

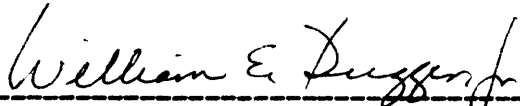
ATTITUDES OF SELECTED VOCATIONAL TEACHERS
TOWARD VOCATIONAL EDUCATION AND
COLLEGE PREPARATION

by

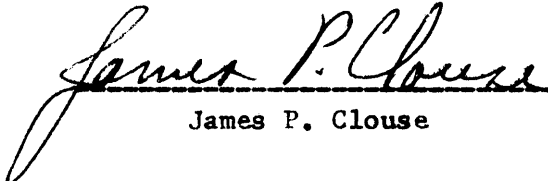
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Dissertation submitted to the Graduate Faculty of the
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in partial fulfillment of the requirements for the degree of
DOCTOR OF EDUCATION
in
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DEDICATION

This study is dedicated to the author's wife, Senie; his son, Vincent; and his daughters, Tracey and Kimberly, for their patience, encouragement, devotion, and sacrifices which made this dissertation a reality.

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Chapter 1

INTRODUCTION

In modern American society great importance is attached to the teacher who plays a crucial role in the socialization of children who one day will be the "command generation". Emans (1969:459-463) indicated that the teacher is given the privilege to transmit his concept of his professional role to the students with whom he is involved. The teacher holds this position because he or she has completed a specified curriculum in higher education or has met some other predetermined criterion.

Recruitment, selection, and utilization of vocational teachers have long been a concern of the personnel of the vocational areas. Much time and energy have been expended in an effort to determine those traits and abilities which contribute to the success of teaching in vocational areas as well as academic areas.

Researchers have dealt with the sociological factors, physiological factors, and the influence of professional education on competence of vocational teachers. The attitude of vocational teachers is an important facet which needs more investigation.

NEED FOR THE STUDY

Since the beginning of the industrial revolution the economy of the United States has rapidly expanded. This expansion has caused

an increase in the demand for services of vocationally oriented personnel. Thus, public education has been greatly affected, and vocational education is receiving more emphasis throughout the nation. This expansion has provided a number of teaching positions in many of the vocational areas.

There is a need for an appraisal of the attitudes of those who possess a desire to enter vocational teaching careers before or during pre-service training as well as at the time they begin employment with school systems. The improvement of the selection and assignment of vocational teachers would be aided by this type of appraisal. It would also aid in the identification of those characteristics deemed desirable by the local education agency. The teacher education institution could utilize this appraisal to aid in the selection of teacher candidates.

Many vocational teachers are recruited from the ranks of industry. They are proficient in the skills and knowledge of their respective vocational areas. They became accustomed to the world of work through their many years in industry. This study may possibly provide information which will determine whether or not the long association with industry influenced the attitude of vocational teachers toward vocational education.

This interest in the personal attributes of teachers, related to the teaching environment, has resulted in a number of studies. Few of the studies, however, seem relevant to trade and industrial teacher education. The teachers sampled were usually holders of college degrees and had little, if any, experience in industry (Finch, 1969:55).

The present study will provide additional research and knowledge of one aspect, namely attitude, of the characteristics of vocational teachers.

In this study an attempt was made to determine whether the attitude of the vocational teacher is in some way responsible for the shortage of vocational teachers. Emphasis at the state level to increase the number of vocational teachers is typified in the Virginia Vocational Education Advisory Council's Fifth Annual Report (1974:vi).

The present supply of qualified vocational personnel is inadequate to meet the demands of this rapidly growing program of vocational education. Critical shortages of teachers exist in the fields of industrial arts education, agriculture education, and health occupations education. The field of distributive education is experiencing moderate shortages and business education and consumer and homemaking are currently experiencing very low or no shortages of teachers.

This study will also provide further evidence as to whether the attitude of the teacher of the Area Vocational-Technical Center in the State of Virginia is a positive or negative value in the training of students for job entry skills at the secondary school level. To emphasize the need for job entry skill training at the secondary school level in Virginia, Nolm (1974:1) reported that, ". . . approximately 65 percent (51,350) of our young people will be headed for employment in occupations that do not require formal learning beyond high school."

STATEMENT OF THE PROBLEM

The purpose of the present research was to assess the attitudes of the vocational teachers of the Area Vocational-Technical Centers of the Commonwealth of Virginia relative to their vocational education and college preparation preference.

More specifically, an attempt was made to answer the following questions:

1. Is there any difference between the attitude of the vocational teachers relative to the area of subject matter which they teach and their age?
2. Is there any difference between the attitude of the vocational teachers relative to the area of subject matter which they teach and their number of years of work experience outside of teaching?
3. Is there any difference between the attitude of the vocational teachers relative to the area of subject matter which they teach and their number of years of teaching experience?
4. Is there any difference between the attitude of the vocational teachers relative to their age and the number of years of work experience?
5. Is there any difference between the attitude of the vocational teachers relative to their age and number of years of teaching experience?
6. Is there any difference between the attitude of the vocational teachers relative to their number of years of work experience and number of years of teaching experience?

7. Is there any difference between the attitude of the vocational teachers relative to their sex (male or female)?

8. To what extent are the combinations of the personal characteristic variables predictive of teachers attitudes toward vocational education/college preparation preference?

ASSUMPTION OF THE STUDY

The assumption of the study was that the respondents would be able to interpret the attitude scale and provide an accurate account of their feelings.

LIMITATIONS OF THE STUDY

The limitations of the study were:

1. The findings are most appropriate to the teachers of the Area Vocational-Technical Centers in the Commonwealth of Virginia. Generalization beyond this group should be made with extreme caution.

2. All respondents were vocational teachers and a majority (52.2 percent) of them were trade and industrial teachers.

DEFINITION OF TERMS

Area Vocational-Technical Centers refers to training facilities which were constructed or renovated through funds provided by the Vocational Educational Act of 1963 (Advisory Council on Vocational Education, 1968:45).

Attitude refers to a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations which it is related (Fishbein, 1967:8).

Attitude scale refers to a printed list of statements used in gathering information from the vocational teachers of the Area Vocational-Technical Centers of the Commonwealth.

Vocational teacher refers to a person employed in the Area Vocational-Technical Center of Virginia who teaches courses in agriculture, business and office, distributive, health occupations, home economics, and trade and industrial education to the secondary school students.

Vocational education refers to:

. . . that aspect of education that aims at the development of human abilities in terms of knowledge, skills and understandings so that the individual may serve happily and efficiently in carrying out the activities in vocational pursuits of his choice (Roberts, 1971:6).

College preparation refers to the academic courses taught at the secondary level which are required by a college or university for admittance to their degree programs.

SUMMARY

The preceeding discussion was written to provide the framework for an investigation into the attitudes of the teachers of the Area Vocational-Technical Centers in the State of Virginia relative to their vocational education/college preparation preference. In this chapter,

the problem was introduced, the need of the study was discussed, the problem was stated, basic assumptions and limitations were specified, and terms were defined.

Recruitment, selection, and utilization of vocational teachers are three aspects which have been concerns of vocational personnel. An appraisal of the attitude of vocational and potential vocational teachers is advisable in an effort to identify desirable teacher characteristics.

Due to an interest in the personal teaching attributes, more research efforts have been made. Additional research and knowledge of the characteristics of vocational teachers will be provided by this study.

Chapter 2

REVIEW OF RELATED LITERATURE

The attitude of an individual in an academic or vocational course is related to the meaning and value associated with that course. It is the responsibility of the teachers to provide an atmosphere in the classroom that will be conducive to the learning of acceptable attitudes by the students. Because the teachers are the recipient of this responsibility, it is important to investigate the teacher's attitude.

The first section of this chapter will review selected literature concerning the measurement of attitude. This will include the definition of attitude, concept of attitude, and the theory of attitude measurement. Literature dealing with the attitude of school personnel, including vocational teachers, will be presented in the second section. The third section will review the literature related to the independent variables of this study.

MEASUREMENT OF ATTITUDE

Definition of attitude. Krech and Crutchfield (1954:335) view attitude as "an enduring organization of motivational, emotional, perceptual and cognitive processes with respect to some aspect of the individual's world."

After reviewing many early definitions of attitude, Allport (1935:798) concluded that:

An attitude is a mental and neural state of readiness exerting a directive influence upon the individual's response to all objects and situations with which it is related.

In support of Allport's definition, Remmers, Gage, and Rummel (1965:308) stated that an attitude may be defined as "an emotionalized tendency, organized through experience to react positively or negatively toward a psychological object."

Thurstone, a pioneer in the measurement of attitude, expands the definitions by Allport, Remmers, Gage and Rummel by stating that attitudes may also be formed by reacting to stereotypes. It is not necessary for experience to be an accompaniment in order for an attitude to be formed. He states that "an attitude is the sum total of man's inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears, threats and conviction about any specified topic." While expanding the source of development of attitudes, Thurstone agrees that his definition is a consistency response (Thurstone and Chave, 1929:6).

The pattern of these definitions seems to project a common theme. This theme defines attitude as a consistency among responses to a specific set of stimuli of social object.

Additional definitions are offered by Fuson, Dood and Campbell. Fuson (1942:14) defines an attitude as the probability of occurrence of a defined behavior in a defined situation. Attitude, according to Dood (1948:11), refers to an implicit response that is anticipatory and mediating in reference to patterns of overt responses, and is considered

socially significant in the individual's society. Campbell (1950:15-34) has summarized this view in presenting an operational definition of an attitude, "an individual's social attitude is an enduring syndrome of response consistency with regards to a set of social objects."

It is apparent from the literature cited that there are common elements in the various definitions of attitude. An attitude is a tendency to respond in a particular way toward a specific group or class of objects. It is directly related to how the individual feels; what he or she believes; and how he or she acts. The fact that a person possesses an attitude is not a determinant of his or her individual differences, but rather how he or she arranges them in order of importance to form values.

Concept of Attitude. In order to understand how attitude can be measured, the concept of attitude needs to be understood. Attitudes are usually classified into three general components: (1) cognitive (belief); (2) affective (emotional or feelings); and (3) behavioral (action-taking). There is much evidence that these components are interrelated and there is much interplay between them (see Figure 1, Rosenberg, et al., 1960:3). These components may differ in strength. For example, a given attitude may incorporate favorable beliefs about its objects; a mildly favorable feeling; and some slight tendency to take favorable action with respect to that object. Available evidence suggests that there is a general trend for consistency among these components.

