was designed to differentiate between various occupational groups on the basis of interest, while the Study of Values was designed to classify individuals on the basis of personal values. Since the instruments do not measure the same things, they cannot be used interchangeably.

A study was undertaken at the University of Texas in 1953 in an attempt to correlate the Study of Values and the Kuder Preference Record.\footnote{Ira Iscoe and Omer Lucier, "A Comparison of the Revised Allport-Vernon Scale of Values and the Kuder Preference Record," \textit{Journal of Applied Psychology,} III (Winter, 1953), pp. 195-196.} The following Kuder scales were correlated with the six Study of Values scales: sociable, practical, theoretical, and dominant. The only significant correlation occurred on the theoretical scale where a very low correlation was observed. The researcher pointed out, as a result of the study, the danger of using similarly defined traits measured by different instruments.

As a summarization of research on the Study of Values, Super and Crites have commented:

Although not tested, it would appear that the Study of Values is less subject to choice on the basis of occupational stereotypes, as evident from the items used on the Kuder Pref-
erence Record and the Strong Vocational Inter-
est Blank.¹

The research, then, on the Study of Values has indicated it to be an instrument which measures essentially what it purports to measure and although it is not constructed to counsel individuals for specific careers, it does effectively discriminate among individuals in specialized occupational groupings.

Research pertaining to the Minnesota Teacher Attitude Inventory.—The MTAI has been used in numerous research studies since it was first published in 1951 as an instrument for measuring the attitudes toward teaching of individuals preparing for teaching and of teachers. Dwight L. Arnold, writing in the 1953 Mental Measurements Yearbook, which provided the latest review of this instrument, indicated the MTAI was an excellent attempt to measure a difficult subject and that it had current merit for research if not for prediction and selection of teaching staff and teacher education candidates.² It was noted that the test authors did not show research of longitudinal studies which would have been more helpful in establishing the predictive value of the test. Rather,

¹Super and Crites, op. cit., p. 499.

Arnold indicated that the test authors chose to include research verifying the contention that persons scoring high on the MTAI tend to be better teachers than those scoring low.

Another review in the same yearbook provided essentially the same evaluation of the MTAI but stressed that the experienced teacher norms were valuable, although the norms for teachers in training were questionable. Of particular concern to this reviewer was the unexplained great variation between the mean scores of teachers in training and experienced teachers. The consensus was that the MTAI was an excellent effort and a valuable tool for research into attitudes.

Therefore, it would appear that findings of studies using the MTAI should be carefully analyzed before conclusions are drawn. Despite the expressed cautions, the MTAI remains a widely used instrument for measuring attitudes toward teaching, or more specifically, the kind of teacher-pupil relations a teacher maintains.

The philosophical basis of the Minnesota Teacher Attitude Inventory was established in a 1950 article by Carroll H. Leeds in which the construction and validation

1Lee J. Cronbach, ibid., p. 802.

2Anthony C. Riccio, "The Relationship of Selected Variables to Attitudes Toward Teaching" (Ph.D. dissertation, The Ohio State University, 1959), p. 35.
of the instrument were explained. Leeds stated:

It is postulated that rapport between teachers and pupils constitutes one of the many factors essential to teaching success. . . . Definitely involved is the teacher's personality which, on assumption, either facilitates or checks the establishing of satisfactory rapport with pupils.

The authors of the MTAI determined five categories of items to be included in the instrument:

1. Moral status of children as seen by adults
2. Discipline of pupils
3. Child knowledge
4. Educational principles
5. Personal reactions of the teacher

Hence, each of the 150 statements comprising the MTAI relate to one of the five categories. Validation on the original instrument was achieved by administering the instrument to 200 teachers, half of whom were classified as superior teachers and half of whom were classified as inferior teachers. The decisions regarding superior and inferior teachers were made by school administrators on the basis of criteria supplied by the test authors.

Another early study conducted by the test authors was designed to measure the validity and the reliability

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2Ibid., p. 1.
of the instrument and also to establish norms. It was reported that academic teachers rank higher than non-academic teachers by one-half standard deviation. Moreover, teachers having more training rank significantly higher than those having less training. Interestingly, the highest ranking individual group of teachers was experienced vocational agriculture teachers; however, no explanation for this phenomenon was provided. The author felt that the .43 correlation between the scores of students entering the profession and the scores of the same individuals five years later showed that the MTAI was an instrument having significant implications for teacher education.

A later study which also was concerned with the stability of MTAI scores involved an intensive review and synthesis of the research conducted by the test authors. Longitudinal studies concerning pre-service and in-service teachers were considered. Hoyt found that there was a

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inservice scores after two to three years of teaching, for predicting probable scores after several years additional teaching experience.\textsuperscript{1}

The review provided additional insight into the variability of the scores over a period of time by indicating that teacher education students typically score 20 points higher at the end of their teacher education preparation as compared to their score at the beginning of their junior year. However, their score usually drops about 20 points after one or two years teaching experience. Unfortunately, while the variability was noted, there was no explanation for it.

On the other hand, a review of the literature by Donald E. Campbell in 1967 showed that discrepancies existed in the predictive value of the Minnesota Teacher Attitude Inventory.\textsuperscript{2} Dealing with attitudinal changes before and after student teaching, Campbell cited studies showing that attitudinal changes did occur and other studies showing that such changes did not occur. The apparent inconsistencies were attributed to the nature of the instrument.

The relationship between MTAI scores and subject matter taught has been the subject for several studies.

\textsuperscript{1}Ibid., p. 491.

\textsuperscript{2}Donald E. Campbell, "Dimensional Attitude Changes of Student Teachers," \textit{Journal of Educational Research}, LXI (December, 1967), pp. 159-162.
Kearney and Rocchio in 1955 determined that a significant difference existed in attitudes toward teaching between those teachers who teach self-contained classrooms, such as primary teachers, and those teachers who teach specialist, or subject matter, classrooms.¹ It was observed that teachers of self-contained classrooms were more concerned with the pupil's development of his whole personality, as contrasted with the subject-matter specialists who were more concerned with the pupil's acquisition of specific knowledge. Thus, these researchers concluded that the elementary teacher was more child-centered than the subject-matter teacher, usually found at the secondary level. The findings of the study are consistent with the norms established for the instrument as the norms for elementary teachers are higher than the norms for secondary teachers.²

Callis reported essentially the same information.³ Basic differences existed among education students preparing to teach in three categories: early childhood


education, academic subject areas, and specialized fields. Teachers preparing for teaching in the early childhood category scored highest on the MTAI, while those preparing for special fields scored lowest.

Another use of the MTAI with pupils was discovered in a 1953 study by Kearney and Rocchio.1 Pupil ratings of teachers were related to the MTAI scores of the teachers. A rating scale was devised by which the sophomore and senior classes in four selected high schools determined the best- and least-liked teachers. The reported mean MTAI score of the best-liked teachers was 38.71, while the mean score of the least-liked teachers was 18.39. A significant difference in the scores was noted at the .01 level of significance.

The possible use of the MTAI as a predictor of personality was studied by Desmond L. Cook.2 In essence, the study involved determining what, if any, relationship existed between teacher-pupil attitudes and personality. Both the Minnesota Teacher Attitude Inventory and the

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Guilford-Zimmerman Temperament Survey were administered to selected individuals at three levels of their teaching career experience. These levels included: prior to student teaching, after student teaching, and after about one year's teaching experience. It was found that the relationships between the two instruments were not consistent during the three times the teachers were tested. Thus, it was concluded that the MTAI is not a measure of personality.

Of particular relevance were two major studies conducted to determine the ability of the MTAI to discriminate between effective and ineffective teachers. The 1959 study by Standlee and Popham was conducted in conjunction with the U.S. Office of Education to learn whether teachers' effectiveness, in terms of administrators' ratings, was related to MTAI scores.\(^1\) It was hypothesized that if a positive relationship did exist, then the MTAI could be used as a predictor of teacher effectiveness. Using 880 Indiana teachers who graduated from Indiana teacher training institutions, MTAI scores were obtained for 83.9 per cent of the group and administrators' ratings were obtained for a similar number. By grouping MTAI scores according to corresponding levels

on the rating scale, it was determined that there was a positive significant relationship between teachers' effectiveness and MTAI scores.

An extension of the previous study was conducted among 180 Kansas teachers. Unlike the preceding study, the Kansas study was concerned only with the ability of the Minnesota Teacher Attitude Inventory to discriminate between superior and inferior teachers, much like the early validation study. A rating of superior or inferior for each of the teachers was supplied by superintendents or principals where the teachers were employed. Ultimately, 72 matched pairs of inferior- and superior-rated teachers were compared. The sample contained 17 pairs of elementary teachers, 17 pairs of secondary academic teachers, and 38 pairs of secondary non-academic teachers. The mean MTAI score for the superior teachers was 23.60 and for the inferior teachers, 5.03. The difference was significant at the .01 level, and the hypothesis was supported that the MTAI could discriminate between superior and inferior teachers.

It appears from the literature that the MTAI has been used for a variety of purposes with a variety of

results. While the test authors have limited their claims of uses of the instrument to a measurement of teachers' attitudes toward teaching, other researchers have sought to extend the MTAI's uses into personality measurement and teaching success prediction. The great variability of mean scores for different groups, as shown in the test manual, and the wide range of mean scores for effective and ineffective teachers, as shown in research studies, should serve to caution researchers and writers who would attempt to generalize study results using the MTAI. This researcher was unable to locate an explanation for the divergence of scores in the literature reviewed. One likely explanation is that differences have occurred due to differences in the composition of sample groups since it has been shown that differences do exist among grade levels taught, subjects taught, and amount of training. Therefore, it would seem that comparisons among various studies should be undertaken with considerable caution.

Two studies were located which provide insight into the use of the Study of Values and the Minnesota Teacher Attitude Inventory together. In 1959 Riccio studied the relationship of the information measured by both instruments, as indicated through a sample of freshmen education students.\(^1\) It was found that there was

\(^{1}\)Riccio, op. cit.
little or no significant correlation between the elements measured by the MTAI and the individual value scales measured by the Study of Values. Hence, while both instruments are valuable research tools, as shown by the literature, inferential conclusions concerning the use of both instruments together must be carefully stated.

In a study to determine whether differences in values existed between superior and inferior teacher-education students, the Study of Values and the MTAI were utilized. Classification of students into superior and inferior categories was made by faculty ratings and MTAI scores. The results of the Study of Values test showed only limited differences. Superior women students scored significantly lower on the economic scale than inferior women students. The major conclusion of the study was that teacher characteristics, including values, need more study before such inventories can have predictive value. While it is likely that the sample was too broad to enable the instrument to differentiate values of the groups, the study does indicate a way that two instruments can be used together.

CHAPTER III

PRESENTATION OF THE DATA

The purpose of this chapter is to report the data relative to the hypotheses under consideration in this study. Therefore, the chapter consists of a summary of the data and a presentation of the information relative to the testing of each of the seven hypotheses.

The information was gathered from the administration of two standardized instruments to selected groups of individuals. These groups consisted of experienced distributive education teacher-coordinators in Ohio, undergraduate business administration students, and selected business employees.