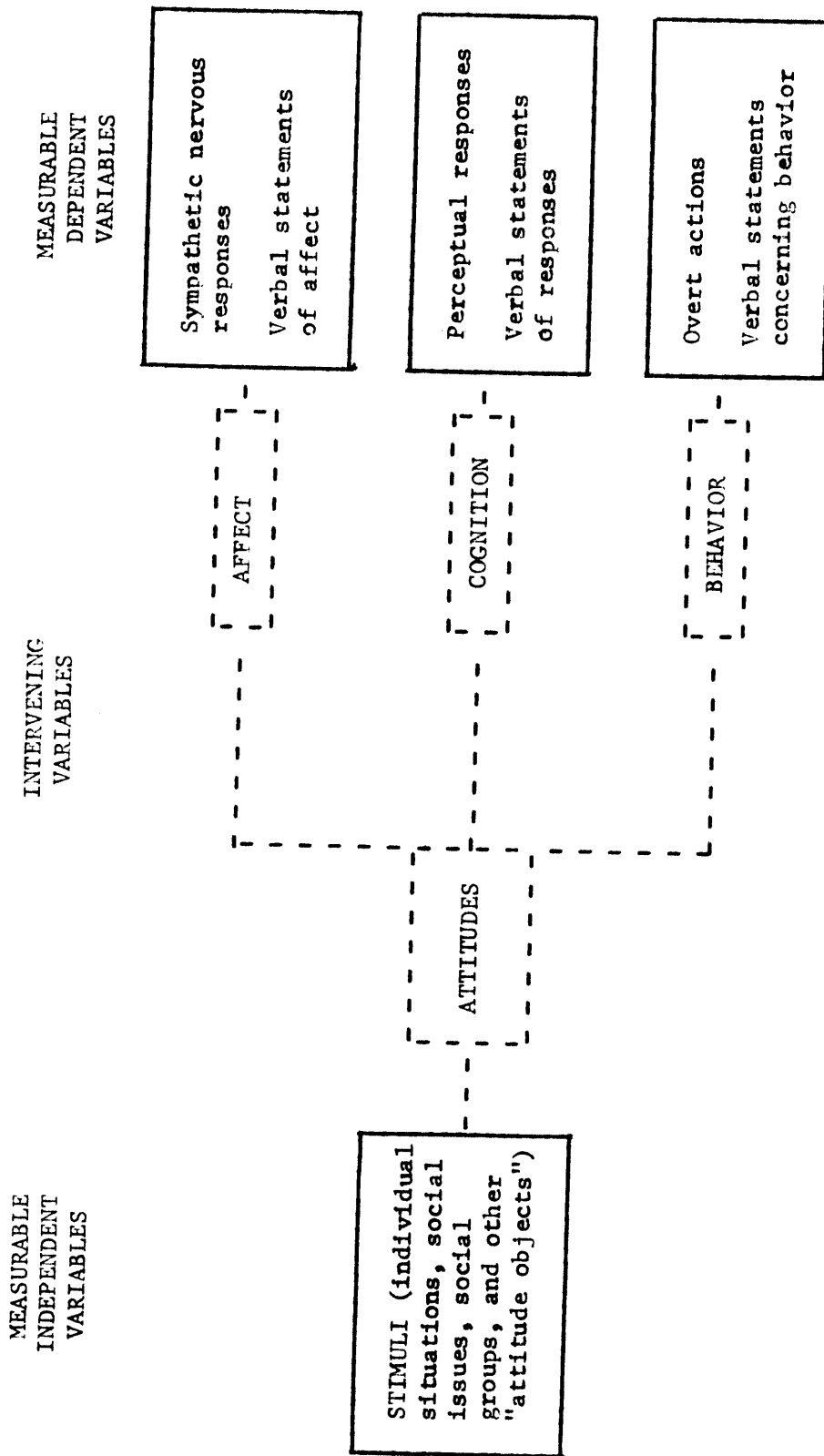


Figure 1
Schematic Conception of Attitudes

Values, beliefs, and attitudes do not stand in isolation of one another. They are related in a number of ways. Attitude may be said to be a product or the result of certain combinations of values and beliefs.

The following is a brief example:

Value. Equal representation of all interest within the United States is good.

Belief. Congress allows for equal representation of all interests within the United States.

Attitude. I like Congress.

Attitudes serve as a mean by which an individual can organize his or her environment. That is, attitudes serve as economizing devices which allow us to react to familiar physical and social objects without giving much thought to them. They serve as a way of economically organizing our knowledge and reacting to our complex environment. Trandis (1967:101-107) stated that attitudes are learned in order to ". . . understand the world around us; to protect self-esteem; to adjust to a complex world and express fundamental values."

Through direct exposure, attitudes are learned. They may be positive or negative, favorable or unfavorable. In support, Krech, et al. (1962:146) indicated that a person's affect toward an object will be more positive as he or she experiences success in his or her own associations with the attitude object. If the experience is unsuccessful, the person will change his affect in an unfavorable direction.

An attitude is an expression capable of predicting behavior. It is a tendency to react in a certain manner. Although expressed

opinions do not always correspond to action in the classroom, there is evidence that the investigation of educational attitudes of teachers can lead to the predicting of development of attitudes.

A value system is a body of standards which gives meaning to attitudes. An attitude is an internal tendency which is transferred to an external object. When an object becomes a satisfying wish or need; it then becomes a value (Bonner, 1961:385-386). Attitudes provide a mean by which a person may express himself and show other people what kind of a person he is. For example, teachers who value their profession highly may want to express themselves by taking positions on a great number of educational issues. The expression of their likes and dislikes on these issues serve to tell what they are like and how they feel about certain aspects of their profession.

An attitude is not directly observable but is inferred from the way we react to a particular stimulus. When attitudes are studied, stimuli and various kinds of responses are observed. An attitude is a predisposition of an individual to evaluate his immediate environment or his world. The evaluation may be favorable or unfavorable according to the individual's likes or dislikes of some social belief or physical object. They help us to cope with our environment and to confront the many different situations which we face each day. It is through the expression of an attitude that we learn an individual's needs, wants, values, personal tastes and prejudices.

Theory of Attitude Measurement. Since the early part of the present century, an increased effort has been made by researchers in

an attempt to accurately measure attitudes. Some forty years ago, the issue of attitude measurement was highly controversial. Through efforts of Thurstone and others, this controversy was soon settled and attitude research has made many advances.

Through the use of questions by the researchers or expressed reactions from individuals, an opinion may be obtained. Attitude may be inferred or estimated from this statement of opinion. Best (1970:173) indicates that the process of inferring attitudes from opinions which are expressed has many limitations because the concealment of real attitudes by the individual is possible. He states:

An individual may not really know how he feels about a social issue. He may never have given the idea serious consideration. An individual may be unable to know his attitude about a situation in abstract. Until confronted with the real situation, he may be unable to predict his reaction or behavior.

Even behavior itself is not always a true indicator of attitude. When politicians kiss babies, their behavior may not be a true expression of affection toward infants. Social customs or desire for social approval make many overt expressions of behavior mere formalities, quite unrelated to the inward feelings of the individual. Even though there is no sure method of describing and measuring attitude, the description and measurement of opinion, in many instances, may be closely related to the real feeling or attitude of an individual.

Best further states that in view of the limitations, several methods have been employed by researchers, basing their data upon the expressed opinion of individuals. They are:

1. Asking the individual directly how he feels about a subject. This technique may employ a schedule or questionnaire of the open or closed form. It may employ the interview process, in which the individual expresses his opinion orally.
2. Asking the individual to check the statements in a list with which he is in agreement.

3. Asking the individual to indicate his degree of agreement or disagreement with a series of statements about a controversial subject.

4. Inferring his attitude from his reaction to projective devices, through which he may reveal his attitude unconsciously. (A projective device is a data-gathering instrument which conceals its purpose in such a way that the subject cannot guess how he should respond to appear in his best light. Thus his real characteristics are revealed.)

Attitudes are measured extensively by the use of attitude scales. An attitude scale is constructed by using a set of statements to which an individual responds. The statements are related to the contents of the study. The attitude of the person will be determined by the pattern of his response. Scales differ in their make-up relative to type and method of construction, but their objective is identical in that they assign a person a numerical position or score on a continuum. This score may be taken as representative of the behavior of persons as described by the overall content elements.

The concept of a unidimensional scale is foremost because it measures a single variable. This indicates that individuals with the same score have about the same attitude. The items on the scale must be highly interdependent in order for the attitude scale to be unidimensional (Brown, 1970:77).

Three of the procedures which have been used extensively in opinion or attitude research are the Thurstone Technique of Scaled Values, Remmers Generalized Attitude Scale, and Likert Method of Summated Ratings. Each of these procedures warrants a brief description.

The Thurstone Technique employs a number of judges to sort into eleven categories a large number of statements expressing opinions concerning an attitude object. At one extreme is the most favorable attitude while at the opposite end is the most unfavorable attitude; the neutral position is in the center. The median scale value assigned by the judges to each of the statements in the collection is determined. Only the relevant statement as determined by the judge is retained. Because this method of constructing a scale to measure attitudes requires a great deal of labor, it is impossible to build scales measuring all possible significant attitude objects. (Best, 1970:174).

The Remmers generalized attitude scale was developed to measure attitudes toward any one of a number of attitude objects. The statements in the generalized attitude scale are not related specifically to any single attitude object; but the name of the appropriate object is written at the head of the scale, the statement can be interpreted meaningfully for any representative of the class of objects for which the scale was intended (Remmers, Gage, and Rummel, 1965:134). The values of Remmers' scale are determined by Thurstone's equal-appearing intervals technique. With the Thurstone scale the statements are arranged in random order; however, in the Remmers scale they appear in the order of decreasing favorableness. This arrangement greatly increases the time and labor required for scoring without affecting the accuracy of the measurement (Remmers, Gage, and Rummel, 1965:315).

The Likert Method of Summated Ratings can be carried out without a panel of judges. It has yielded scores very similar to those obtained

by the Thurstone method. The correlation coefficient between the two scales was reported as high as $+0.92$ in one study (Edwards and Kenney, 1946:72-73). Compared to either the Thurstone or Remmers scale, the Likert-type scale is fairly easy to construct. This factor makes it attractive for use by the student of opinion research.

In the construction of the scale, a list of statements is gathered which reflect favorable and unfavorable attitudes about the attitude object. The correctness of the statements is not important. They may be used if they express opinions held by a number of people. The subject responds on a five point scale and the scales are usually scored by assigning values from one to five. Five is usually the favorable end of the scale. A subject's score is the total of the values indicated. Likert-type scales can be constructed in a rather short time, require no judges, and can be scored rapidly (Best, 1970: 174-175). The reliability and validity obtained by this scale are comparable to the Remmers and Thurstone scales (Remmers, Gage, and Rummel, 1965:315).

One problem raised in the measurement of attitudes is the difficulty of validation. With the attitude scale, the problem of validity is the correspondence between what the subject describes as his attitude and one's overt behavior. The problem of reliability of any scale can usually be handled successfully since care in the selection and phrasing of the items usually give high reliabilities by both split-half and test-retest method (Klineberg, 1954:494).

Attitudes, interests, motives and values have been described as the representations of important aspects of personality. These

characteristics have an effect on education, vocational adjustment, interpersonal relations, and personal enjoyment and fulfillment.

Interviews, questionnaires, and scales can be very valuable if not trusted blindly. There have been much criticism because they are subject to distortion in cases where the respondent hopes to gain by being less frank.

ATTITUDE OF SCHOOL PERSONNEL

From the colonial period to the present, teaching in America has been associated with concerns such as low income, limited prestige, and religious and moral prompting. This position is supported by Lortie (1968:18) who stated that ". . . dedicatory ethic has developed among educators which elevates service motives at the expense of material benefits."

Miskel et al. (1975:38-53) viewed changes among teachers of the present decade which he calls a "period of transition." There is a growing militancy among teachers which is causing change in the ideology advocated by Lortie. Perhaps this continuing unrest by teachers will foster the development of a completely new ideology. It may show that teachers are losing their interest in teaching per se in favor of "intrinsic incentives." If the prediction by Miskel, et al. has any substance, attitude could force a change in the ideology of the teaching profession.

Looking into the past, we can readily observe that some change is necessary throughout the entire educational system. The entire country needs to evaluate its educational outlook. For example, The

National Advisory Council on Vocational Education (1973:2) sharply attacked the national attitude that vocational-educational is designed for "somebody else's" children. The council states that this attitude is shared by students, labor leaders, administrators, teachers, parents, and businessmen.

To continue to foster the attitude that a college degree is the "passport" to the world of work can cause much frustration to the masses of society. Worthington (1973:20) alluded to the false attitudes held by society that worships a college degree as the best avenue to occupational success has wrought havoc and disappointment. Much of what seemed to be relevant did not hold promise. America can no longer afford to look upon 83 percent of the population as less than first class citizens. There cannot be harmony where one-third try to obtain a college degree; less than one-sixth reach that goal; and more than nine-tenths regard it as the best preparation for life and work.

Success in the selection of a vocational career may be due to the attitude of the vocational teacher. A pressing issue of our society is whether a college degree is always better than vocational education. In support, Smith (1974:9) states:

While it can hardly be called a mass movement, there is encouraging signs that industrial education students--and their teachers--are working hard to counteract the bearded attitude that the baccalaureate is always better.

Early in their secondary career, students are elevated to the position of having to choose a specific direction to follow relative to the type of curriculum they will pursue while in high school. Their choice is determined by the image they have developed of the world

and of themselves. Super (1957:28) stated that a comparison has to be made between the two images by the individual in order for him or her to make a career decision. The decision that is made is determined by the attitude of that person toward the chosen career. The attitude may change in the future. Therefore, it may be a healthy sign when the students of the tenth, eleventh, and twelfth grades reorient their career projection.

In a study concerning the relationship and meaning of work, job satisfaction, and selected demographic variables of vocational and non-vocational teachers, Kazanas and Gregor (1975:12-19) indicated the following:

1. General and vocational education are charged with the responsibility of preparing youth for a meaningful and self-supporting life.
2. The leadership of the career education movement is becoming increasingly aware of the importance of attitudes and value of work held by youth.
3. During the transition from childhood to adulthood, individuals pass through psychological, physiological and sociological development.
4. From childhood to adulthood, the individual acquires attitudes, values, skills and knowledge that prepare him for meeting responsibilities for adult life.
5. Education requires that the child spend more time away from home. Therefore, there is less parental influence. The increased burden is placed on the teacher to provide opportunities for the development of attitudes to enter occupation settings.

One of the functions of teaching is to stimulate the students to develop attitudes which are desirable to them and their social contacts. The implication here is that the teacher should play a significant role in the development of attitudes of students. It may be more critical for the vocational teacher with a responsibility for preparing students to assume the proper attitude for the role of the

worker. A study by Hirschi (1968) indicated that teachers significantly influence the career-decision of their students. The study revealed that if the teachers attitudes were biased, there was an unlikelyhood that the influence was realistic or relevant.

Tippie (1972) in a comparative study of attitudes alluded to the role that the teacher plays in the formation of student attitudes. The extent of that role is not sure. The influence of the home as well as peer group will have an influence on the attitude of the student's attitude formation. The researcher further stated:

Experience with many children in the school situation has led the writer to believe many children who have behavior problems in school also manifest this same behavior away from the school situation and more time than not, there are moderate to severe family problems often related to marital difficulties of the parents. As a result, these children are not given the proper training in the home that leads to development of a responsible adult. Some teachers are able to overcome this emotional obstacle by virtue of their ability to relate to the student at his level of acceptance, whereas others cannot achieve this rapport. Perhaps, we should be far from concerned about curriculum development in the area of responsibility and attitudes, and if this should take place, it would be more important to have better knowledge of teacher attitude and their effects on the student.

The junior high school staff members' attitudes toward vocational education are crucial to the development of programs to meet the total educational needs of students. It is unlikely that the junior high school staff will commit time and resources to vocational education if they believe secondary education should be designed exclusively to produce a "well rounded graduate". However, if the junior high school staff believes that a major responsibility of secondary schools is to produce future workers, it will probably support the curriculum designed to teach skills and abilities that are required in the trade

and technical fields. Attitudes of the junior high school staff members are a basic consideration in the development of coordinated vocational programs in grades seven through twelve (Conroy, 1969:1-3).

In order for young people to make an objective choice of careers, all factions of the community (including school personnel) must settle petty differences and focus in on a common goal. That goal should be to project the attitudes necessary to enable the young people to make proper selections of career choices. This position is supported by Miller and Sue. Miller (1967:254-262) found the students who persisted in their programs (engineering and technical) scored higher on their scholastic aptitude test and were motivated to achieve and secure the benefits of the program. The dropout scored higher than the non-dropout in the area of social needs. The technical students and the engineering students may have similar profiles. Because of the similarities in profiles, it is often expressed that engineering dropouts are suited for technician programs and the top technician graduates should go into baccalaureate engineering programs. The mobility of the students between these two programs may or may not be desirable. Many of the students who transfer between the two programs have "false starts" because of improper counseling, lack of motivation, or lack of maturity. Sue (1974:64:68) alluded to the failure of teachers to understand the Chinese-American culture norms against assertion and aggressive behavior. Judgement of behavior of Asians was made according to Anglo-American standards. Although the advice given by teachers was well intentioned, much of it was

problem oriented. They did not recognize the many problems. For example, "Asians are disproportionately found in fields like physical science and engineering." Stereotyping of Asians needs to be discontinued and consideration for the unique characteristics and abilities of each should be explored.

Guidance counselors have an important role in the attitude formation of the students. They must provide the proper atmosphere for the students to develop a favorable attitude toward the world of work. Awareness of the reasons which underlie the perceptions of the counselors and the means which can make them more positive, should be an objective of educators. Hoyt (1969:12-16) stated that it is essential that an accurate and positive image of vocational education is held by the counselors. The problem may be viewed from three vantage points: (1) in terms of a clear understanding of the current image of vocational education held by the counselors; (2) in terms of image of vocational education we wish counselors to hold; and (3) in terms of the action which must be taken to substitute the second image for the first.

Hoyt made contact with thousands of counselors across the United States in order to assess their impressions of vocational education. Five of the most prevalent negative perceptions were:

1. Vocational educators are trying to turn out skilled technicians and craftsmen at the secondary school level.
2. High school vocational education is to prepare people for gainful employment.
3. Vocational education has failed to offer a sufficient variety of choices to students.
4. Vocational educators are looking for the academically talented students rather than providing for students with lower levels of academic aptitudes.

5. Vocational education exists separate and apart from regular school.

In spite of the negative image held by individual counselors, the overriding image was positive. There was a reaction to the ideal image which is consistent with the goals and objectives of the guidance movement. There are nine aspects which deserved comment:

1. Vocational education should be seen as representing a mean of expanding the spectrum of educational opportunities.
2. Vocational education should be seen as representing an opportunity for young people to discover and develop the special talents they possess.
3. Vocational education represents one aspect of the school which does provide for individual differences.
4. Vocational education represents an opportunity to discover and reflect purposefully on the values of a work oriented society.
5. Vocational education provides opportunities for all students to experience success at some level of their educational undertaking.
6. Vocational education represents a meaningful and direct contact between the school and the world of work.
7. Secondary-school vocational education represents a different avenue by which young people can explore and make decisions regarding the need for a desirability of post-secondary training and education.
8. High-school vocational education represents one place where students whose abilities are too low to profit from the training after high school can acquire basic job skill which will enable them to become productive workers.
9. Vocational education represents an opportunity for young people to explore and develop basic skills which have wide application in a variety of occupational areas.

A study by Sponaugle (1972) revealed that guidance counselors in Ohio's public schools possessed a generally favorable attitude toward vocational education. Guidance counselors in the schools served by joint vocational schools, schools not served by joint vocational schools, and metropolitan schools were less favorable toward vocational education than guidance counselors in joint vocational schools. There was no significant difference between the attitudes of the counselors of

the schools served by joint vocational schools, schools not served by joint vocational schools, and metropolitan schools.

LITERATURE RELATED TO INDEPENDENT VARIABLES

This section will review the literature related to the independent variables to be investigated in this study. The review will show a need for more research in the investigation of attitudes of teachers relative to vocational education/college preparation preference. There is a void of factual evidence about attitudes of vocational teachers toward vocational programs and about many of the variables related to these attitudes. In recent years, a few studies have been done concerning attitudes toward career education, it would be risky to generalize these results directly to vocational education.

Area of subject matter taught. An unfavorable teacher attitude toward the program in which they work is likely to affect the persistence or retention in the teaching profession. In addition, the ability to communicate with the students about substantial education or occupational information is likely to affect the attitude of the teachers. There are various factors in the school system which affect attitude toward vocational education. Vocational education does not reach a sufficient number of students on the high school level. A major reason for this may be due to the poor image of vocational education.

The public has a strong influence on the educational system. They have been indoctrinated for many years with misinformation con-

cerning the importance of a baccalaureate degree. Baker (1972:24-30) conducted a survey of the attitudes of vocational teachers, academic teachers, and the general public toward career education. The subjects consisted of 32 vocational teachers of home economics, agri-business, business education, and cooperative education programs. The same scale was administered at random to 21 academic teachers, and to 26 community members. The teachers and the public differed significantly in their bias toward individual curriculum elements relating to college preparation and vocational education. The vocational teachers believed that the need for vocational training is expanding and this expansion should include the training of "bright" students. The academic teachers disagreed with both views of the vocational teachers. Baker concluded:

If the success of the career education concept is dependent upon the lack of bias toward the individual curriculum elements, then differences in attitudes such as those found could be detrimental to the career education concept.

Calvert (1970:123-125) found that the teachers with liberal arts background recommended the liberal arts curriculum to others. Biased attitudes were also characterized by parents and neighbors.

Age and teaching experience. Age and teaching experience will be discussed together because they are normally parallel to each other.

Ryan (1960:391-393) noted the existence of significant differences between teachers in different age groups when he investigated a number of teacher characteristics relative to patterns of attitudes, educational viewpoints, emotional understanding and verbal understanding. Generally, the scores of teachers 55 years and above, were lower

when compared to younger teachers. The researcher could only speculate whether or not these age differences are dependent upon changes in the teachers' characteristics as they grew older and became more experienced or on cultural influences through training programs. Ryan concluded that age must be considered as a relevant independent variable whenever the characteristics of teachers are to be investigated. He found trends with regard to the extent of the number of years of teaching experience similar to those noted when teachers were classified relative to age. Teachers with more experience tended to score lower than the teachers with less experience on most of the variables investigated.

Differences in the educational values among teachers appeared to be reflected in the teachers' appraisal of their curriculum. It was reported that there was no significant difference between age and educational values, but persons of higher education expressed a greater progressive value orientation than those with lesser educational backgrounds (Emans, 1969:459).

Murray (1973:2), in a study of occupational orientation teachers in the schools of Mississippi concluded that the work ethic was more important to the older teachers. Recognition was given to the preparation that was necessary by high school students for work or for college. The older teachers tended to give more advice and information about career development. The younger occupational teachers tended to take a competitive point of view with regards to the students. The older teachers were more of a "parent figure" and therefore less competition was exhibited between them and the students.

Brooks (1974:45) further elaborated on Murray's conclusion by stating:

Age, experience, and training have been shown to be significantly related to a number of teacher characteristics, including teacher attitudes. There is considerable research which shows that the attitude of teachers change in a negative direction as a result of teaching experience. This is especially true during the first year or two of teaching. There is some evidence that the older occupational orientation teachers are more "educated" to the needs of the students and the teacher's role in providing these needs. The attitudes of the occupational orientation teachers likely change in a positive direction as a result of experience. Further, the occupational orientation teachers who are involved full-time in the programs have a better understanding of the program and devote a greater amount of their attention to making the program successful.

Sex. The environment in which females develop and learn differs from the environment of males. This fact makes men and women categorically different. Larimore (1969:88) emphasized that in view of expectations due to culture and stereotypes of occupation which apply to the members of both sexes, this variable should be considered as a relevant factor whenever attitudes are being investigated.