The Minnesota Teacher Attitude Inventory and the Study of Values were administered to experienced distributive education teacher-coordinators. The scores obtained by the teacher-coordinators on both instruments were categorized on the basis of the backgrounds of the teacher-coordinators. The categories of backgrounds have been termed "subgroups" and are defined as follows:

Subgroup 1 Those teacher-coordinators having majored or minored in distributive education as an undergraduate
Subgroup 2  Those teacher-coordinators having qualified for teaching distributive education after having graduated from a collegiate school of business

Subgroup 3  Those teacher-coordinators having entered distributive education from business employment

Subgroup 4  Those teacher-coordinators having entered distributive education from another area of teaching

Throughout this chapter reference is made to the subgroups described above. Consequently, the subgroup number will refer to the definition as stated.

The Study of Values was administered to business administration students and selected business employees. These groups represent potential sources of teacher-coordinators since experience has shown that some distributive education teacher-coordinators enter the field with these backgrounds. Of the 80 teacher-coordinators who participated in the study, 78 completed the MTAI and 75 completed the Study of Values. Since the data obtained from each instrument were treated separately, all usable scores were tabulated. The number of teacher-coordinators entering the field with the four categories of backgrounds is indicated in Table 1. It is apparent that the greatest number entered distributive education from another area of teaching and relatively few entered the field from other backgrounds.
TABLE 1
NUMBERS AND PER CENTS OF DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS ENTERING THE FIELD FROM FOUR BACKGROUNDS

<table>
<thead>
<tr>
<th>Background</th>
<th>Number</th>
<th>Per Cent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate Distributive Education Curriculum</td>
<td>11</td>
<td>13.75</td>
</tr>
<tr>
<td>Undergraduate Business Administration Major</td>
<td>8</td>
<td>10.00</td>
</tr>
<tr>
<td>Business Employment</td>
<td>18</td>
<td>22.50</td>
</tr>
<tr>
<td>Another Area of Teaching</td>
<td>43</td>
<td>53.75</td>
</tr>
</tbody>
</table>

Therefore, since teacher recruitment in distributive education is of current concern, this study has been undertaken to investigate the values, which are important factors in vocational choice, of two of the potential sources of teacher-coordinators—undergraduates in business administration and business employees. The assumptions underlying this study are as follows: Values vary among occupations, individuals with similar values choose similar occupations, and, therefore, individuals outside of distributive education may choose a career in distributive education if their values are similar to those of distributive education personnel.

The undergraduate business administration students
measured were enrolled in marketing courses at The Ohio State University, Spring and Summer Quarters, 1968. The business employees sample was obtained from business firms in Ohio. The personnel managers of 34 firms were requested to select one, two, or three employees of their firm who met the requirements of the study and who were willing to complete the Study of Values. Twenty-three firms participated by supplying 50 participants who completed the Study of Values (Table 2).

### TABLE 2

**FIRMS PARTICIPATING IN THE STUDY AND NUMBERS OF PARTICIPANTS FROM EACH FIRM**

<table>
<thead>
<tr>
<th>Name and Location of Firm</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sears, Roebuck and Company (Columbus)</td>
<td>3</td>
</tr>
<tr>
<td>J. C. Penney (Cleveland)</td>
<td>3</td>
</tr>
<tr>
<td>F. and R. Lazarus (Columbus)</td>
<td>3</td>
</tr>
<tr>
<td>Shoe Corporation (Columbus)</td>
<td>3</td>
</tr>
<tr>
<td>Big Bear Stores (Columbus)</td>
<td>3</td>
</tr>
<tr>
<td>Federated Department Stores (Cincinnati)</td>
<td>3</td>
</tr>
<tr>
<td>Lasalle-Koch (Toledo)</td>
<td>3</td>
</tr>
<tr>
<td>Gray Drug Stores (Cleveland)</td>
<td>3</td>
</tr>
<tr>
<td>Polsky's (Akron)</td>
<td>3</td>
</tr>
<tr>
<td>Shillito's (Cincinnati)</td>
<td>3</td>
</tr>
<tr>
<td>Halle Brothers (Cleveland)</td>
<td>3</td>
</tr>
<tr>
<td>Sterling-Lindner (Cleveland)</td>
<td>2</td>
</tr>
<tr>
<td>Marathon Oil Company (Findlay)</td>
<td>2</td>
</tr>
<tr>
<td>H. S. Pogue (Cincinnati)</td>
<td>2</td>
</tr>
<tr>
<td>Richman Brothers (Cleveland)</td>
<td>2</td>
</tr>
<tr>
<td>May Company (Cleveland)</td>
<td>2</td>
</tr>
<tr>
<td>Boston Store (Columbus)</td>
<td>1</td>
</tr>
<tr>
<td>McDonald's Hamburgers (Columbus)</td>
<td>1</td>
</tr>
<tr>
<td>The Union Company (Columbus)</td>
<td>1</td>
</tr>
<tr>
<td>Potter's Shoes (Cincinnati)</td>
<td>1</td>
</tr>
<tr>
<td>Unishops of Clarkins (Cleveland)</td>
<td>1</td>
</tr>
<tr>
<td>Forest City Enterprises (Cleveland)</td>
<td>1</td>
</tr>
<tr>
<td>B. R. Baker (Cleveland)</td>
<td>1</td>
</tr>
</tbody>
</table>
Overview of the Data

Prior to the presentation of data relative to the testing of the hypotheses, a summary of mean scores achieved by the three groups and four subgroups is shown in Table 3.

TABLE 3
SUMMARY OF MEAN MTAI AND STUDY OF VALUES SCORES FOR GROUPS AND SUBGROUPS TESTED

<table>
<thead>
<tr>
<th>Groups</th>
<th>MTAI</th>
<th>T^a</th>
<th>E^b</th>
<th>A^c</th>
<th>S^d</th>
<th>P^e</th>
<th>R^f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher-Co-</td>
<td>16.44</td>
<td>37.76</td>
<td>49.32</td>
<td>33.64</td>
<td>37.71</td>
<td>42.11</td>
<td>39.44</td>
</tr>
<tr>
<td>coordinators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subgroup 1</td>
<td>23.91</td>
<td>36.27</td>
<td>44.91</td>
<td>37.27</td>
<td>39.45</td>
<td>43.00</td>
<td>39.09</td>
</tr>
<tr>
<td>Subgroup 2</td>
<td>26.25</td>
<td>33.71</td>
<td>53.28</td>
<td>36.00</td>
<td>35.86</td>
<td>42.28</td>
<td>38.68</td>
</tr>
<tr>
<td>Subgroup 3</td>
<td>2.41</td>
<td>37.82</td>
<td>53.18</td>
<td>30.41</td>
<td>36.88</td>
<td>44.18</td>
<td>38.53</td>
</tr>
<tr>
<td>Subgroup 4</td>
<td>18.28</td>
<td>38.87</td>
<td>48.62</td>
<td>33.55</td>
<td>37.92</td>
<td>40.95</td>
<td>40.05</td>
</tr>
<tr>
<td>Business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>--</td>
<td>39.62</td>
<td>46.34</td>
<td>34.54</td>
<td>35.50</td>
<td>45.08</td>
<td>38.92</td>
</tr>
<tr>
<td>Business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>--</td>
<td>40.92</td>
<td>46.52</td>
<td>34.96</td>
<td>36.75</td>
<td>45.16</td>
<td>35.73</td>
</tr>
</tbody>
</table>

^aTheoretical Values  
^bEconomic Values  
^cAesthetic Values  
^dSocial Values  
^ePolitical Values  
^fReligious Values

The mean MTAI scores for distributive education teacher-coordinators varied widely—an observation which is consistent with established norms for the instrument and with other research. Since the instrument purports to measure attitudes and since the range of possible scores
is from +150 to -150, or 300 points, mean variations among groups are to be expected.

On the other hand, Study of Values scores have much less variation. For this instrument an increase in one value must be matched by a corresponding decrease in another value. The widest variation in mean scores between the teacher-coordinator group and any other group occurred in religious values. The mean score of teacher-coordinators was 3.71 points higher than that of undergraduate business administration students. The smallest variation, .90, occurred between the teacher-coordinator and business-employee groups in aesthetic values.

The highest values scored by any of the three groups were the economic values of the teacher-coordinators. Moreover, the economic values were the highest values of all three groups. Political values, representing drive and power, were consistently the second highest value scored by all three groups. Aesthetic values were consistently the lowest values scored by all three groups.

Considerably more variation in the mean Study of Values scores occurred among the four subgroups of teacher-coordinators, except in the religious values scores. The highest values recorded among the four subgroups were obtained for economic values among teacher-coordinators who entered distributive education after having graduated
from a collegiate school of business and those who entered the field from business employment. As in the case of the three major groups, economic and political values were consistently high among the four subgroups of teacher-coordinators.

**Determination of Statistical Techniques**

Two statistical procedures were utilized in this study to test the hypotheses. The F ratio test of variance homogeneity was used to determine whether a significant variance occurred in the distribution of the scores of the groups compared. The assumption underlying this test is that if sample variances are homogeneous, then population parameters are also homogeneous.¹ Thus, the calculation of the F ratio test of variance yields a variability score between two groups and the score may then be tested for significance in an F table. The statistical value for variance is equal to the standard deviation squared. The formula for the determination of the F ratio is:

\[ F = \frac{s_g^2}{s_1^2} \]

where \( s_g \) represents the larger variance and \( s_1 \) represents the smaller variance of the two groups being compared.² A two-tailed test is used since it is not


²Ibid.
known prior to the data collection which variance will be greater. Degrees of freedom for both sample groups was equal to \( n - 1 \). The F ratio test of variance was used to test Hypotheses 1 and 2.

The t test was used to determine whether significant differences existed between the mean scores of the groups studied. Since only two mean scores were compared in any one instance, the t test was appropriate for this study. As Popham has pointed out, the significance of an observed difference between mean scores is based on the magnitude of the differences between the two means, the amount of overlap in the distribution of the two samples, and the number of subjects in the two samples.\(^1\) All three factors are considered in the t test, and, therefore, each factor must be determined prior to the computation of the t test. The second factor, group variability or amount of overlap between the distributions, is measured by the F ratio.

The pooled variance t model has been selected for this study.\(^2\) The formula for the t test is:

\[
 t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\left(\frac{x_1^2 + x_2^2}{n_1 + n_2 - 2}\right) \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}
\]

\(^1\)Ibid., p. 130. \(^2\)Ibid., p. 145.
The degrees of freedom appropriate for this t test is:
\[ n_1 + n_2 - 2. \]

The value calculated for \( t \) is then compared to a value for \( t \) located in a table of \( t \) values.

A calculated value of \( t \) which equals or exceeds the table value of \( t \) is judged to be statistically significant. A probability level of .05 has been selected for this study. Thus, the null hypothesis will be rejected when the calculated value equals or exceeds the table value and the null hypothesis will be accepted when the calculated value is less than the table value. This basis for acceptance and rejection is consistent for both the F ratio test of variance and the t test.

**Tests of the Hypotheses**

The remainder of Chapter III is devoted to the presentation of data relative to the tests of the hypotheses. Each hypothesis is discussed separately and appropriate supporting data are provided. The F ratio test of variance has been used to test Hypotheses 1 and 2, while the t test has been used to test Hypotheses 3, 4, 5, 6, and 7. Moreover, it is intended that the descriptive information supplement the tabular statistical treatment of the data. Hence, the reader is referred to the accompanying tables for the numerical treatment of the data.