In a study of the characteristics of teachers by Ryan (1960:391) a difference in the sexes were found. Men who taught in secondary schools tended to receive lower scores than women on scales measuring stimulating and imaginative classroom behavior, attitudes toward students, "permissive" educational viewpoints, and verbal understanding.

Sex appears to be a significant factor in the prediction of development of careers of each of the sexes. A survey of 1,860 students of the 1972 graduating class at five colleges in Pennsylvania found that the sex of the student is the most significant variable influencing career choices in and out of college. The career range

expectation of the female is more restricted and they have less occupational mobility due to fewer career opportunities. The most significant finding of this study was that women tended to choose careers in which they could be less than totally committed (Gottlieb, 1973:8).

The major findings in a study of the relationship between attitudes toward vocational education and knowledge of vocational education of Tennessee guidance personnel revealed the following:

1. A positive significant relationship was found between counselors' attitudes toward vocational education and their knowledge of vocational education.
2. Full-time counselors appeared to have a more positive attitude toward vocational education than the part-time counselors.
3. Counselors who had been students in high school vocational education programs did not have a more positive attitude toward vocational education or greater knowledge of vocational education than the counselors who had not been students in vocational programs.
4. Counselors who had taught courses in vocational education did not have a more positive attitude toward vocational education or greater knowledge of vocational education than the counselors who had not taught in vocational programs.
5. Noneducational work experience, either summer or full year, did not appear to influence the counselors' attitude toward vocational education.
6. The variables of counselors' age, sex, marital status, teaching preparation, or counselor certification did not appear to be related to the counselors' attitude toward vocational education or their knowledge of vocational education.
7. Counselors who were participants in the summer vocational guidance workshop had a significantly more positive attitude toward vocational education and a greater knowledge of vocational education than the counselors who had not participated in the summer workshop (LaBorde, 1973:1083-A).

Another aspect of attitudinal development was revealed by Lagana (1972:2) who found that men entering the teaching profession had a less favorable attitude than women entering teaching. During the first five month period in the teaching situation the men entering teaching underwent a more favorable attitude change than the women

entering teaching. An interview with the teacher disclosed that although the women entering teaching were optimistic about teaching, they tended to become disenchanted with the nonchalant attitude of the students. The women teachers involved in the study revealed that they were also discouraged by the instructional practices required to achieve a desirable environment.

Not only is the concept of an attitude something that should be of vital interest to the educator but how attitudes are formed and changed should be of equal importance. A person's attitude is influenced and changed by many factors including sex. The extent of the influence is not easy to perceive. Is the school, the home, the peer group, or some other factor the most important aspect of attitude formation? All play an important part in the development of attitudes.

Work experience. For many years, persons in some of the service areas of vocational education looked to the teacher education programs of the university to provide the majority of the subject matter taught. They tended to find unacceptable a teacher education program which relied upon nonacademic experiences as the source of subject matter. In recent years the trend is changing. This may be noted by the following statement of Jerome Moss (Evans and Terry, 1971:45):

. . . presuming he or she has had high job satisfaction, some reasonable amount of time working at the occupation can almost guarantee that the teacher will represent a realistic model of workers in that occupation; he or she will possess not only the appreciations, but also a minimum amount of the personal characteristic and values that may be necessary to function "successfully" in the occupation.

After studying the methods employed by the countries of Europe to prepare vocational teachers, the International Vocational Training Information and Research Center (1964:4) reported that one group of countries places particular emphasis on the recruiting of vocational teachers who have acquired their vocational skill through long experience in employment. Here the teachers are normally recruited at a comparatively advanced age -- thirty years or over. The principal selection criterion is that the successful candidate should have proved his ability for skilled work in his trade or occupation; his general education background and scholastic achievements are taken into account only in a secondary capacity.

The previous description fits the current situation in the United States in trade and industrial education, and to a large extent in technical education. This method is used where the mission of the vocational education program emphasizes "hands on" activities. In addition to being a means for acquiring technical skills, on-the-job experiences provide a method of developing the "appreciations" (of mores, conditions of work, etc.) required of vocational teachers.

Due to the limited amount of literature uncovered, the researcher feels that the present study will provide an opportunity for more investigation concerning the work experience of vocational teachers.

SUMMARY

Although much is known about attitude and attitude formation, little research has been directed toward its human applications. Not only is the concept of an attitude something that should be of vital interest but also the formation and change of attitudes are of equal importance.

An attitude is a tendency to respond in a particular way toward a specific group or class of objects. Attitudes are usually classified into three general components: (1) cognitive; (2) emotional; and (3) behavior. An attitude is learned through direct exposure and may be positive or negative. It may be estimated from a statement of opinion.

An attitude is a characteristic which is not directly observable but is inferred by reaction to a particular stimulus. The process of inferring an attitude from an opinion which is expressed has many limitations because of the possibility of concealment of the real attitude by individuals. Best (1970:137) implied that even though there is no sure method of describing and measuring attitude, the description and measurement of opinion, in many instances, may be closely related to the real feeling of the attitude of an individual.

Investigation of educational attitudes of teachers can lead to predicting the development of attitudes (Krech, et al., 1962:146). Age, experience and sex appear to have a significant influence on the attitude of teachers.

Chapter 3

METHODS AND PROCEDURES

The purpose of this chapter is to describe the sample, discuss the instrumentation, explain the data collection procedures, discuss the validity and reliability of the attitude scale and its limitations, show the independent variables, list the hypotheses to be tested, and given an explanation of the analysis of data.

SAMPLE

The 1974-75 Virginia Education Directory was utilized in identifying 27 Area Vocational-Technical Centers of the Commonwealth. From the population of 27 centers, a random sample of 17 was selected. The geographical locations of the selected Area Vocational-Technical Centers are shown in Figure 2. Ary, Jacobs and Razavieh (1972:162) stated:

The best known of the sampling procedures is random sampling. The basic characteristic of random sampling is that all members of the population have an equal and independent chance of being included in the sample. That is, for every pair of element X and Y, X's chance of being selected equals Y's chance, and the selection of X in no way affects Y's probability of selection. The steps in random sampling:

1. Definition of the population.
2. Listing all members of the population.
3. Selection of the sample by employing a procedure where sheer chance determines which members of the list are drawn for the sample.

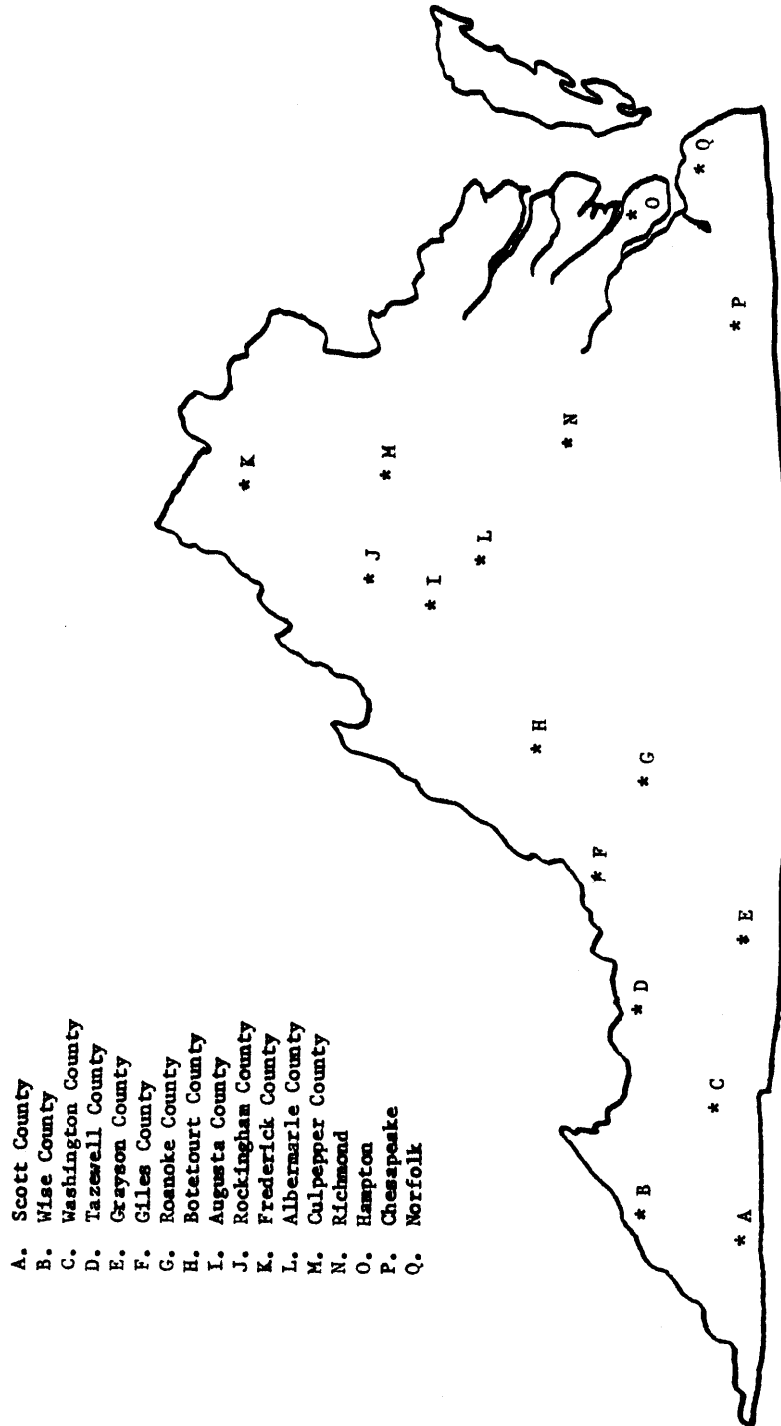


Figure 2
 Geographical Location of the Area Vocational-Technical
 Centers Represented in the Study

A letter was written by the researcher to the Virginia State Director of Vocational Education, Mr. George Orr, Jr., requesting permission to use the vocational teachers of the Area Vocational-Technical Centers as the sample for this study (Appendix D). Mr. Orr replied:

I concur the group you have identified would be a valuable source of information for your study. I am not in a position to grant permission to use this population to collect the data, but I see no problem with your soliciting these individuals in your study.

. . . the Division of Vocational Education is aware of the study and feels the information will be helpful in the future (Appendix E).

Administrative personnel at the 17 selected Area Vocational-Technical Centers were contacted by telephone or through personal contact in an effort to secure their permission to have the attitude instruments sent to the teaching personnel employed in the center of their charge. An affirmative statement was received from each administrator. Four vocational directories were used in identifying the subjects of this study (State Department of Education, 1974-75). The subjects consisted of 277 vocational teachers in the 17 selected Area Vocational-Technical Centers across the State of Virginia. All subjects were employed on a full-time basis. The teachers had met or were in the process of meeting the professional requirements for teaching in their particular area. The location and number of teachers in each of the 17 selected centers are shown in Table 1.

Table 1
Location and Number of Teachers
in Each Center

Location	Number
<u>Counties:</u>	
Albermarle (Charlottesville)	16
Augusta (Fishersville)	25
Botetourt (Fincastle)	6
Culpepper (Rapidan)	20
Frederick (Winchester)	17
Giles (Pearisburg)	8
Grayson (Independence)	8
Roanoke (Salem)	15
Rockingham (Harrisonburg)	10
Scott (Gate City)	11
Tazewell (Tazewell)	12
Washington (Abingdon)	10
Wise (Wise)	22
<u>Cities:</u>	
Chesapeake	18
Hampton	23
Norfolk	28
Richmond	28
TOTAL	277

INSTRUMENTATION

Central to this study are the attitude statements used in an instrument devised by Baker, Clark and Miller (Appendix A) to gather similar data.

The first part of the Baker data collection instrument was a Likert-type scale. It was used to measure the attitudes of the vocational teachers relative to college preparation and vocational education. The scale consisted of 30 statements representing college preparation and vocational education concepts. Each statement was arranged on a favorable or unfavorable five point scale ranging from 1 (lowest response) to 5 (highest response) as shown:

3. Every vocational teacher should 5 4 3 2 1
 earn a degree.
- 5 strongly agree
 4 agree
 3 no opinion
 2 disagree
 1 strongly disagree

The second part of the instrument was used to qualify the 5 independent variables: (1) subject area taught; (2) years of work experience; (3) years of teaching experience; (4) college credits earned to date; and (5) future college plans.

The scale was devised by reviewing instruments used in several studies related to attitude and to vocational education. Statements from these studies were assembled and additional statements were added as a means of looking into specific topics and to provide adequate breadth. The scale had two major elements. The first was

devised to ascertain the favorable or unfavorable attitude. Secondly, the degree to which the attitudes were favorable or unfavorable toward vocational or academic areas.

Face validity is determined by examination of the title and appearance of the test. A test may be said to have face validity if it appears to measure what the designer says it measures (Smith and Adams, 1966:63).

The face validity for the scale devised by Baker, Clark, and Miller was verified through a combination of the Thurstone Technique and the Likert Method (see Chapter 2). Five vocational teachers with interest and training in attitudinal research were selected as a panel of judges. Their role was to revise and select the statements to be used in the scale. Revision continued until total agreement was reached. In the final agreement, 30 statements remained for the purpose of representing the attitude scale by Baker, et al. The scale was then structured after the Likert pattern (Baker, et al., 1975:6).

Reliability is the extent to which a measuring device is consistent and accurate in yielding comparable scores upon administration (Ary, Jacobs, and Razavieh, 1972:190). That is, the score of an individual or a group should remain constant over a specified interval of time.

The scale was administered to a random sample of 150 vocational teachers to test its reliability. The teachers were participants in in-service activity in two states, 90 in Missouri and 60 in Texas. Split-half comparisons were performed on the 30 attitude statements.

When computed by Baker, et al., the split-half comparisons gave a reliability of .81+.

The teachers represented the following specialized areas:

1. Trade, industrial and technical education
2. Business, office and distributive education
3. Health education
4. Home economic education (Baker, Miller, and Clark, 1975:6).

The form used to collect data for the present study consisted of the 30 attitude statements utilized in the Baker scale (A description of the Baker, Miller, and Clark instrument may be seen in Appendix C) and the following independent variables: (1) the area of subject matter taught; (2) the age of the teacher; (3) the number of years of work experience; (4) the number of years of teaching experience; and (5) the sex of the teacher. (Appendix A). The attitude statements and the independent variables were printed on a data processing sheet. The completed sheet could be fed directly into the computer.

The purpose of the instrument was to measure the extent to which the independent variables affected the attitude (vocational education/college preparation preference) of the vocational teachers.

To define the attitude of the teachers, it was necessary to determine the total score of the dependent variable items on the survey instrument. Each dependent variable item was assigned a value ranging from five (low) to nine (high). Utilization of the 30 dependent variable items and the theoretical values from each item

produced a low range of 150 and a high range of 270; thus, an arithmetic mean of 210 was observed. Because the 30 dependent variable items had a tendency to focus toward the college preparation concept, a mean score of less than 210 indicated a college preparation preference and a score of more than 210 indicated a vocational education preference.

COLLECTION OF DATA

A total of 277 vocational teachers were identified for the purpose of investigating their attitude toward vocational education and college preparation.

The survey was conducted by mail and sent individually to the place of employment of each subject on February 16, 1976. The individual survey packet contained a cover letter (Appendix F), an instrument, a return envelope and postage. Each instrument was numerically coded for the purpose of identification upon return. A number was assigned to each of the teachers. When an instrument was received from each teacher, there was simply a matter of comparing the number corresponding with the name.

Two weeks were allowed for response before the initiation of follow-up procedure. At this time, post cards (Appendix G) were mailed to each subject who had failed to return the instrument. If after the first reminder, the subject failed to respond within one week, another survey packet was mailed with a reminder letter. (Appendix H).

The normal minimum rate of return for a mail survey is 40 percent. This type of research often limits the researcher in quantity, as well as the quality of the data collected (Travers, 1969: 199-200). It was anticipated that a much higher rate of return would be obtained due to the nature of this study and the cooperation of the vocational teachers involved. Mouly (1965:255) stated that a high percentage of return is promoted when the topic has interest and psychological meaning. A rate of at least 60 percent was expected by the researcher.

This prediction proved accurate. By March 14, 1976, 72.9 percent or 202 of the 277 survey instruments had been returned. It may be speculated that the subject of "attitudes of vocational teachers" was a topic worthy of investigation and of significant interest to the vocational teachers participating in the study. Table 2 shows the number of instruments returned on a weekly basis while Table 3 shows the number of survey instruments sent to each Area Vocational-Technical Center and the number of returns and percentage of instruments returned.

As each instrument was received, it was examined to determine its completeness and/or correctness. If a discrepancy such as poor marking was observed, the correction was made by the researcher. If corrections would not be made by the researcher, the instrument was returned to the teacher for the necessary changes. Only two instruments were returned for corrections. The completed instruments were recorded by the numerical coding system which utilized the names associat-

Table 2
Weekly Instrument Return

Week No.	Number Returned	Percent Returned
1	107	38.6
2	29	10.5
3	36	13.0
4	30	10.8
TOTAL	202	72.9

Table 3

Summary of Instruments Mailed and Number
and Percentage of Return

Location	Number Mailed	Number Returned	Percent Returned
<u>Counties:</u>			
Albermarle	16	14	87.5
Augusta	25	19	76.0
Botetourt	6	5	83.3
Culpepper	20	12	60.0
Frederick	17	11	64.7
Giles	8	6	75.0
Grayson	8	7	87.5
Roanoke	15	11	73.3
Rockingham	10	8	80.0
Scott	11	8	72.7
Tazewell	12	10	83.3
Washington	10	6	60.0
Wise	22	13	59.1
<u>Cities:</u>			
Chesapeake	18	13	72.2
Hampton	23	19	82.6
Norfolk	28	22	78.6
Richmond	28	18	64.3
TOTAL	277	202	

ed with numbers. The facilities of the computer center at Virginia Polytechnic Institute and State University were utilized to analyze the data.

HYPOTHESES

Hypothesis I. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to the area of subject matter which they teach and their age.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the area of subject matter taught and σ^2_2 is the variance of the age.

Hypothesis II. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to the area of subject matter which they teach and their number of years of work experience outside of teaching.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the area subject matter taught and σ^2_2 is the variance of the years of work experience.

Hypothesis III. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of

Virginia relative to the area of subject matter which they teach and their number of years of teaching experience.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the area of subject matter taught and σ^2_2 is the variance of the years of teaching experience.

Hypothesis IV. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to their age and the number of years of work experience outside of teaching.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the age and σ^2_2 is the variance of the number of years of work experience.

Hypothesis V. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to their age and number of years of teaching experience.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the age and σ^2_2 is the variance of the number of years of teaching experience.

Hypothesis VI. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of

Virginia relative to their number of years of work experience outside of teaching and number of years of teaching experience.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the number of years of work experience and σ^2_2 is the variance of the number of years teaching experience.

Hypothesis VII. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to their sex (male-female).

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the males and σ^2_2 is the variance of the females.

The Statistical Analysis System (SAS), analysis of variance procedure designed and implemented by Barr and Goodnight (1972), was used in testing the hypotheses. All hypotheses were tested at the alpha level of 0.05. The critical F values used in the study were derived from Table D by Ferguson (1971:452-455).

ANALYSIS

Statistics employed in analyzing the data for this study was the analysis of variance (ANOVA). It served to test the difference between the attitude of the vocational teachers relative to: (1) the area of subject matter taught and their age; (2) the area of subject matter taught and their number of years of work experience; (3) the area of subject matter taught and their number of years of teaching

experience; (4) their age and number of years of work experience; (5) their age and number of years of teaching experience; (6) their number of years of work experience and number of years of teaching experience; and (7) their sex (male-female).

Best stated that:

The analysis of variance is a convenient way to determine whether the means of more than two samples are too different to attribute to sampling error. It would be possible to use a number of t-tests to determine the significance of the difference between five means, two at a time, but it would involve ten separate tests. An analysis of variance would make the determination possible with a single test, rather than ten (Best, 1970: 276).

Ferguson (1971:223) stated, "Experiments with two-way classification may be conducted with only one sampling unit, and measurement for each experimental condition."

SUMMARY

In chapter 3, the sample was clarified; an explanation of the type of scale used, and its purpose, and a validity and reliability statement was given; information concerning the collection of data was discussed; the independent variables and hypotheses to be tested were presented; and the analyses of the data was detailed.

The sample consisted of 17 Vocational-Technical Centers across the State of Virginia. An attitude scale was mailed to each of the 277 teachers employed in the centers. Follow-up procedures were used. The respondents returned 72.9 percent of the scales.

Chapter 4

RESULTS

INTRODUCTION

The major purpose of this chapter is to present and interpret the statistical technique applied to the data and indicate the results obtained. As indicated in chapter 3, the major objective of the research project was to assess the attitude of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to their vocational education and college preparation preference. In order to assess their attitude, a survey instrument was mailed to each subject. A total of 202 (72.9 percent) of the 277 subjects responded. The attitude of the teachers was assessed in terms of the total score of the dependent variable items on the survey instrument.

Two research designs, a one-way classification of variance and a two-way classification of variance, were utilized to answer the eight research questions posed by this study. A two-way analysis of variance was used to analyze the data in each of the first six hypotheses. A one-way analysis of variance was employed to analyze the data in the seventh hypothesis. When drawing conclusions regarding analysis, the 0.05 level of significance was used. Discussion of the two-way classifications was directed toward three treatment areas: (1) treatment of the first independent variables in the classification;

(2) treatment of the second independent variable in the classification; and (3) treatment of the two variables as a combination. The chapter is divided into nine sections:

1. Analysis of Data Concerning Area and Age
2. Analysis of Data Concerning Area and Work Experience
3. Analysis of Data Concerning Area and Teaching Experience
4. Analysis of Data Concerning Age and Work Experience
5. Analysis of Data Concerning Age and Teaching Experience
6. Analysis of Data Concerning Work Experience and Teaching Experience
7. Analysis of Data Concerning Sex (male-female)
8. Disposition of the Hypotheses
9. Predictability of Personal Characteristics Variables

ANALYSIS OF DATA CONCERNING AREA AND AGE

Hypothesis I. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers of the State of Virginia relative to the subject matter which they teach and their age.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the area subject matter taught and σ^2_2 is the variance of the age of the teachers.