**Hypothesis 1.**—There is no significant difference in the dispersion of the values held by distributive
education teacher-coordinators and those held by selected business employees.

There was only one significant difference in the F ratio test of variances calculated for Hypothesis 1 (Table 4). Calculated variances for five values were less than the F ratio table values. The table value for F with 74 and 49 degrees of freedom was 1.70 and the table value for F with 49 and 74 degrees of freedom was 1.70. Therefore, the calculated values of F exceeded the table values only on the theoretical value scale and it was determined this was the only significant difference in the variances between the two groups for any of the values considered at the .05 level of significance. The differences in the standard deviations between the two groups were small, as the maximum difference existed in aesthetic values and was 1.72. The minimum difference was .82 and was present in the political values of the two groups. The null hypothesis was therefore accepted on five of the six value scales on the basis of the results of the F ratio test of variance.

Hypothesis 2.—There is no significant difference in the dispersion of the values held by distributive education teacher-coordinators and those held by undergraduate business administration majors.

Significant differences in the variance or homogeneity of two values were noted in Hypothesis 2. The table
<table>
<thead>
<tr>
<th>Values</th>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>37.76</td>
<td>6.38</td>
<td>1.78*</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>39.62</td>
<td>4.78</td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>49.32</td>
<td>6.70</td>
<td>1.56</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>46.34</td>
<td>8.37</td>
<td></td>
</tr>
<tr>
<td>Aesthetic</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>33.64</td>
<td>9.81</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>34.54</td>
<td>8.09</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>37.71</td>
<td>6.34</td>
<td>1.61</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>35.50</td>
<td>4.99</td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>42.11</td>
<td>6.41</td>
<td>1.31</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>45.08</td>
<td>5.59</td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>39.44</td>
<td>7.84</td>
<td>1.31</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>38.92</td>
<td>8.98</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
values for both 74 and 51 degrees of freedom and 51 and 74
degrees of freedom are 1.67. The calculated F ratio test
of variance for aesthetic and religious values exceeded
the table value at .05 level of significance (Table 5).
The differences in the standard deviations in the values
where significant differences occurred exceeded 2.00. It
should be noted, however, that the magnitudes of the
calculated F ratios showing significant differences were
very small.

Therefore, the null hypothesis was accepted for
four values and rejected for two values. Hypothesis 2
was accepted for theoretical, economic, social and polit­
cical values and rejected for aesthetic and religious
values.

Hypothesis 3.—There is no significant difference
between the mean values held by distributive education
teacher-coordinators and those held by selected business
employees.

Significant mean differences between teacher-
coordinators and selected business employees occurred in
three values measured by the Study of Values: economic,
social, and political-values. The t table value was 1.980
for 123 degrees of freedom. Hence, the mean economic and
social values scores of distributive education teacher-
coordinators were significantly higher than those of the
<table>
<thead>
<tr>
<th>Values</th>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>37.76</td>
<td>6.38</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>40.92</td>
<td>6.09</td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>49.32</td>
<td>6.70</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>46.52</td>
<td>6.95</td>
<td></td>
</tr>
<tr>
<td>Aesthetic</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>33.64</td>
<td>9.81</td>
<td>1.78*</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>34.96</td>
<td>7.36</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>37.71</td>
<td>6.34</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>36.75</td>
<td>6.96</td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>42.11</td>
<td>6.41</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>45.16</td>
<td>6.73</td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>39.44</td>
<td>7.84</td>
<td>1.68*</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>35.73</td>
<td>10.15</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
selected business employees. The mean political values scores of the selected business employees were significantly higher than those of the distributive education teacher-coordinators (Table 6).

### TABLE 6

A COMPARISON OF THE MEAN VALUE SCORES OF DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS AND SELECTED BUSINESS EMPLOYEES

<table>
<thead>
<tr>
<th>Values</th>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>37.76</td>
<td>1.771</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>39.62</td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>49.32</td>
<td>2.207*</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>46.34</td>
<td></td>
</tr>
<tr>
<td>Aesthetic</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>33.64</td>
<td>.542</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>34.54</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>37.71</td>
<td>2.085*</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>35.50</td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>42.11</td>
<td>2.676*</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>45.08</td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>39.44</td>
<td>.344</td>
</tr>
<tr>
<td></td>
<td>Business Employees</td>
<td>50</td>
<td>38.92</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
In addition, although the differences were not statistically significant, the teacher-coordinator group obtained a higher mean score on the religious values scale while the business employees group obtained higher mean scores on the theoretical and aesthetic values scales.

Therefore, on the basis of the t test, the null hypothesis was accepted for three value scales and rejected for three value scales. Hypothesis 3 was accepted for theoretical, aesthetic, and religious values and rejected for economic, social, and political values.

**Hypothesis 4.**—There is no significant difference between the mean values held by distributive education teacher-coordinators and those held by undergraduate business administration majors.

It was indicated by the t test that significant mean differences were present on four values scales when distributive education teacher-coordinators were compared to undergraduate business administration students. The significant differences occurred in theoretical, economic, political, and religious values. For 125 degrees of freedom, the table value of t was 1.980, which indicated substantial significant differences in the four values where significant differences occurred. The mean economic and religious value scores of teacher-coordinators were significantly higher than those of the undergraduate
business administration students (Table 7). However, the mean theoretical and political value scores of the business administration students were significantly higher than those of the teacher-coordinators.

**TABLE 7**

A COMPARISON OF THE MEAN VALUE SCORES OF DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS AND UNDERGRADUATE BUSINESS ADMINISTRATION STUDENTS

<table>
<thead>
<tr>
<th>Values</th>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>37.76</td>
<td>3.192*</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>40.92</td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>49.32</td>
<td>2.295*</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>46.52</td>
<td></td>
</tr>
<tr>
<td>Aesthetic</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>33.64</td>
<td>.830</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>34.96</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>37.71</td>
<td>.768</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>36.75</td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>42.11</td>
<td>2.607*</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>45.16</td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td>Teacher-Coordinators</td>
<td>75</td>
<td>39.44</td>
<td>2.348*</td>
</tr>
<tr>
<td></td>
<td>Business Students</td>
<td>52</td>
<td>35.73</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
Therefore, Hypothesis 4 was rejected on four value scales and accepted on two value scales. Thus, as with the two previous hypotheses, there can be no clear acceptance or rejection of Hypothesis 4.

**Summary of Hypotheses 1 through 4.**—A synthesis of the statistically significant data from the first four hypotheses showed that a significant variance or dispersion in the distribution of scores occurred for aesthetic and religious values between the teacher-coordinator group and the undergraduate business administration student group. The values of the teacher-coordinators and the selected business employees were determined to be homogeneous at the .05 level of significance, except in theoretical values. Thus, the variances determined for both Hypotheses 1 and 2 were minimal.

A greater number of significant differences were noted in Hypotheses 3 and 4. The mean economic and political value scores of both the selected business employee group and the undergraduate business administration student group varied significantly from those values of the teacher-coordinator group. Moreover, for the economic values, the teacher-coordinator group achieved significantly higher scores than those achieved by either of the other two groups. However, the teacher-coordinator group obtained significantly lower mean political value scores than either of the other two groups.
Significant differences were also reported for theoretical, social and religious values. Teacher-coordinators scored significantly higher on the religious values scale, but significantly lower on the theoretical values scale when compared to undergraduate business administration students. Furthermore, teacher-coordinators scored significantly higher on the social values scale than the selected business employees. Significant mean differences, then, were noted on five of the six value scales.

To place the mean value scores achieved by all three groups in proper perspective, a schematic representation showing the magnitude of the differences between the three groups is presented below:

---

indicates teacher-coordinator group scores
indicates undergraduate business administration student group scores
indicates selected business employee group scores
Thus, it is apparent that despite significant mean differences between the teacher-coordinator group and the other groups, a pattern did exist. All groups tended to achieve mean scores in the same direction for each of the values. When the mean values for the teacher-coordinator group were high, the corresponding mean values for the other groups tended to be high. Accordingly, when the mean values for the teacher-coordinator group were low, the corresponding mean values for the other groups tended to be low.

Therefore, not considering the t test for significant difference, the typical distributive education coordinator scored higher on the economic, social, and religious value scales than the other two groups studied, as reflected by mean Study of Values scores. Using the same basis for judgment, the typical teacher-coordinator scored lower on the theoretical, aesthetic, and political value scales than the other two groups measured.

**Hypothesis 5.**—There is no significant difference between the mean attitudes toward teaching held by distributive education teacher-coordinators and those held by other secondary teachers.

The data collected for testing this hypothesis have been compared in two ways to the established norm groups for experienced non-academic secondary teachers.
indicated by the Minnesota Teacher Attitude Inventory. The need for establishing two test situations resulted from the lack of a clear-cut definition of what individuals constituted the norm groups for the MTAI. Norms are offered for experienced non-academic secondary teachers with four years of training and for experienced non-academic secondary teachers with five years of training. The constitution of the number of years of training criterion is not made evident by the test authors. Therefore, the entire teacher-coordinator group was compared to the norms for experienced non-academic secondary teachers with four years of training and to the norms for teachers with five years of training. Moreover, the teacher-coordinator group was subdivided into a group having four years of training and a group having the equivalent of five or more years of training. The individuals comprising the latter group included those teacher-coordinators who had accumulated thirty or more semester hours beyond their initial baccalaureate degree, regardless of whether the work was at the graduate or undergraduate level.

Because the raw scores of the individuals comprising the norms for the MTAI were not known, a slight variation in the t test formula was necessary. The

---

1Ibid.
t test formula used for comparing the teacher-coordinators to the established norms was:

\[ t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} \]

In this case, \( s^2 \) is equal to the variance, or the standard deviation squared. The computation of the degrees of freedom remains at: \( n_1 + n_2 - 2 \). The means, standard deviations, F ratios, and t tests for the teacher-coordinator group compared to the norm groups with four and five years of training are shown in Table 8.

<table>
<thead>
<tr>
<th>TABLE 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>A COMPARISON OF ATTITUDES TOWARD TEACHING HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS AND ESTABLISHED NORM GROUPS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher-Coordinators</td>
<td>78</td>
<td>16.44</td>
<td>32.23</td>
<td>1.75*</td>
<td>1.193</td>
</tr>
<tr>
<td>Norms for Teachers With 4 Years of Training</td>
<td>98</td>
<td>9.70</td>
<td>42.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher-Coordinators</td>
<td>78</td>
<td>16.44</td>
<td>32.23</td>
<td>1.33</td>
<td>2.190*</td>
</tr>
<tr>
<td>Norms for Teachers With 5 Years of Training</td>
<td>70</td>
<td>28.90</td>
<td>36.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
The F ratio calculated for the teacher-coordinator group and the norm group for teachers with four years of training yielded an F ratio of 1.75, as compared to a table value for F of 1.60. Therefore, a significant difference in the distribution or dispersion between the groups was present at the .05 level.

On the other hand, no significant difference in the dispersion between the teacher-coordinator group and the norm group for experienced non-academic secondary teachers with five years of training was noted. The calculated F ratio of 1.33 exceeded the table value of F by .34. Therefore, attention is called to the standard deviations of the groups: the standard deviations for the teacher-coordinator group and the norm group for teachers with five years of training were 32.23 and 36.50 respectively. However, the standard deviation for experienced non-academic secondary teachers with four years of training was 42.70. This wide difference in standard deviations accounted for the observed significant difference in the dispersion between the teacher-coordinator group and the norm group for teachers with four years of training.

The results of the calculation of the t tests indicated that a significant difference occurred in the mean scores in attitudes toward teaching between the teacher-coordinator group and the norm group for teachers
with five years of training. Based on 146 degrees of freedom the calculated value of \( t \) was 2.190, compared to a table value of 1.980.

Consequently, this set of calculations indicated that the teacher-coordinator group scored higher, but not significantly higher, than the norm group comprised of experienced non-academic secondary teachers with four years of training. However, the teacher-coordinator group scored significantly lower than the norm group for experienced non-academic secondary teachers with five years of training.

A further test of Hypothesis 5 was utilized by comparing a teacher-coordinator group composed of teacher-coordinators with less than five years of training to the norm group for teachers with four years of training. In addition, a teacher-coordinator group composed of teacher-coordinators with five or more years of training was compared to the norm group for teachers with five years of training. The results of these comparisons are shown in Table 9.

Significant differences were noted in both sets of calculations for teacher-coordinator and norm groups. In both cases the standard deviations of the norm groups were substantially higher than those of the teacher-coordinator groups and, therefore, the teacher-coordinator and norm
groups were not homogeneous at the .05 level of significance. The table value for F for the comparison between teacher-coordinators with four years of training and the norms for teachers with four years of training was 1.60. The comparison between teacher-coordinators with five or more years of training and the norms for teachers with five years of training yielded an F ratio table value of 1.88. Therefore, the dispersion or variance of the teacher-coordinator groups was not as great as the dispersion of the norm groups.

### TABLE 9

A COMPARISON OF ATTITUDES TOWARD TEACHING OF DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS WITH FOUR AND FIVE YEARS OF TRAINING TO ESTABLISHED NORMS

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher-Coordinators With 4 Years of Training</td>
<td>47</td>
<td>17.26</td>
<td>28.81</td>
<td>2.20*</td>
<td>1.255</td>
</tr>
<tr>
<td>Norms for Teachers With 4 Years of Training</td>
<td>98</td>
<td>9.70</td>
<td>42.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher-Coordinators With 5 Years of Training</td>
<td>31</td>
<td>14.22</td>
<td>17.26</td>
<td>4.47*</td>
<td>2.743*</td>
</tr>
<tr>
<td>Norms for Teachers With 5 Years of Training</td>
<td>70</td>
<td>28.90</td>
<td>36.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
A comparison of the mean scores of the groups showed that teacher-coordinators with less than five years of training achieved higher scores than the teacher-coordinators with five or more years of training, which is the opposite of what the norm groups indicated. Teacher-coordinators with less than five years of training scored 17.26, while teacher-coordinators with five or more years of training scored 14.22. The established norms indicated that the mean score for teachers with four years of training was 9.70 and the mean score for teachers with five years of training was 28.90.

In testing the mean scores of the groups having four years of training, it was noted that no significant difference between the teacher-coordinator group and the norm group was present. At the .05 level of significance the calculated t value was 1.255 and the table value for t was 1.960 with 143 degrees of freedom.

However, a significant difference did occur between the teacher-coordinator group having five or more years of training and the norm group for experienced non-academic secondary teachers with five years of training. With 99 degrees of freedom the calculated value of t exceeded the table value of t by .763. Thus, the teachers comprising the norm group achieved significantly higher scores than the corresponding teacher-coordinator group.
Therefore, the results of Hypothesis 5 were inconclusive. Teacher-coordinators with four years of training and the total group of teacher-coordinators scored higher, but not significantly higher, than the norm group for teachers with four years of training. Teacher-coordinators with five or more years of training scored significantly lower than established norms for teachers with five years of training. Accordingly, the total group of teacher-coordinators also scored significantly lower than the norm group for teachers with five years of training.

Hypothesis 6.—There are no significant differences in the mean attitudes toward teaching among distributive education teacher-coordinators who entered the field from (a) an undergraduate distributive education curriculum, (b) a certification program in distributive education immediately after graduation from business administration, (c) a period of employment in business, or (d) a teaching career in another subject area.

The attitudes toward teaching among distributive education teacher-coordinators who entered the field from four backgrounds were investigated in Hypothesis 6. Four subgroups were constituted from total teacher-coordinator group by classifying the participating teacher-coordinators on the basis of their backgrounds prior to entering distributive education. In order to test each subgroup with
every other subgroup, six comparisons were made as shown in Tables 10 through 15. Since the number of participants in each subgroup ranged from 8 to 42, it is evident that the results of the tests for significance were tempered by relatively small samples which yielded small degrees of freedom.

Subgroups 1 and 2 were the first subgroups compared. The results of the comparison between the attitudes toward teaching of teacher-coordinators who entered the field after having majored or minored in distributive education as undergraduates and those attitudes of teacher-coordinators who entered the field after having graduated from a collegiate school of business and then qualifying for distributive education are indicated in Table 10.

**TABLE 10**

A COMPARISON OF ATTITUDES TOWARD TEACHING HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT BACKGROUNDS

<table>
<thead>
<tr>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subgroup 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11</td>
<td>23.91</td>
<td>59.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subgroup 2&lt;sup&gt;b&lt;/sup&gt;</td>
<td>8</td>
<td>26.25</td>
<td>31.23</td>
<td>3.63</td>
<td>.101</td>
</tr>
</tbody>
</table>

<sup>a</sup>Teacher-coordinators who entered distributive education after having majored or minored in distributive education as undergraduates.

<sup>b</sup>Teacher-coordinators who entered distributive education after having graduated from a collegiate school of business and then qualifying for distributive education.
The F ratio test of variance indicated no significant difference in the dispersion between subgroups 1 and 2. At the .05 level of significance the F ratio table value was 4.76 and the calculated F value was 3.63. Sample sizes of eight and eleven teacher-coordinators offset the 28 point difference between the standard deviations of the two subgroups. Thus, the groups were considered to be statistically homogeneous.

No significant difference was noted between the mean scores of the two subgroups as the mean difference was less than three points. The table value for t was 2.110 with seventeen degrees of freedom. Hence, the results of the comparison between subgroups 1 and 2 supported the hypothesis.

Subgroups 1 and 3 were considered next. With a sample size of eleven for teacher-coordinators who entered the field after having majored or minored in distributive education and a sample size of seventeen for teacher-coordinators who entered the field from business employment, it was determined that there was no significant difference in the dispersion between the subgroups on the basis of the F ratio test of variance (Table 11). The table value for F was 3.06 and the calculated value for F was 2.66, and, therefore, subgroups 1 and 3 were judged to be statistically homogeneous at the .05 level.
### TABLE 11
A COMPARISON OF ATTITUDES TOWARD TEACHING HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT BACKGROUNDS

<table>
<thead>
<tr>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subgroup 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11</td>
<td>23.91</td>
<td>59.48</td>
<td></td>
<td>2.66</td>
</tr>
<tr>
<td>Subgroup 3&lt;sup&gt;b&lt;/sup&gt;</td>
<td>17</td>
<td>2.41</td>
<td>36.38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Teacher-coordinators who entered distributive education after having majored or minored in distributive education as undergraduates.

<sup>b</sup>Teacher-coordinators who entered distributive education from business employment.

The small size of the samples was similarly reflected in the t test calculation of mean differences. Using 26 degrees of freedom there was no significant difference in the attitudes toward teaching between the mean scores of subgroups 1 and 3 at the .05 level. The mean score for subgroup 1 was 23.91 while the mean score for subgroup 3 was 2.41. Teacher-coordinators who entered the field after having majored or minored in distributive education scored higher, but not significantly higher, than the teacher-coordinators who entered the field from business employment. Therefore, on the basis of the comparison between subgroups 1 and 3, the null hypothesis was accepted since the table value of t exceeded the calculated value by .866.
Subgroups 1 and 4, teacher-coordinators who entered the field after having majored or minored in distributive education and teacher-coordinators who entered the field from another area of teaching, were next compared, as indicated in Table 12.

**TABLE 12**

A COMPARISON OF ATTITUDES TOWARD TEACHING HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT BACKGROUNDS

<table>
<thead>
<tr>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subgroup 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11</td>
<td>23.91</td>
<td>59.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subgroup 4&lt;sup&gt;b&lt;/sup&gt;</td>
<td>42</td>
<td>18.28</td>
<td>32.74</td>
<td>3.30*</td>
<td>.421</td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

<sup>a</sup>Teacher-coordinators who entered distributive education after having majored or minored in distributive education as undergraduates.

<sup>b</sup>Teacher-coordinators who entered distributive education after having taught in another subject area.

A significant difference was noted in the distribution or dispersion of subgroups 1 and 4. The calculated F ratio value for subgroups 1 and 4 was 3.30, which was .91 greater than the table value. Thus, the subgroups were not statistically homogeneous at the .05 level.

However, no significant difference in the mean
scores of subgroups 1 and 4 was observed. With 41 degrees of freedom, the calculated value of t was .421 and the table value of t was 2.021. Although the teacher-coordinators who entered the field after having majored or minored in distributive education scored about five and one-half points higher on the MTAI than the teacher-coordinators who entered the field after having taught in another subject area, the difference was not significant at the .05 level and the null hypothesis was accepted.

The comparison of subgroup 2 and subgroup 3 indicated that there were no significant differences between these subgroups in terms of the distribution of the samples (Table 13). The calculated value for F was 1.36 and the table value for F was 4.57. Thus, the groups were statistically homogeneous as reflected by the standard deviation of subgroup 2, which was 31.23, and the standard deviation of subgroup 3, which was 36.38.

The t test indicated a significant difference in the mean MTAI scores between subgroups 2 and 3. Those teacher-coordinators who entered the field after having graduated from a collegiate school of business achieved significantly higher scores in attitudes toward teaching than the teacher-coordinators who entered the field from business employment. With 26 degrees of freedom, the calculated t value exceeded the table t value by .289 at
the .05 level of significance. Therefore, the null hypothesis, which stated that there was no significant difference among the groups, was rejected in the comparison of subgroups 2 and 3.

**TABLE 13**

A COMPARISON OF ATTITUDES TOWARD TEACHING HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT BACKGROUNDS

<table>
<thead>
<tr>
<th>Background</th>
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<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subgroup 2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>8</td>
<td>26.25</td>
<td>31.23</td>
<td>1.36</td>
<td>2.358*</td>
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<tr>
<td>Subgroup 3&lt;sup&gt;b&lt;/sup&gt;</td>
<td>17</td>
<td>2.41</td>
<td>36.38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>*</sup>Significant at the .05 level.

<sup>a</sup>Teacher-coordinators who entered distributive education after having graduated from a collegiate school of business and then qualifying for distributive education.

<sup>b</sup>Teacher-coordinators who entered distributive education from business employment.

Subgroups 2 and 4 were then compared as shown in Table 14. No significant difference in the dispersion was noted between subgroups 2 and 4. The table value for F exceeded the calculated value by 3.21 and, therefore, the distribution of the subgroups was judged to be homogeneous.