Analysis of variance was performed by classifying: (1) the area of subject matter taught by the teachers and their attitude scores; (2) the age of the teachers and their attitude scores; and (3) the area

of subject matter taught by the teachers, their age, and attitude scores. Treatment of the area of subject matter and attitude scores yielded 5 degrees of freedom for the area of subject matter; 172 degrees of freedom for the residual; and a calculated F value of 1.070. Based on the degrees of freedom, the critical F value was 2.26. The critical F value of 2.26 was greater than the calculated F value of 1.070 which indicated the attitude of the vocational teachers was not influenced by the area of subject matter which they teach when analyzed individually with relation to their age. The age of the teachers and their attitude scores yielded 4 degrees of freedom for the age; 172 degrees of freedom for the residual; a calculated F value of 4.888 and a critical F value of 2.41. This indicated the vocational education/college preparation preference of the vocational teachers was influenced by their age when analyzed individually with relation to the area of subject matter taught. Analysis of the area of subject matter taught, teachers' age, and their attitude scores revealed 20 degrees of freedom for the area of subject matter taught; 172 degrees of freedom for the residual; and a calculated F value of 0.175. The degrees of freedom produced a critical F value of 1.62. With a critical F value greater than the calculated F value, the null hypothesis statement of no difference between the attitude of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to the area of subject matter which they teach and their age was retained. The results of the analysis is presented in Table 4.

Table 4

Summary Table of ANOVA for Total Scores
on Area and Age Groups

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Value
Area	5	663.070	132.614	1.070
Age	4	2423.538	605.884	4.888*
Area-Age	20	434.750	21.738	0.175
Residual	172	21318.489	123.945	
TOTAL	201	24839.847		

F .95 (5,172) = 2.26

F .95 (4,172) = 2.41*

F .95 (20,172) = 1.62

*Significant at the 0.05 level

ANALYSIS OF DATA CONCERNING AREA AND WORK EXPERIENCE

Hypothesis II. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to the area of subject matter which they teach and their number of years of work experience outside of teaching.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the area of subject matter taught and σ^2_2 is the variance of the number of years of work experience.

The data were analyzed by a two-way ANOVA. The following variables were classified: (1) the area of subject matter taught and the attitude scores; (2) the number of years of work experience and the attitude scores; and (3) the area of subject matter taught, number of years of work experience, and attitude scores. Analysis revealed 5 degrees of freedom for the subject matter taught, 172 degrees of freedom for the residual; and a calculated F value of 1.014. The critical F value of 2.26 was greater than the calculated F value of 1.014. This provided evidence for retention of the null hypothesis that the vocational education/college preparation preference of the vocational teachers was not influenced by the area of subject matter which they teach when tested with relation their number of work experience outside of teaching. Examination of the number of years of work experience and the attitude scores revealed 4 degrees of freedom for the number of years of work experience; 172

degrees of freedom for the residual; and a calculated F value of 0.798. Evaluation of the degrees of freedom resulted in a critical F value of 2.26. The indication was that the attitude of the vocational teachers was not influenced by the number of years of work experience when tested individually with relations to the area of subject matter taught due to the greater calculated F value. The area of subject matter taught, work experience, and attitude of the teachers yielded 20 degrees of freedom for the area of subject matter taught and the work experience; 172 degrees of freedom for the residual; a calculated F value of 0.487; and a critical F value of 1.62. Therefore, with the critical F value greater than the calculated F value, the indication was that no difference existed between the vocational education/college preparation preference of the vocational teachers. The null hypothesis was retained. The summary statistics is found in Table 5.

ANALYSIS OF DATA CONCERNING AREA AND TEACHING EXPERIENCE

Hypothesis III. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers of the State of Virginia relative to the area of subject matter which they teach and their number of years of teaching experience.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the area of subject matter taught and σ^2_2 is the variance of the teaching experience.

Table 5

Summary Table of ANOVA for Total Scores
on Area and Work Experience Groups

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Value
Area	5	663.070	132.414	1.014
Work Experience	4	417.458	104.365	0.798
Area-Work Experience	20	1275.505	63.775	0.487
Residual	172	22483.814	30.720	
TOTAL	201	24839.847		

F .95 (5,172) = 2.26

F .95 (4,172) = 2.41

F .95 (20,172) = 1.62

Analysis of variance was performed by classifying: (1) the area of subject matter taught and the attitude scores; (2) the years of teaching experience and the attitude scores; and (3) the area of subject matter taught, work experience, and the attitude scores.

Treatment of the area of subject matter taught and the attitude scores yielded 5 degrees of freedom for the area of subject matter taught; 172 degrees of freedom for the residual; and a calculated F value of 1.202. Based on the degrees of freedom, the critical F value was 2.26. This indicated that the preference of the vocational teachers was not influenced by the area of subject matter which they teach with relation to the number of years of teaching experience. The number of years of teaching experience and the attitude scores yielded 4 degrees of freedom for the teaching experience; 172 degrees of freedom for the residual; and a calculated F value of 1.991. The degrees of freedom produced a critical F value of 2.41. The results indicated that the vocational education/college preparation preference of the vocational teachers was not influenced by the years of teaching experience when analyzed with relation to the area of subject matter taught. Calculation of the area of subject matter taught, teaching experience, and attitude scores produced 20 degrees of freedom for the subject matter taught and the teaching experience; 172 degrees of freedom for the residual; and a calculated F value of 1.962. Because the critical F value of 1.62 was less than the calculated F value of 1.962 the null hypothesis of no difference between the attitude of the vocational teachers relative to the area of subject matter taught

and the number of years of teaching experience was rejected. The results of the analysis of variance is presented in Table 6.

ANALYSIS OF DATA CONCERNING AGE AND WORK EXPERIENCE

Hypothesis IV. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to their age and number of years of work experience outside of teaching.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the age of the teachers and σ^2_2 is the variance of the number of years of work experience outside of teaching.

By classifying the age of the teachers and their attitude scores; number of years of work experience and the attitude scores; and the age, years of work experience, and attitude scores with the aid of ANOVA, the following resulted:

1. The age and attitude scores produced 4 degrees of freedom for the age; 177 degrees of freedom for the residual; 4.790 calculated F value; and a critical F value of 2.41. This indicated that the vocational teachers' preference was influenced by their age when tested individually with relation to the number of years of work experience.

2. The number of years of work experience and the attitude scores yielded 4 degrees of freedom for the work experience; 177 degrees of freedom for the residual; a calculated F value of 0.856;

Table 6

Summary Table of ANOVA for Total Scores on
Area and Teaching Experience Groups

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Value
Area	5	663.070	132.614	1.202
Teaching Experience	4	876.070	219.165	1.991
Area-Teaching Experience	20	4328.660	216.433	1.962*
Residual	172	18971.457	110.299	
TOTAL	201	24839.847		

*Significant at the 0.05 level

F .95 (5,172) = 2.26

F .95 (4,172) = 2.41

F .95 (20,172) = 1.62*

and a critical F value of 2.41. This indicated that no difference existed in the attitude of the vocational teachers relative to their number of years of work experience when tested with relation to their age.

3. The age, work experience, and attitude scores produced 16 degrees of freedom for the age and work experience; 177 degrees of freedom for the residual; 0.227 calculated F value; and 1.69 critical F value. The null hypothesis that there was no difference between the vocational education preference of the vocational teachers relative to their age and number of years of work experience was maintained. The results of the analysis of variance is shown in Table 7.

ANALYSIS OF DATA CONCERNING AGE AND TEACHING EXPERIENCE

Hypothesis V. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to their age and number of years of teaching experience.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the age and σ^2_2 is the variance of the teaching experience.

Analysis of variance was performed by classifying the following:

1. The age of the teachers and their attitude scores.
2. The number of years of teaching experience and the attitude scores.

Table 7

Summary Table of ANOVA for Total Scores
on Age and Work Experience Groups

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Value
Age	4	2423.538	605.884	4.790*
Work Experience	4	417.458	104.365	0.856
Age-Work Experience	16	422.309	27.627	0.227
Residual	177	21576.572	121.901	
TOTAL	201	24839.847		

F .95 (4,177) = 2.41*

F .95 (4,177) = 2.41

F .95 (16,177) = 1.69

*Significant at the 0.05 level

3. The number of years of teaching experience, the age, and the attitude scores.

Treatment of the age and the attitude scores of the teachers yielded the following:

1. The age yielded 4 degrees of freedom.
2. The residual yielded 177 degrees of freedom.
3. A calculated F value of 5.193 was derived.
4. A critical F value of 2.41 was indicated.

Analysis concluded that there was a difference between the preference of the vocational teachers relative to their age when analyzed with relation to their teaching experience.

Treatment of the number of years of teaching experience and the attitude scores indicated the following:

1. The teaching experience yielded 4 degrees of freedom.
2. The residual yielded 177 degrees of freedom.
3. A calculated F value of 1.879 was derived.
4. A critical F value of 2.41 was indicated.

The critical F value of 2.41 was greater than the calculated F value of 1.879 which indicated the preference of the vocational teachers was not affected by their number of years of teaching experience when analyzed individually with relation to their age.

Analysis of the age, teaching experience, and the attitude scores revealed the following:

1. The age and teaching experience revealed 16 degrees of freedom.

2. The residual revealed 177 degrees of freedom.
3. A calculated F value of 0.573 was derived.
4. A critical F value of 1.69 was indicated.

Through analysis, it was concluded that the vocational teachers' vocational education/college preparation preference was not influenced by their age and number of years of teaching experience. The summary statistics is found in Table 8.

ANALYSIS OF DATA CONCERNING WORK EXPERIENCE AND TEACHING EXPERIENCE

Hypothesis VI. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to their number of years of work experience and their number of years of teaching experience.

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the years of work experience and σ^2_2 is the variance of the years of teaching experience.

Analysis of variance was performed by classifying: (1) the number of years of work experience and the attitude scores; (2) the number of years of teaching experience and the attitude scores; and (3) the number of years of work experience, the number of years of teaching experience, and the attitude scores. Treatment of the work experience and attitude scores yielded 4 degrees of freedom for the work experience; 177 degrees of freedom for the residual; and a calculated F value of 0.808. Based on the degrees of freedom, the

Table 8

Summary Table of ANOVA for Total Scores
on Age and Teaching Experience Groups

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Value
Age	4	2423.538	605.884	5.193*
Teaching Experience	4	876.660	219.165	1.879
Age-Teaching Experience	16	1069.200	66.825	0.573
Residual	177	20470.449	116.652	
TOTAL	201	24839.847		

F .95 (4,177) = 2.41*	*Significant at the 0.05 level
F .95 (4,177) = 2.41	
F .95 (16,177) = 1.69	

critical F value was 2.41 which indicates that the number of years of work experience outside of teaching has no influence on the vocational education/college preparation preference of the vocational teachers when analyzed with relation to the number of years of teaching experience. Treatment of the number of years of teaching experience and the attitude scores yielded 4 degrees of freedom for the teaching experience; 177 degrees of freedom for the residual; and a calculated F value of 1.696. The degrees of freedom produced a critical F value of 2.41 which was greater than the calculated F value. Thus, the indication was that no difference existed between the preference of the vocational teachers relative to their number of years of teaching experience when analyzed with relation to their work experience. Treatment of the work experience, the teaching experience, and the attitude scores yielded 16 degrees of freedom for the work experience and teaching experience; 177 degrees for the residual; and a calculated F value of 0.327. The critical F value of 1.69 indicated the work experience outside of teaching and the years of teaching experience do not influence the vocational education/college preparation preference of the vocational teachers. The null hypothesis was retained. The results of the analysis of variance is presented in Table 9.