The mean score for subgroup 2 was 26.25 and the mean score for subgroup 4 was 18.28. The magnitude of the difference between the mean scores was not great enough to
produce a significant difference between the subgroups. Using 48 degrees of freedom, the calculated value of $t$ was .635 and the table value of $t$ was 2.021 at the .05 level of significance. Therefore, no significant difference in the attitudes toward teaching was present between teacher-coordinators who entered the field after having graduated from a collegiate school of business and then qualifying for distributive education and those teacher-coordinators who entered distributive education after having taught in another subject area. On the basis of this comparison the null hypothesis was accepted.

**TABLE 14**

A COMPARISON OF ATTITUDES TOWARD TEACHING HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT BACKGROUNDS

<table>
<thead>
<tr>
<th>Background</th>
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<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subgroup 2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>8</td>
<td>26.25</td>
<td>31.23</td>
<td>1.10</td>
<td>.635</td>
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<tr>
<td>Subgroup 4&lt;sup&gt;b&lt;/sup&gt;</td>
<td>42</td>
<td>18.28</td>
<td>32.74</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Teacher-coordinators who entered distributive education after having graduated from a collegiate school of business and then qualifying for distributive education.

<sup>b</sup>Teacher-coordinators who entered distributive education after having taught in another subject area.

The final comparison in testing Hypothesis 6 was made between subgroups 3 and 4. The calculation of the
F ratio test of variance indicated that there was no significant difference in the distribution of the scores of subgroups 3 and 4 (Table 15). The table value of $F$ exceeded the calculated value of $F$ by .95 at the .05 level of significance.

TABLE 15

A COMPARISON OF ATTITUDES TOWARD TEACHING HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT BACKGROUNDS

<table>
<thead>
<tr>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subgroup 3&lt;sup&gt;a&lt;/sup&gt;</td>
<td>17</td>
<td>2.41</td>
<td>36.38</td>
<td>1.23</td>
<td>1.541</td>
</tr>
<tr>
<td>Subgroup 4&lt;sup&gt;b&lt;/sup&gt;</td>
<td>42</td>
<td>18.28</td>
<td>32.74</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Teacher-coordinators who entered distributive education from business employment.

<sup>b</sup>Teacher-coordinators who entered distributive education after having taught in another subject area.

Moreover, no significant difference was observed between the mean MTAI scores of teacher-coordinators who entered the field from business employment and those teacher-coordinators who entered the field from another area of teaching despite a difference in the means of almost sixteen points. Thus, teacher-coordinators in subgroup 4 scored about sixteen points higher than the teacher-coordinators in subgroup 3, but the difference was not significant at the .05 level with 57 degrees of freedom.
The calculated value of $t$ was 1.541 and the table value of $t$ was 2.000. Hence, the null hypothesis was accepted in the comparison of subgroups 3 and 4.

A synthesis of the six comparisons among the four subgroups showed that a significant difference in the mean MTAI scores occurred only between subgroups 2 and 3. Despite this fact, differences in the magnitude of the four means were present. Subgroup 2, teacher-coordinators who entered the field after having graduated from a collegiate school of business, obtained the highest mean score in attitudes toward teaching. Subgroup 3, teacher-coordinators who entered the field from business employment, scored lowest on the MTAI. Small sample sizes may have prevented the presence of more significant differences since the table value for $t$ is higher when sample sizes are smaller.

Nevertheless, Hypothesis 6, which stated that there are no significant differences in the mean scores in attitudes toward teaching among distributive education teacher-coordinators having different backgrounds, was accepted in five of the six tests made.

**Hypothesis 7.**—There are no significant differences in the mean values among distributive education teacher-coordinators who entered the field from (a) an undergraduate distributive education curriculum, (b) a certification program in distributive education immediately
after graduation from business administration, (c) a period of employment in business, or (d) a teaching career in another subject area.

As with Hypothesis 6, in order to test Hypothesis 7, six comparisons were made between the four subgroups which represented four backgrounds of distributive education teacher-coordinators. However, since there are six value scales indicated in the Study of Values, each comparison between two subgroups resulted in six tests for significant differences. In total, 36 t tests were performed. As in the previous hypothesis, the samples were small and therefore greater mean differences were required in order to establish significant differences. It should be noted that the sample sizes in Hypothesis 7 were slightly different from those in Hypothesis 6. This variation was due to the number of teacher-coordinators who successfully completed the MTAI and the Study of Values. The results of the six comparisons between the four subgroups are shown in Tables 16 through 21.

The comparison between subgroups 1 and 2 on the six value scales were considered first (Table 16). No significant difference in the dispersion of scores for any of the values of subgroups 1 and 2 was observed. The largest standard deviation occurred in the religious values of teacher-coordinators who entered distributive
education after having graduated from a collegiate school of business and the smallest standard deviation occurred in the economic values of the same subgroup. The greatest difference in standard deviations between the subgroups occurred in economic values, while the smallest difference was in theoretical values.

With eighteen degrees of freedom, the table value of $t$ was 2.120 and the highest calculated $t$ value was in economic values where an 8.37 mean difference between the two subgroups was present. Thus, teacher-coordinators having entered the field by qualifying for distributive education immediately after graduation from a collegiate school of business held higher, although not significantly higher, economic values than the teacher-coordinators who entered the field after having majored or minored in distributive education. Very small mean differences existed between subgroups 1 and 2 in aesthetic, political, and religious values.

Thus, on the basis of six $t$ tests, the null hypothesis is accepted for subgroups 1 and 2: there is no significant difference in the values held by teacher-coordinators who entered the field having majored or minored in distributive education and those held by teacher-coordinators who entered the field after graduation from a collegiate school of business.
<table>
<thead>
<tr>
<th>Value</th>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>Subgroup 1</td>
<td>11</td>
<td>36.27</td>
<td>4.74</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Subgroup 2</td>
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<td>33.71</td>
<td>5.45</td>
<td>1.32</td>
<td>1.050</td>
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<tr>
<td>Economic</td>
<td>Subgroup 1</td>
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<td>44.91</td>
<td>7.62</td>
<td>4.47</td>
<td>1.316</td>
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<td>53.28</td>
<td>3.60</td>
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<tr>
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<td>Subgroup 1</td>
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<td>7.71</td>
<td>1.54</td>
<td>.310</td>
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<td></td>
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<tr>
<td>Social</td>
<td>Subgroup 1</td>
<td>11</td>
<td>39.45</td>
<td>6.86</td>
<td>1.88</td>
<td>1.193</td>
</tr>
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<td></td>
<td>Subgroup 2</td>
<td>7</td>
<td>35.86</td>
<td>5.00</td>
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</tr>
<tr>
<td>Political</td>
<td>Subgroup 1</td>
<td>11</td>
<td>43.00</td>
<td>5.40</td>
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<td>.230</td>
</tr>
<tr>
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<td>Subgroup 2</td>
<td>7</td>
<td>42.28</td>
<td>7.87</td>
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<tr>
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<td>Subgroup 1</td>
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<td>39.09</td>
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<td>.053</td>
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<td></td>
<td>Subgroup 2</td>
<td>7</td>
<td>38.86</td>
<td>10.11</td>
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<td></td>
</tr>
</tbody>
</table>

\(^a\) Teacher-coordinators who entered distributive education after having majored or minored in distributive education as undergraduates.

\(^b\) Teacher-coordinators who entered distributive education after having graduated from a collegiate school of business and then qualifying for distributive education.

Subgroups 1 and 3 were compared next. As in the previous comparison, no significant difference was noted in the distribution of the value scores of the two subgroups as shown in Table 17. The largest difference in standard deviations between subgroups 1 and 3 occurred in economic values and produced a calculated F ratio of 3.36. The largest standard deviation was in the religious values.
of subgroup 1 and the smallest standard deviation was in the economic values of subgroup 3.

TABLE 17
A COMPARISON OF VALUES HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT BACKGROUNDS

<table>
<thead>
<tr>
<th>Value</th>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
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<td>11</td>
<td>36.27</td>
<td>4.74</td>
<td>1.28</td>
<td>.779</td>
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<tr>
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<tr>
<td>Economic</td>
<td>Subgroup 1</td>
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<td>44.91</td>
<td>7.62</td>
<td>3.36</td>
<td>3.725*</td>
</tr>
<tr>
<td></td>
<td>Subgroup 3</td>
<td>17</td>
<td>53.18</td>
<td>4.16</td>
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<tr>
<td>Aesthetic</td>
<td>Subgroup 1</td>
<td>11</td>
<td>37.27</td>
<td>7.71</td>
<td>1.47</td>
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<td></td>
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<td>30.41</td>
<td>6.36</td>
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</tr>
<tr>
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<td>Subgroup 1</td>
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<td>39.45</td>
<td>6.86</td>
<td>1.93</td>
<td>1.152</td>
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<td>.482</td>
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<td>44.18</td>
<td>6.85</td>
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<td>39.09</td>
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<td>17</td>
<td>38.53</td>
<td>7.22</td>
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</tr>
</tbody>
</table>

*Significant at the .05 level.

^a Teacher-coordinators who entered distributive education after having majored or minored in distributive education as undergraduates.

^b Teacher-coordinators who entered distributive education from business employment.

The calculation of the t test for subgroups 1 and 3 showed that significant differences were present in two values at the .05 level of significance. Teacher-coordinators who entered the field after having majored or
minored in distributive education obtained significantly lower mean economic value scores, but significantly higher aesthetic value scores, than the teacher-coordinators who entered the field from business employment. The table value for $t$ at 28 degrees of freedom was 2.056. In addition, subgroup 1 obtained higher mean scores, although not significantly higher, on the social and religious value scales than those teacher-coordinators in subgroup 3. On the other hand, higher mean value scores were reported for subgroup 3 on the theoretical and political value scales. Thus, for subgroups 1 and 3, Hypothesis 7 was accepted on the basis of theoretical, social, political, and religious value scales and rejected on the basis of the economic and aesthetic value scales.

The results of the comparisons between subgroups 1 and 4 are indicated in Table 18. No significant difference in the distributions of the value scores was noted between the groups. The largest standard deviation was registered by subgroup 4 on the aesthetic value scale and the smallest standard deviation was recorded by subgroup 1 on the theoretical scale. In addition, the theoretical scale provided the largest difference in standard deviations between the two subgroups. Hence, subgroups 1 and 4 were judged to be statistically homogeneous.

Similarly, no significant differences between
<table>
<thead>
<tr>
<th>Value</th>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
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<tr>
<td>Theoretical</td>
<td>Subgroup 1(^a)</td>
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<td>36.27</td>
<td>4.74</td>
<td>2.14</td>
<td>1.166</td>
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<tr>
<td></td>
<td>Subgroup 4(^b)</td>
<td>40</td>
<td>38.87</td>
<td>6.95</td>
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</tr>
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<td>Subgroup 1</td>
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<td>44.91</td>
<td>7.62</td>
<td>1.19</td>
<td>1.533</td>
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<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>48.62</td>
<td>6.99</td>
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<td></td>
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<tr>
<td>Aesthetic</td>
<td>Subgroup 1</td>
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<td>37.27</td>
<td>7.71</td>
<td>1.37</td>
<td>1.244</td>
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<td>33.55</td>
<td>9.04</td>
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<tr>
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<td>39.45</td>
<td>6.86</td>
<td>1.01</td>
<td>.657</td>
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<td>6.84</td>
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<td>Subgroup 1</td>
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<td>43.00</td>
<td>5.40</td>
<td>1.31</td>
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<tr>
<td>Religious</td>
<td>Subgroup 1</td>
<td>11</td>
<td>39.09</td>
<td>8.32</td>
<td>1.18</td>
<td>.361</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>40.05</td>
<td>7.67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Teacher-coordinators who entered distributive education after having majored or minored in distributive education as undergraduates.