ANALYSIS OF DATA CONCERNING SEX (MALE-FEMALE)

Hypothesis VII. There is no difference between the attitude (vocational education/college preparation preference) of the vocational teachers of the Area Vocational-Technical Centers in the State of

Table 9

Summary of ANOVA for Total Scores on Work
Experience and Teaching Experience
Groups

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Value
Work Experience	4	417.458	104.365	0.808
Teaching Experience	4	876.660	219.165	1.696
Work Experience- Teaching Experience	16	675.934	42.246	0.327
Residual	177	22869.794	129.208	
TOTAL	201	24839.847		

F .95 (4,177) = 2.41

F .95 (4,177) = 2.41

F .95 (16,177) = 1.69

Virginia relative to their sex (male-female).

$$H_0: \sigma^2_1 - \sigma^2_2 = 0$$

where σ^2_1 is the variance of the males and σ^2_2 is the variance of the females.

When classifying the sex of the teachers and their attitude scores, 1 degree of freedom for the sex, 200 degrees of freedom for the residual, a calculated F value of 0.728, and a critical F value of 3.81 were derived. This indicated that sex was not a factor significantly influencing the vocational education/college preparation preference of the vocational teachers. Therefore, the null hypothesis is retained. Results of the data analyses which reflects retention of the null hypothesis is presented in Table 10.

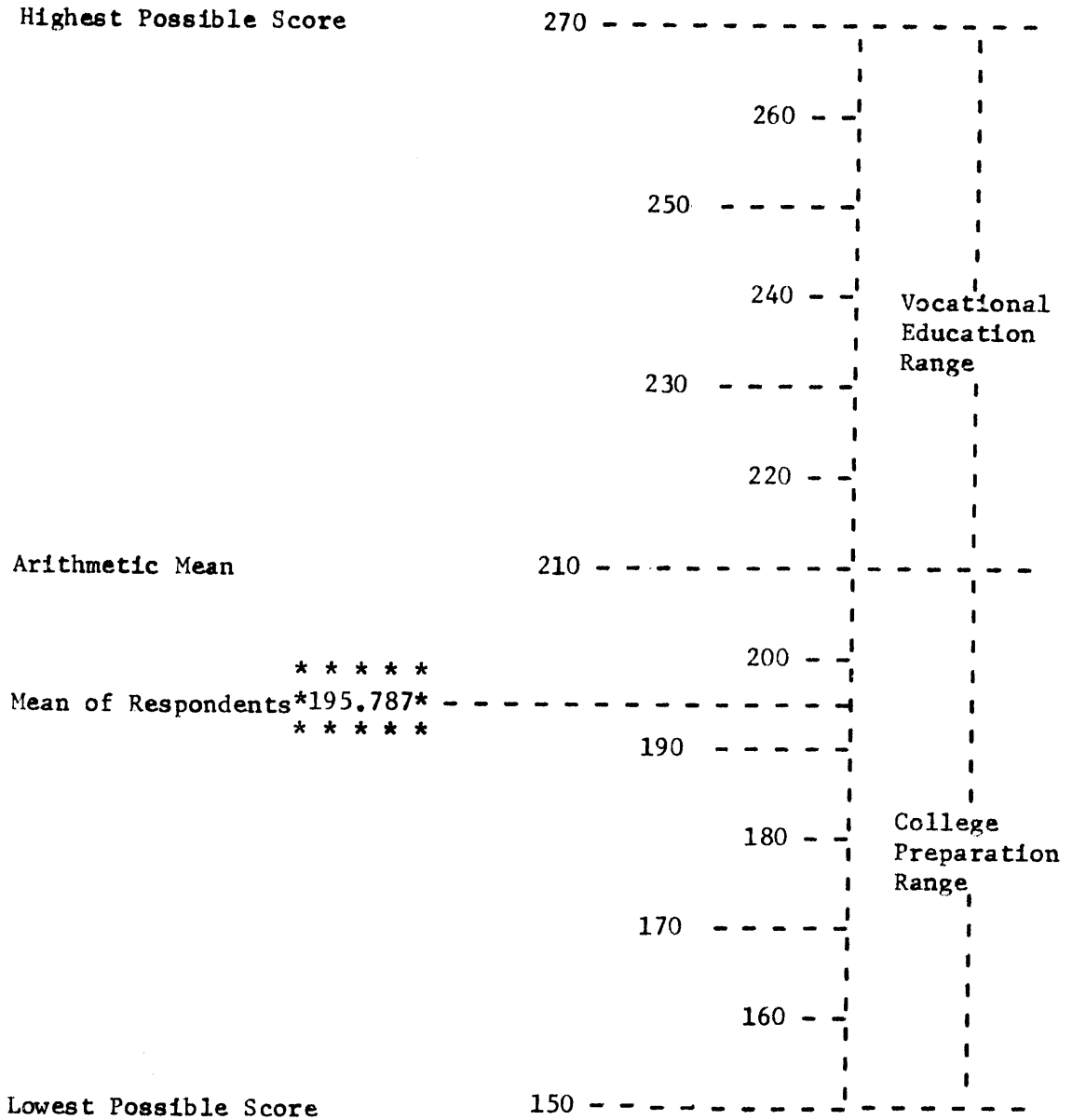
Based on the numerical value assigned to the criterion variable items, the highest possible score that could be attained on the attitude scale by the respondents was 270 and the lowest possible score was 150. The arithmetic mean was 210. The range between 210 and 270 was assigned to vocational education preference and the range between 150 and 210 was assigned to college preparation preference. It was possible to designate the above ranges because the criterion variable items had a tendency to focus toward college preparation and each item was scored in a sequence from one (agree) to five (no opinion) as shown in Appendix A. The values from the survey instruments completed by the respondents produced an overall criterion mean of 195.787 (see Table 11).

Table 10
Summary of ANOVA for Total Scores
on Sex Groups

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Value
Sex	1	90.052	90.052	0.728
Residual	200	24749.795	123.749	
TOTAL	201	24839.847		

F .95 (1,200) = 3.81

Table 11
Illustration of Means



PREDICTABILITY OF PERSONAL CHARACTERISTIC VARIABLES

Many of the personal characteristic variables involved in this study do not appear to be related to the vocational education/college preparation preference of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia. The lack of significance between the combinations of characteristics variables may infer that the personal characteristics of the teachers examined in this study might not serve as valid indicators of teacher preference. Also, there was indication that the variables were independent of each other because of the lack of difference between them at the 0.05 level confidence. Consequently, the examination of combinations of personal characteristics variables was not deemed appropriate.

SUMMARY

In this chapter the findings of the research were described. Analysis of the data provided information which was used to determine the retention or rejection of the null hypotheses. Based on the data analysis, six of the seven hypotheses were retained. The analyzed data was presented in tabular form.

The seven hypotheses were concerned with the assessment of the attitude (vocational education/college preparation preference) of the vocational teachers employed in the Area Vocational-Technical Centers across the State of Virginia. An effort was made to determine if any difference existed in their attitude when tested with relation to selected personal characteristic variables.

The overall mean of the respondents was 195.787 which indicated a college preparation preference.

The predictability of many of the personal characteristic variables appeared not to serve as valid indicators of teacher preference.

Chapter 5

SUMMARY AND CONCLUSIONS

In recent years, increasing emphasis has been placed on the importance of the teacher and the teaching environment. The teacher is in a position to transmit his or her attitude or concept to students. This role has been and is still allocated to the teacher because he or she has met some specified criterion. Much energy is expended in an effort to determine those traits and attributes which contribute to the success of teachers. Research concerning the attitude of vocational teachers is an important facet of the learning process which needs to be investigated.

The purpose of this study was to assess the attitude of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia relative to their vocational education and college preparation preference. The problem was defined as determining if certain independent or personal characteristics variables influenced the vocational education and college preparation preference of the vocational teachers employed in these centers. Thirty statements, as part of a survey instrument, were selected as the criterion measures to assess the preference of the teachers.

There was obviously a need for such a study, since information concerning the vocational education and college preparation preference

of the vocational teachers is almost totally lacking. The information is necessary in order that the vocational teachers and others might become cognizant of their negative and positive traits in an effort to strengthen themselves and make them more effective teachers.

A review of the related literature concerning vocational teachers and teachers of other disciplines proved helpful. There was a minimal amount of research that directly related to vocational education and college preparation preference of vocational teachers. However, the literature did provide important information about the concept and measurement of attitude, including the various types of measuring instruments.

RESTATING THE QUESTIONS

In order to determine the data required and the design of the research, certain questions were raised, including the following:

1. Is there any difference between the attitude of the vocational teachers relative to the area of subject matter which they teach and their age?
2. Is there any difference between the attitude of the vocational teachers relative to the area of subject matter which they teach and their number of years of work experience?
3. Is there any difference between the attitude of the vocational teachers relative to the area of subject matter which they teach and their number of years of teaching experience?
4. Is there any difference between the attitude of the vocation-

al teachers relative to their age and the number of years of work experience?

5. Is there any difference between the attitude of the vocational teachers relative to their age and the number of years of teaching experience?

6. Is there any difference between the attitude of the vocational teachers relative to their number of years of work experience and number of years of teaching experience?

7. Is there any difference between the attitude of the vocational teachers relative to their sex (male-female)?

8. To what extent are the combinations of the personal characteristics variables predictive of teachers attitude toward vocational education and college preparation?

To analyze the data statistically, the questions posed were restated in the form of hypotheses. So stated, they could be either retained or rejected. The data obtained from the vocational teachers response to the attitude instrument were used to answer these questions.

It was assumed that the vocational teachers would be able to interpret the attitude instrument and provide an accurate account of their feelings.

The limitations of the study were:

1. The respondents were vocational teachers and a majority (52.2 percent) of them were trade and industrial teachers.

2. The findings are most appropriate to the teachers of the Area Vocational-Technical Centers in the Commonwealth of Virginia.

Generalization beyond this group should be made with extreme caution.

REVIEW OF THE METHODS AND PROCEDURES

The study was based on the response of the vocational teachers employed on a full-time basis in 17 of the Area Vocational-Technical Centers in the State of Virginia. The 17 centers were randomly selected from a total of 27. There were 277 teachers employed in the 17 centers who comprised the following major vocational education categories: (1) agriculture education; (2) business and office education; (3) distributive education; (4) health occupations education; (5) home economics education; and, (6) trade and industrial education.

The data were collected during the period from February 16 to March 14, 1976. Follow-up procedures were used. A two-part survey instrument was used in collecting the data. The first part contained five independent variables and the second part contained thirty attitude statements with implications toward vocational education and college preparation concepts. All necessary information, including the variables and the attitude statements, was printed on optical scanning sheets which were numerically coded for the purpose of identification upon return. The data were scored and tabulated by optical scanning and data processing equipment. Analysis of variance was used to determine the level of significance between the variance of the attitude of the vocational teachers. Each test of significance was performed at the 0.05 alpha level.

CONCLUSIONS

Conclusions reached were based on the results of the analysis of the data; and, as such, were circumscribed by the assumption and limitations of the research.

Conclusions reached on the basis of the hypothesis testing were as follows:

1. The vocational teachers' attitude (vocational education/college preparation preference) was not influenced by the combination of the area of subject matter taught and their age.
2. The vocational teachers' vocational education/college preparation preference was not influenced by the combination of the area of subject matter taught and their number of years of work experience outside of teaching.
3. The vocational teachers' vocational education/college preparation preference was influenced by the combination of the area of subject matter taught and by the number of years of teaching experience.
4. The vocational teachers' vocational education/college preparation preference was not influenced by the combination of their age and number of years of work experience.
5. The vocational teachers' vocational education/college preparation preference was not influenced by the combination of their age and number of years of teaching experience.
6. The vocational teachers' vocational education/college preparation preference was not influenced by the combination of their

number of years of work experience and number of years of teaching experience.

7. The vocational teachers' vocational education/college preparation preference was not influenced by their sex (male-female).