\(^b\) Teacher-coordinators who entered distributive education after having taught in another subject area.

subgroups 1 and 4 were noted for any of the value scales.

The highest calculated t value was 1.533 for economic values, but this figure was .488 less than the table value for t at 39 degrees of freedom. Teacher-coordinators who entered the field after having majored or minored in distributive education achieved higher value scores in aesthetic, social, and political values than those teacher-coordinators who entered distributive education after
having taught in another subject area. On the contrary, the teacher-coordinators in subgroup 4 achieved higher mean scores in theoretical, economic, and religious values than the teacher-coordinators in subgroup 1. Therefore, the results of the comparisons between subgroup 1 and subgroup 4 showed that Hypothesis 7 should be accepted since there were no significant differences between the subgroups on any of the value scales.

Subgroups 2 and 3 were tested to determine whether significant differences existed between them, and the results are shown in Table 19. The F ratio test of variance did not indicate any significant difference in the dispersion of the two subgroups. The greatest difference in the standard deviations of the groups occurred in the measurement of the aesthetic values in which a 3.20 difference between the two subgroups was present. This difference yielded an F ratio value of 2.26 which was exceeded by the table value for F by 1.15. The largest standard deviation was noted in the religious values scale of subgroup 2, and the smallest standard deviation was observed in the economic values scale of subgroup 2.

In order for a mean difference between subgroups 2 and 3 to be significant, it was necessary that the calculated value of t equal or exceed 2.080, which was the table value of t at 22 degrees of freedom. Hence, no
significant differences were noted in the mean value scores of subgroups 2 and 3. However, it is important to observe the very small calculated t values for the economic, social, religious, and political value scales. Thus, the mean differences were very small for four of the six values.

### TABLE 19

**A COMPARISON OF VALUES HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT Backgrounds**

<table>
<thead>
<tr>
<th>Value</th>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>Subgroup 2</td>
<td>7</td>
<td>33.71</td>
<td>5.45</td>
<td>1.03</td>
<td>1.698</td>
</tr>
<tr>
<td></td>
<td>Subgroup 3</td>
<td>17</td>
<td>37.82</td>
<td>5.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>Subgroup 2</td>
<td>7</td>
<td>53.28</td>
<td>3.60</td>
<td>1.33</td>
<td>.056</td>
</tr>
<tr>
<td></td>
<td>Subgroup 3</td>
<td>17</td>
<td>53.18</td>
<td>4.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aesthetic</td>
<td>Subgroup 2</td>
<td>7</td>
<td>36.00</td>
<td>9.56</td>
<td>2.26</td>
<td>1.689</td>
</tr>
<tr>
<td></td>
<td>Subgroup 3</td>
<td>17</td>
<td>30.41</td>
<td>6.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Subgroup 2</td>
<td>7</td>
<td>35.86</td>
<td>5.00</td>
<td>1.02</td>
<td>.459</td>
</tr>
<tr>
<td></td>
<td>Subgroup 3</td>
<td>17</td>
<td>36.88</td>
<td>4.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>Subgroup 2</td>
<td>7</td>
<td>42.28</td>
<td>7.87</td>
<td>1.32</td>
<td>.594</td>
</tr>
<tr>
<td></td>
<td>Subgroup 3</td>
<td>17</td>
<td>44.18</td>
<td>6.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td>Subgroup 2</td>
<td>7</td>
<td>38.86</td>
<td>10.11</td>
<td>1.96</td>
<td>.090</td>
</tr>
<tr>
<td></td>
<td>Subgroup 3</td>
<td>17</td>
<td>38.53</td>
<td>7.22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a* Teacher-coordinators who entered distributive education after having graduated from a collegiate school of business and then qualifying for distributive education.

*b* Teacher-coordinators who entered distributive education from business employment.
The highest mean value scores for both subgroups were obtained for economic values and the second highest mean value scores for both subgroups were obtained for political values. The remaining four value scales were grouped rather closely for both the teacher-coordinators who entered the field after having graduated from a collegiate school of business and the teacher-coordinators who entered the field from business employment. It should be noted that both subgroup 2 and subgroup 3 were, at one time or another, associated with the business world—through college courses and/or actual experience—to a greater degree than those teacher-coordinators comprising subgroups 1 and 4. On the basis of the six t tests, Hypothesis 7 was accepted when comparing subgroups 2 and 3.

A comparison between subgroups 2 and 4 was made to determine whether significant differences existed in the distributions of the value scores. The results of the F ratio test of variance and the t test are shown in Table 20.

As a result of the calculation of F ratios for each of the six comparisons between the values held by the teacher-coordinators in subgroup 2 and the values of those in subgroup 4, it was determined that subgroups 2 and 4 were statistically homogeneous. No significant differences were noted in the distribution of the scores for any of the
values. The greatest calculated value for F was 3.76 and this occurred in the comparison of the economic values held by the two subgroups, but the table value for F was 5.01. Nevertheless, greater differences in the standard deviations were noted between subgroups 2 and 4 for all the values compared than were noted in the previous comparisons between the subgroups. Subgroup 2, teacher-coordinators who entered the field after having graduated from a collegiate school of business, registered the largest standard deviation, 10.11 in religious values, and the smallest standard deviation, 3.60 in economic values.

At the .05 level of significance, no significant differences were observed between the mean value scores of subgroups 2 and 4. Using 45 degrees of freedom, the table value of t was 2.021; and all calculated t values between subgroups 2 and 4 for all six values were less than the table value. The greatest mean differences were present in theoretical and economic values where mean differences of 5.16 and 4.66 occurred, respectively. The mean differences between the remaining four values were very small. However, teacher-coordinators who entered the field after having taught in another subject area achieved higher mean scores in theoretical, social, and religious values, and teacher-coordinators who entered
the field after having graduated from a collegiate school of business and then qualifying for distributive education achieved higher mean scores in economic, aesthetic, and political values. Therefore, the null hypothesis represented by Hypothesis 7 was accepted on the basis of the comparison between subgroups 2 and 4 since no significant differences existed between the mean scores of the subgroups tested.

### TABLE 20

A COMPARISON OF VALUES HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT BACKGROUNDS

<table>
<thead>
<tr>
<th>Value</th>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>Subgroup 2\textsuperscript{a}</td>
<td>7</td>
<td>33.71</td>
<td>5.45</td>
<td>1.63</td>
<td>1.869</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4\textsuperscript{b}</td>
<td>40</td>
<td>38.87</td>
<td>6.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>Subgroup 2</td>
<td>7</td>
<td>53.28</td>
<td>3.60</td>
<td>3.76</td>
<td>1.719</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>48.62</td>
<td>6.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aesthetic</td>
<td>Subgroup 2</td>
<td>7</td>
<td>36.00</td>
<td>6.36</td>
<td>1.12</td>
<td>.659</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>33.55</td>
<td>9.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Subgroup 2</td>
<td>7</td>
<td>35.86</td>
<td>5.00</td>
<td>1.87</td>
<td>.760</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>37.92</td>
<td>6.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>Subgroup 2</td>
<td>7</td>
<td>42.28</td>
<td>7.87</td>
<td>1.62</td>
<td>.506</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>40.95</td>
<td>6.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td>Subgroup 2</td>
<td>7</td>
<td>38.86</td>
<td>10.11</td>
<td>1.73</td>
<td>.362</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>40.05</td>
<td>7.67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{a}Teacher-coordinators who entered the field after having graduated from a collegiate school of business.

\textsuperscript{b}Teacher-coordinators who entered distributive education after having taught in another subject area.
The comparison between the values of the teacher-coordinators comprising subgroups 3 and 4 was the last of the six comparisons made in testing Hypothesis 7 (Table 21). One significant difference was noted in the dispersion of the value scores. The economic value scores of teacher-coordinators who entered the field from business employment were not statistically homogeneous with the economic value scores of the teacher-coordinators who entered the field after having taught in another subject area at the .05 level of significance. The table value of F was 2.57 and the calculated value for F exceeded the table value by .25. As in the comparisons between subgroups 2 and 4, the differences in the standard deviations between subgroups 3 and 4 were larger than the differences in the first four comparisons of subgroups. The largest standard deviation was 9.04 and occurred in the aesthetic values of subgroup 4, and the smallest standard deviation was 4.16 and occurred in the economic values of subgroup 3.

Moreover, a significant difference was noted between the mean economic value scores of subgroups 3 and 4. At the .05 level the mean economic values of the teacher-coordinators who entered the field from business employment (53.18) were significantly higher than the mean economic values of the teacher-coordinators who entered the field after having taught in another subject area (48.62). The table value for t for these six
### TABLE 21
A COMPARISON OF VALUES HELD BY DISTRIBUTIVE EDUCATION TEACHER-COORDINATORS HAVING TWO DIFFERENT BACKGROUNDS

<table>
<thead>
<tr>
<th>Value</th>
<th>Background</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>F ratio</th>
<th>t test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>Subgroup 3a</td>
<td>17</td>
<td>37.82</td>
<td>5.37</td>
<td>1.68</td>
<td>.556</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4b</td>
<td>40</td>
<td>38.87</td>
<td>6.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>Subgroup 3</td>
<td>17</td>
<td>53.18</td>
<td>4.16</td>
<td>2.82*</td>
<td>2.505*</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>48.62</td>
<td>6.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aesthetic</td>
<td>Subgroup 3</td>
<td>17</td>
<td>30.41</td>
<td>6.36</td>
<td>2.02</td>
<td>1.298</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>33.55</td>
<td>9.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Subgroup 3</td>
<td>17</td>
<td>36.88</td>
<td>4.94</td>
<td>1.91</td>
<td>.562</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>37.92</td>
<td>6.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>Subgroup 3</td>
<td>17</td>
<td>44.18</td>
<td>6.85</td>
<td>1.23</td>
<td>1.746</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>40.95</td>
<td>6.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td>Subgroup 3</td>
<td>17</td>
<td>38.53</td>
<td>7.22</td>
<td>1.13</td>
<td>.685</td>
</tr>
<tr>
<td></td>
<td>Subgroup 4</td>
<td>40</td>
<td>30.05</td>
<td>7.67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

aTeacher-coordinators who entered distributive education from business employment.

bTeacher-coordinators who entered distributive education after having taught in another subject area.

comparisons was 2.000 with 55 degrees of freedom. A large mean difference, but not a significant difference, occurred between the subgroups in political values. In all, teacher-coordinators in subgroup 3 achieved higher, although not significantly higher, mean scores in social and political values and teacher-coordinators in subgroup 4 achieved higher mean scores in theoretical, social, and
political values. Therefore, considering the t tests for subgroups 3 and 4, Hypothesis 7 was accepted for five of the six values.

In summary, for testing Hypothesis 7, 36 t tests were computed to compare the mean values for four subgroups of teacher-coordinators. As a result of the comparisons, very few significant mean differences occurred for any of the values for any of the comparisons. The teacher-coordinators in subgroup 1 achieved a significantly higher mean value score than the teacher-coordinators in subgroup 3 in economic and aesthetic values and the teacher-coordinators in subgroup 3 scored significantly higher than the teacher-coordinators in subgroup 4 in economic values. These were the only significant differences in mean value scores among the comparisons made. Hence, Hypothesis 7, which stated that there are no significant differences in the mean value scores among distributive education teacher-coordinators who entered the field from different backgrounds, was accepted in 33 of the 36 t tests and in four of the six comparisons between the subgroups. In only two of the comparisons between the subgroups were significant differences in mean value scores noted and even then significant differences were found in just one or two values.

The following list is presented as a summary of mean value differences. Values in which significant
differences occurred between the groups tested are marked by asterisks.

1. Teacher-coordinators who entered the field after having majored or minored in distributive education as undergraduates achieved higher mean value scores than teacher-coordinators who entered the field after having graduated from a collegiate school of business and then qualifying for distributive education in the following values: theoretical, aesthetic, social, political, and religious.

2. Teacher-coordinators who entered the field after having graduated from a collegiate school of business and then qualifying for distributive education achieved a higher mean value score than teacher-coordinators who entered the field after having majored or minored in distributive education as undergraduates in economic values.

3. Teacher-coordinators who entered the field after having majored or minored in distributive education as undergraduates achieved higher mean value scores than teacher-coordinators who entered the field from business employment in the following values: aesthetic*, social, and religious.

4. Teacher-coordinators who entered the field from business employment achieved higher mean value scores than teacher-coordinators who entered the field after having majored or minored in distributive education as undergraduates in the following values: theoretical, economic*, and political.

5. Teacher-coordinators who entered the field after having majored or minored in distributive education as undergraduates achieved higher mean value scores than teacher-coordinators who entered the field after having taught in another subject area in the following values: aesthetic, social, political, and religious.

6. Teacher-coordinators who entered the field after having taught in another subject area achieved higher mean value scores than teacher-coordinators who entered the field after having majored
or minored in distributive education as undergraduates in the following values: economic and religious.

7. Teacher-coordinators who entered the field after having graduated from a collegiate school of business and then qualifying for distributive education achieved higher mean value scores than teacher-coordinators who entered the field from business employment in the following values: economic, aesthetic, and religious.

8. Teacher-coordinators who entered the field from business employment achieved higher mean value scores than teacher-coordinators who entered the field after having graduated from a collegiate school of business and then qualifying for distributive education in the following areas: theoretical, social, and religious.

9. Teacher-coordinators who entered the field after having graduated from a collegiate school of business and then qualifying for distributive education achieved higher mean value scores than teacher-coordinators who entered the field after having taught in another subject area in the following values: economic, aesthetic, and political.

10. Teacher-coordinators who entered the field after having taught in another subject area achieved higher mean value scores than teacher-coordinators who entered the field after having graduated from a collegiate school of business and then qualifying for distributive education in the following values: theoretical, social, and religious.

11. Teacher-coordinators who entered the field from business employment achieved higher mean value scores than teacher-coordinators who entered the field after having taught in another subject area in the following values: economic, political, and religious.

12. Teacher-coordinators who entered the field after having taught in another subject area achieved higher mean value scores than teacher-coordinators who entered the field from business employment in the following values: theoretical, aesthetic, and social.
From this list, it is apparent that a great number of combinations of mean values among the four subgroups occurred, although few significant differences occurred between the mean value scores of any two subgroups.

Consequently, Hypothesis 7 was accepted in almost all cases. The numerical mean value scores obtained by the total group of teacher-coordinators and each of the four subgroups was presented in Table 3 (page 77). Subtle discriminations in mean values may be noted in that table.
CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Statement of the problem.—The purpose of this study was to provide insight into the nature of distributive education teacher-coordinators and the nature of two groups of potential teacher-coordinators. The problem which was investigated involved the use of two standardized instruments to measure the values and attitudes of the groups considered in this study. The values and attitudes of experienced distributive education teacher-coordinators in Ohio were measured by the Study of Values and the Minnesota Teacher Attitude Inventory. For purposes of comparison and analysis the total sample group of teacher-coordinators was subdivided into the following four subgroups according to their backgrounds prior to entering distributive education teaching: (a) those having majored or minored in distributive education as undergraduates, (b) those having majored in business administration and then upon graduation immediately qualified for certification in distributive education, (c) those
having entered distributive education after business employment, and (d) those having entered distributive education after teaching in another subject area.

The values of a group of undergraduate business administration students and a group of selected business employees were also measured using the Study of Values. Thus, this study was designed to determine whether significant differences existed in the values and attitudes of the groups and subgroups studied.

**Definition of terms.**—Since the terms "attitudes" and "values" have been variously used by many writers, specific definitions, which were consistent with the definitions provided by the authors of the instruments utilized in the study, were adopted. Values were defined as those six personal values measured by the Study of Values: theoretical, economic, aesthetic, social, political, and religious. These values have been determined to be basic to personal drive in occupational decision-making. Theoretical values concern the determination of truth through observation and reason. Economic values involve utility and practicality in all things. Aesthetic values are manifest in a search for form and harmony in life. Social values concern service to mankind. Political values involve man's drive for power. Religious values are indicated by a search for unifying and inner-satisfying
experiences. Researchers have reported that the Study of Values has been used to make occupational discriminations from measurement of these six values.

Attitudes have been defined as attitudes toward teaching which affect the nature of student-teacher relations in the classroom. The MTAI has been purported to measure these attitudes on a scale ranging from -150 to +150—the higher the score, the more child-centered the teacher is inclined to be.

Limitations of the study.—In order to facilitate the conduct of this study, the teacher-coordinators studied were limited to experienced distributive education teacher-coordinators in Ohio. Undergraduates majoring in business administration were limited to those students enrolled in marketing courses during Spring and Summer Quarters, 1968, at The Ohio State University. The sample of selected business employees was limited to Ohio business employees having a baccalaureate degree in marketing or a related area and having at least two years of work experience in a marketing or related occupation.

Procedures used in the study.—All experienced teacher-coordinators of distributive education in Ohio were requested to participate in the study. Those indicating a willingness to complete the Study of Values and the Minnesota Teacher Attitude Inventory were sent the two instruments for completion.
Undergraduates majoring in business administration were administered the Study of Values in two different undergraduate marketing classes. The names of firms employing individuals who met the requirements of the study were obtained from the Ohio State Council of Retail Merchants and letters were sent to these firms requesting the participation of one, two, or three of their employees in the Study of Values. By return mail the firms indicated the number of employees who were willing to participate and the appropriate number of Study of Values booklets were sent to each firm.

**Statistical analysis.**—Means and standard deviations were calculated for all groups and subgroups studied. F ratio tests of variance and t tests were computed for comparing the teacher-coordinator group to the undergraduate business administration students group and the selected business employees group. The Study of Values was used for these comparisons.

The teacher-coordinator group was compared to the established norms for non-academic secondary teachers provided by the Minnesota Teacher Attitude Inventory. The teacher-coordinator group was divided on the basis of those who had less than five years of training and those who had five or more years of training. Teacher-coordinators with less than five years of training were compared
to the norms for teachers with four years of training and
teacher-coordinators with five or more years of training
were compared to the norms for teachers with five years
of training by means of the $t$ test.

The four subgroups of teacher-coordinators were
compared with each other to determine whether significant
differences existed in their attitudes toward teaching.
Six comparisons were made with $t$ tests.

The four subgroups of teacher-coordinators were
compared with each other to determine whether significant
differences existed in their personal values. Since six
value areas were studied, 36 $t$ tests were calculated.

The $F$ ratio test of variance was utilized to deter-
mine whether significant differences in the dispersion or
distribution of the scores of the groups were significant.
The $t$ test was utilized to determine whether significant
differences existed between the mean scores of the various
groups and subgroups. The .05 level was selected for the
determination of whether differences were significant.

Seven hypotheses were tested. The first four
hypotheses were concerned with whether significant dif-
ferences existed between the value scores of the teacher-
coordinator group and the selected business employees
group and between the value scores of the teacher-coordi-
nator group and the undergraduate business administration
students group. Tests were conducted to determine the significance of the differences for both the mean value scores and the distribution or dispersion of scores.

The fifth hypothesis was conducted to compare the attitudes toward teaching held by teacher-coordinators and other secondary teachers as indicated by established norms for the MTAI. The sixth hypothesis involved the comparison of the attitudes toward teaching among teacher-coordinators who entered the field from four different backgrounds. The last hypothesis was concerned with the determination of whether significant differences existed in the personal values among teacher-coordinators who entered the field from four different backgrounds.

Findings of the study.—Of the 135 experienced distributive education teacher-coordinators in Ohio, 78 successfully completed the MTAI and 75 successfully completed the Study of Values. The group of undergraduate business administration students was comprised of 52 students and the group of selected business employees consisted of 50 employees.

Only one significant difference in the distribution of value scores (theoretical values) was noted between the teacher-coordinator and business employees groups at the .05 level and, therefore, the groups were judged to be statistically homogeneous. Two significant
differences were noted in the distribution of value scores between the teacher-coordinator and undergraduate business administration student groups. These significant differences occurred in the aesthetic and religious value scales. Thus, the groups were statistically homogeneous in three of the six values—economic, social, and political.

Significant mean differences, as reflected by the t test, were noted in three of the values when the teacher-coordinator group was compared with the business employees group. The teacher-coordinator group achieved a significantly higher mean score in economic and social values while the business employees group achieved a significantly higher mean score in political values. Hence, the null hypothesis was rejected in three of the six values.

Moreover, significant mean differences occurred in four of the six values in the comparison of teacher-coordinators and undergraduate business administration students. The teacher-coordinator group scored significantly higher in economic and religious values and the undergraduate business administration students group scored significantly higher in theoretical and political values. Therefore, in four of the six values, the null hypothesis was rejected at the .05 level.

Without considering the statistical significance
of the mean differences, it was observed that the pattern of mean scores among the three groups was similar. Thus, the values of each of the groups were correspondingly high or low with the values of the other two groups.

In theoretical values the undergraduate business administration students group scored highest and the teacher-coordinator group scored lowest. The teacher-coordinator group scored highest in economic values and the business employees group scored lowest. In aesthetic values the undergraduate business administration students group scored highest and the teacher-coordinator group scored lowest. The teacher-coordinator group achieved the highest scores of the groups in social values and the business employees group achieved the lowest. The undergraduate business administration student group achieved the highest mean scores in political values and the teacher-coordinator group achieved the lowest. In religious values the teacher-coordinator group achieved the highest scores and the undergraduate business administration students group achieved the lowest scores.

When mean MTAI scores of the teacher-coordinator group were compared with the norms for experienced non-academic secondary teachers with four years of training, no significant differences were found. However, when the teacher-coordinator group was compared with the norms for
teachers with five years of training, the mean teacher-coordinator score was significantly lower than the mean norm score. In addition, no significant difference in mean scores was noted between the teacher-coordinator group comprised of teacher-coordinators with less than five years of training and the norm group for teachers with four years of training. However, the teacher-coordinator group composed of teacher-coordinators with five or more years of training achieved significantly lower mean MTAI scores than the norm group for teachers with five years of training. Thus, no significant differences existed between the mean scores of teacher-coordinators and other teachers with four years of training, but significant differences did occur between the teacher-coordinator group and teachers with five years of training.

Only one significant difference in the mean MTAI scores was noted among the six comparisons of the four subgroups of teacher-coordinators. Teacher-coordinators who entered the field after having graduated with a business administration major and then qualified for distributive education scored significantly higher than teacher-coordinators who entered the field from business employment. No other significant mean differences in MTAI scores among the subgroups were found.

In a comparison of the values held by teacher-coordinators representing four backgrounds, very few
significant differences were noted. The teacher-coordinators who entered the field after having majored or minored in distributive education as undergraduates achieved significantly higher mean value scores in economic and aesthetic values than teacher-coordinators who entered the field from business employment. Teacher-coordinators who entered the field from business employment scored significantly higher than teacher-coordinators who entered the field after having taught in another subject area in economic values. No other significant differences in mean values among the subgroups were found.

Conclusions

This study included the consideration of seven hypotheses, three of which were divided into subsections that were tested separately. Therefore, these three hypotheses could not be accepted or rejected in their entirety. Rather, the tests of significance were used to reject or accept specific portions of the hypotheses.

In view of the limitations cited previously and the acknowledged small sampling in some subgroups of teacher-coordinators, the following conclusions were drawn:

1. The values held by distributive education teacher-coordinators are distributed in a manner similar to those of undergraduate business administration students and business employees. In other words, the values of
each of the latter two groups vary in essentially the same way as those of teacher-coordinators.

Only one significant difference was noted in the variance or dispersion of the values between the group of teacher-coordinators and the group of business employees as indicated by the F ratio test of variance. Moreover, a significant difference in variance was noted in only two values, aesthetic and religious, when the teacher-coordinator and undergraduate business administration student groups were compared.

2. The values held by distributive education teacher-coordinators are different from those held by business employees and undergraduate business administration students. In other words, business employees and undergraduate business administration students do not have the same combinations of basic drives, in terms of magnitude, as teacher-coordinators do. While certain values are similar, others are different.

Teacher-coordinators have significantly higher economic and social values than selected business employees. On the other hand, business employees hold significantly higher political values than distributive education teacher-coordinators. Therefore, the values of the two groups are similar in three values, theoretical, aesthetic, and religious, and are different in three values.
Teacher-coordinators have significantly higher economic and religious values than undergraduate business administration students; and the undergraduate business administration students have significantly higher theoretical and political values than teacher-coordinators. Hence, the groups are not similar in values in four of the six value areas, as shown by the t test.

3. The values of all three groups show a definite pattern or set of relationships when the undergraduate business administration student group and the business employee group are compared to the teacher-coordinator group. Thus, on a profile chart the value patterns of all three groups would be roughly congruent.

The theoretical values of all three groups are lower than the economic values of all three groups. The aesthetic values are lower than any other value for all three groups. The social and religious values are lower than the political values for all three groups. No attempt, however, has been made to determine the statistical significance of this observation.

4. The attitudes toward teaching of distributive education teacher-coordinators seem to vary inversely with those of other teachers having similar experience and backgrounds when an additional year of education is attained.
The attitudes toward teaching of distributive education teacher-coordinators with less than five years of training are similar to those of other teachers having about the same experience and training. No significant difference in mean MTAI scores was noted between the teacher-coordinators with less than five years of training and established norms for non-academic secondary teachers with four years of training.

The attitudes toward teaching of distributive education teacher-coordinators with five or more years of training are less student-centered than those of other teachers possessing about the same experience and training. Teacher-coordinators with five or more years of training obtained significantly lower mean MTAI scores than the established norms for non-academic secondary teachers with five years of training as shown by the t test. Thus, according to the definition of attitudes toward teaching provided by the MTAI, teacher-coordinators with five or more years' training are significantly less student-centered than other teachers with five years' training.

5. Regardless of their backgrounds, distributive education teacher-coordinators have similar attitudes toward teaching. Backgrounds prior to entering the field apparently have little effect on teacher-coordinators' attitudes toward teaching.
No significant differences in attitudes toward teaching were noted in five of the six combinations of subgroups which represented teacher-coordinators having four different backgrounds. Only teacher-coordinators who entered the field from business employment scored significantly lower than teacher-coordinators who entered the field after having graduated from a collegiate school of business.

6. Regardless of their backgrounds, distributive education teacher-coordinators have similar personal values. Apparently, backgrounds of teacher-coordinators prior to entering the field have little effect on the values which they hold. On the other hand, it is possible to say that the profile of values established for the total teacher-coordinator group is representative of the four subgroups and, therefore, the values which distributive education teacher-coordinators hold are consistent regardless of their backgrounds.

Teacher-coordinators who entered the field after having majored or minored in distributive education as undergraduates have significantly higher aesthetic values than teacher-coordinators who entered the field from business employment. The latter subgroup of teacher-coordinators have significantly higher economic values than teacher-coordinators who entered the field after
having majored or minored in distributive education as undergraduates and also higher than those who entered the field after having taught in another subject area. These differences were the only significant ones at the .05 level as shown by the t test.

Recommendations

Based on the specific findings of this study, the following recommendations and activities are suggested:

1. There is a need for additional study of the values, attitudes, and other factors which tend to influence an individual's occupational choice, such as a career in distributive education. This study would center on how such factors could be used to counsel specific individuals or groups of individuals for careers in distributive education.

2. An effort should be made to recruit individuals into the field from collegiate schools of business and from the business world who hold personal values similar to those of distributive education teacher-coordinators. Since distributive education teacher-coordinators, as a group, differ from business employees and undergraduate business administration students, recruitment should be conducted on an individual basis with individual values being considered.

3. There is a need for research to determine the
causes of differences in attitudes toward teaching between distributive education teacher-coordinators and other teachers having five or more years of training.

4. Because of the variation in attitudes toward teaching between teacher-coordinators having four and five years of training, additional study needs to be conducted to determine the actual and the desired effect distributive teacher education should have on teacher-coordinators' attitudes toward teaching.

5. Research should be undertaken to determine the similarity of values of distributive education teacher-coordinators who entered the field from business employment and who entered the field after having graduated from a collegiate school of business to groups of individuals representing their respective backgrounds. In other words, there may be differences in values; for example, between those business employees who entered distributive education and those who have not.

In summary, then, a rather complex subject--values and attitudes--has been investigated in this study. Social scientists have not yet acquired a full understanding of these factors in occupational choice, nor have they even agreed upon precise definitions. Rather, it is simply acknowledged that values and attitudes are important in occupational choice. Therefore, much more research is
necessary to provide an understanding of why people make specific vocational choices. This study has indicated that the values and attitudes of people employed in the discipline of distributive education are similar to each other, when the criterion of backgrounds prior to entering the field is used. It still remains to be determined how other individuals, such as those in other areas of teaching, those in business employment, and those in collegiate schools of business, can be attracted into distributive education when they possess a combination of values and attitudes similar to those of distributive education teacher-coordinators. Therefore, the magnitude of the teacher recruitment problem in distributive education has not been lessened by this study; rather, it is hoped that as a result of this study there will be a greater insight into the nature of the individuals who comprise, and who could comprise, the distributive education discipline.
May 8, 1968

Dear Coordinator:

In an effort to learn more about the sources of additional coordinators for Ohio's expanding distributive education program, Tom White at Ohio State is attempting to study the values and attitudes of our present coordinators.

We are requesting that you take 45 minutes of your time to complete two inventories - the Minnesota Teacher Attitude Inventory and the Study of Values. Both are straightforward opinionnaires and have no hidden implications. We are interested in establishing a profile of distributive education personnel with regard to their economic, aesthetic, and social values and their attitudes toward teaching. Both inventories are self-administered and, while there is no time limit, the total time you spend would be no longer than 45 minutes.

As this study may provide useful information about the interests of distributive education coordinators, we would appreciate your cooperation.

Please complete the enclosed card and return it by May 14 and you will be sent the inventories and instructions.

Thank you.

Sincerely,

Bernard C. Nye
State Supervisor
Distributive Education
May 14, 1968

Dear Coordinator:

We appreciate your willingness to participate in the study of teacher-coordinators' values and attitudes.

Enclosed you will find all the materials you need. Please check to make sure you find the following items:

1 - Minnesota Teacher Attitude Inventory
1 - Answer Sheet for the MTAI
1 - Study of Values booklet
1 - Stamped return envelope

You may complete either inventory first. The directions for both inventories are stated in the test booklets. Please place your answers in the test booklet for the Study of Values and on the answer sheet for the Minnesota Teacher Attitude Inventory. You may use either pen or pencil.

Pay particular attention to the instructions for the Study of Values. Do not take too long for any one question. When you have completed both inventories, please return both test booklets and the answer sheet for the MTAI.

Since the MTAI test booklets will be used by other coordinators, we will appreciate your returning the materials by

Thank you for your participation.

Sincerely,

Thomas R. White
Distributive Education
(Letter to business firms requesting their participation)

Mr. Glenn Mitchell  
Director of Personnel  
The Kroger Company  
1014 Vine Street  
Cincinnati, Ohio 45201

Dear Mr. Mitchell:

Your name has been suggested by the Ohio State Council of Retail Merchants as a person who may be able to help in a study at The Ohio State University. The study concerns a measurement of values held by three groups of individuals: selected business employees, distributive education teachers, and business administration students. Since these people have similar backgrounds, we are interested in determining if their values are similar.

We would appreciate your locating one, two, or three employees in your organization who would be willing to spend 15 minutes taking the Study of Values inventory. This is a straightforward, self-administered, standardized instrument on which individuals can even determine their own profile of values, if they so desire. Moreover, the Study of Values has been standardized for a variety of occupations.

The only restrictions on this sample are that the participants in this study have a college degree in business administration or a related area; have worked in a marketing, managerial, or related occupation for at least two years; and that they are not more than forty years old.

If you have one, two, or three employees who could participate in this study, please indicate the number and I will send you the Study of Values booklets. You may write your response on this letter and return it to me.

Thank you very much.

Sincerely,

Thomas R. White  
Distributive Education  
The Ohio State University  
1945 N. High Street  
Columbus, Ohio 43210
(Letter to business firms supplying inventories)

Mrs. Ann Hupke  
Personnel Development Director  
The May Company  
158 Euclid Avenue  
Cleveland, Ohio 44114  

Dear Mrs. Hupke:

We certainly appreciate your willingness to participate in the Study of Values inventory, which involves a comparison of the values held by distributive education teachers, selected business employees, and business administration students.

I am enclosing two Study of Values booklets which you may distribute to the two employees you selected to participate in the study. These individuals must have a college degree in business administration or a related area, have at least two years work experience in a marketing or related occupation, and be not more than 40 years old.

The inventory measures an individual's values in six areas, which may be noted on the back of the booklet.

The instructions are located in the test booklet. It is important that they are read carefully, as they are easily misunderstood, although they are quite simple. The same caution applies in case a participant wishes to score his own inventory and develop his own profile.

There is no time limit for the Study of Values, but past experience has shown it takes about 15 minutes to complete.

When the inventories have been completed, please return them to me, hopefully by June 25. Thank you for your help.

Sincerely,

Thomas R. White  
Distributive Education  
The Ohio State University  
1945 N. High Street  
Columbus, Ohio 43210
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