8. The analysis revealed that the length of association with industry did not influence the attitude of the vocational teachers.

The lack of difference between the combinations of the majority of the personal characteristics variables of this study tended to indicate that they probably do not serve as valid indicators of the vocational education and college preparation preference of the subjects. Similar data supporting the results of this study were reported by Finch (1969:63). However, Brooks (1974:45) reported that age, experience and training were factors which have been shown to be significantly related to a number of teacher related characteristics, including teacher attitude. Ryan (1960:391) reported that sex appeared to be a significant factor in the prediction of development of careers of each of the sexes. The present study revealed that age was a characteristic which showed significant differences when it appeared as a single variable. When combined, the area of subject matter taught and the number of years of teaching experience showed a significant difference at the level tested. The lack of difference between the combinations of personal characteristics variables might have resulted due to the large number of trade and industrial education personnel used in the study as opposed to the smaller number for the remaining groups (see Appendix I).

The overall criterion mean score of 195.787 was a deviation of 14.213 from the arithmetic mean of 210. This implied that the vocational education/college preparation preference of the teachers, as a group, had a tendency to be in favor of college preparation as opposed to vocational education. Baker, et al. (1975:16) concluded that the data of their study strongly suggested that the vocational teachers were biased against vocational education and favored college preparation.

The existence of such a bias as reported by the present research and by Baker's study is justification for further research and evaluation. If the existence of this bias should prove widespread, it should be regarded as a cause for concern by teachers in vocational programs. The effects of such an attitude may have implications that are not readily seen by vocational education personnel.

RECOMMENDATIONS

The following recommendations are suggested for utilization of the study and for further research in the area of attitude assessment:

1. This study should be replicated to add reliability to the research procedure and methodology.
2. It is recommended that the study be replicated using a sample of vocational teachers from all geographical locations in the United States.
3. Research efforts should be directed specifically at other influences; such as, social, economic, etc., to determine their effects

on the attitudes (vocational education/college preparation preference) of vocational teachers.

4. The attitude instrument used for this study should be further tested for possible widespread use in assessing the vocational education/college preparation preference of vocational teachers.

5. The response by the vocational teachers of the Area Vocational-Technical Centers of Virginia clearly indicates an interest in this type of research. It is, therefore, recommended that additional research be directed involving other groups of vocational teachers.

6. It is recommended that the findings of this study be utilized by teacher education personnel of vocational programs as an aid in formulating general background knowledge of prospective teachers entering their teacher education programs.

7. The limited amount of literature specifically related to vocational education/college preparation preference of teachers indicates a need for further study. It is recommended that additional research be directed involving teachers of disciplines other than vocational areas.

8. A large percentage of the subjects used in this study were teachers of the trade and industrial area of vocational education. This factor may have influenced the outcome. It is recommended that further study be implemented utilizing the individual vocational areas.

9. The area of subject matter taught and the number of years of teaching experience were the only pair of variables which showed

a significant difference when tested at the 0.05 alpha level. It is recommended that additional research be directed toward investigating these two factors relative to vocational teachers in an effort to determine the extent of these differences.

10. Utilization of the results of this study would be increased by publication in profession journals.

11. This study utilized selected vocational teachers. It is recommended that additional research be done involving vocational students.

12. The results of this study suggest acceptance of six of the seven stated hypothesis. Ultimate acceptance of the hypotheses should not be considered until further research is made, using larger sample sizes.

SUMMARY

The preceeding discussion was intended to provide a summary of the study, the conclusions reached, and to state recommendations. The summary included a framework for the investigation, discussion of the literature researched, methods and procedures of the research, and analysis of the data.

The framework for the investigation related to: (1) the purpose of the investigation; (2) the definition of the problem; (3) the need for such a study; (4) the assumption of the study; (5) and the limitation of the study. Statements about the literature showed its relationship to the study.

The methods and procedures defined the sample, presented the instrumentation, explained the data collection procedures, and defined the statistics employed to analyze the data.

The conclusions were reached on the basis of the analysis. Recommendations for use and further study were presented.

LITERATURE CITED

LITERATURE CITED

- Advisory Council on Vocational Education. Vocational Educational: The Bridge Between Man and His Work, Washington, D.C.: Office of Education, 1968.
- Allport, G. W. "Attitudes," Murchison, C. (ed.). Handbook of Social Psychology, Worcester, Mass.: Clark University Press, 1935.
- Ary, Donald, Jacobs, Lucy C., and Razavieh, Asghar. Introduction to Research in Education. New York: Holt, Rinehart and Winston, Inc., 1972.
- Baker, G. E. "A Study of the Attitudes of Vocational Teachers, Academic Teachers and General Public Toward Career Education," Journal of Industrial Teacher Education, 10:1 (Fall, 1971), 24-30.
- Baker, G. E., Clark, F. E., and Miller, F. M. "A Study of the Attitudes of Vocational Teachers Concerning College Preparation," Journal of Industrial Teacher Education, 12:1 (Winter, 1975), 5-16.
- Barr, A. J., and Goodnight, J. H. Statistical Analysis System. Raleigh: North Carolina State University, 1972.
- Best, John W. Research in Education. Englewood Cliffs: Prentice-Hall, Inc., 1970.
- Bonner, Hubert. Psychology of Personality. New York: The Ronald Press Company, 1961.
- Brooks, William Kent. "A Study of Attitudes and Teaching Behavior of Occupational Orientation Teachers in Mississippi," Unpublished Doctoral Dissertation, Ohio State University, 1974.
- Brown, Frederick G. Principles of Educational and Psychological Teaching. Hinsdale, Illinois: The Dryden Press, Inc., 1974.
- Calvert, R. J. "Liberal Arts Graduates: They Would Do It Again," Personnel and Guidance Journal, 49 (1970).
- Campbell, D. T. "The Indirect Assessment of Social Attitudes," Psychological Bulletin, XLVII, January, 1950.
- Conroy, Jr., William G. "An Investigation of Alternatives to Improve Attitudes of Junior High School Staff Members Toward Vocational Education in High School," American Vocational Journal, Woburn,

- Mass., 1969, 1-3.
- Dood, L. W. Public Opinion and Propaganda. New York: Henry Holt and Company, 1949.
- Edwards, Allen L. and Kenney, Katherine C. "A Comparison of the Thurstone and Likert Techniques of Attitude Scale Construction," The Journal of Applied Psychology, XXX, (February, 1946), 72-73.
- Emans, Robert. "Teachers Attitudes as a Function of Values," Journal of Educational Research, 62, (July-August, 1969), 159-163.
- Evans, Robert N., and Terry, David R., (ed.). Changing the Role of Vocational Teacher Education. Bloomington, Illinois: McKnight and McKnight Publishing Company, 1971.
- Ferguson, George A. Statistical Analysis in Psychology and Education. New York: McGraw-Hill Book Co., 1971.
- Finch, Curtis R. "Trade and Industrial Education Teacher's Background, Values, and Attitudes Toward Teaching," Journal of Industrial Teacher Education, 6:2 (Winter, 1969), 55-64.
- Fishbein, Martin, (ed.). Reading in Attitude Theory and Measurement. New York: John Wiley and Sons, Inc., 1967.
- Fuson, W. M. "Attitude: A Note on the Concept and Its Research Context," American Sociology Review. VII (January, 1942), 14.
- Gottlieb, David. Youth and the Meaning of Work. Washington, D. C.: United States Department of Labor, 1973.
- Hirschi, H. C. "The Role of the Instructor in Vocational Guidance," Career Counseling. (1968).
- Hoyt, Kenneth B. "The Image Gap in Vo-Ed Counseling: Its Causes and Corrections," National Business Education Quarterly, 37 (Summer, 1969), 12-16.
- International Vocational Training and Informational Center. Training of Vocational Teachers. Vol. 1. No. 1. Geneva, Switzerland: International Labour Office, 1964.
- Kazanas, H. C., and Gregor, Tom G. "Relationships of the Meaning of Work, Job Satisfaction, and Selected Demographic Variables of Vocational and Non-Vocational Teachers," Journal of Industrial Teacher Education, 12:3, (Spring, 1975), 12-19.
- Klineberg, O. Social Psychology. New York: Henry Holt and Company, 1954.

- Krech, David, et al. Individuals in Society. New York: McGraw-Hill Book Company, Inc., 1962.
- Krech, David, and Crutchfield, R. A. Theories and Problems of Social Psychology. New York: McGraw-Hill Book Company, 1948.
- LaBorde, Gerald Keith. "A Study of the Relationships Between Attitudes Toward Vocational Education and Knowledge of Vocational Education of Tennessee Guidance Personnel," Unpublished Doctoral Dissertation, University of Tennessee, 1973.
- Lagana, Joseph E. What Happened to the Attitudes of Beginning Teachers? Danville, Illinois: The Interstate Printers and Publishers, Inc., 1972.
- Lortie, D. The Semi-Professional and Their Organization. New York: Free Press, 1969.
- Miller, Aaron J. "Presistence in Engineering and Technical Institute Programs: A Study of Nonintellective Concomitants," Journal of Human Resources, 2:2, (Spring, 1967), 154-162.
- Mouly, George J. The Science of Educational Research. New York: David McKay Company, 1965.
- Murray, Morris. "A Description of Occupational Orientation Programs in Mississippi Schools," Unpublished Report to the Research and Curriculum Unit, Mississippi State University, July, 1973, 2.
- National Advisory Council on Vocational Education. "Vocational Amendments of 1968," First Annual Report, Washington, D. C.: U.S. Office of Education, July, 1969, 5.
- Nolm, Edwin E. "Comparing Occupational with Educational Trends for Virginia," Virginia Economic Review. 8 (August, 1974), 1.
- Remmers, H. H., Gage, N. L., and Rummel, J. F. A Practical Introduction to Measurement and Evaluation. New York: Harper and Row, Publishers, Inc., 1965.
- Robert, Roy W. Vocational and Practical Arts Education. New York: Harper and Row Publishers, Inc., 1971.
- Rosenberg, Milton J., et al. Attitude Organization and Change. New Haven: Yale University Press, 1963.
- Ryans, David G. Characteristics of Teachers: Their Descriptions, Comparison and Appraisal. Washington, D. C.: American Council on Education, 1960.

- Smith, Fred M., and Adams, Sam. Education Measurement for the Classroom Teacher. New York: Harper and Row, Publishers, Inc., 1966.
- Smith, Howard S. "The Games Vocational Education Plays," Industrial Education, 63:8 (November, 1974), 9.
- Sponaugle, Adam Junior. "Attitudes of Guidance Counselors Regarding Vocational Education," Unpublished Doctoral Dissertation, Ohio State University, 1972.
- State Department of Education. Directory of Trade and Industrial Education Programs in Virginia. Richmond: State Department of Education Trade and Industrial Education Service, 1975.
- _____. Directory of Virginia Agriculture Education Personnel. Richmond: Division of Vocational Education, 1974-75.
- _____. Directory of Virginia Home Economics Education Personnel. Richmond: Division of Vocational Education, 1974-75.
- _____. Roster of Business Teachers. Richmond: Division of Vocational Education, 1974-75.
- Sue, David. "A Silent-Minority Member Speaks Out," Today's Education, 63:2, (March-April, 1974), 84-86.
- Super, D. E., et al. Vocational Development: A Framework for Research. New York: Bureau of Publications, Teachers College, Columbia University, 1957.
- Thurstone, L. L. and Chave, E. J. The Measurement of Attitudes. Chicago: University of Chicago Press, 1929.
- Tippie, Bruce Edward. "A Comparative Study of the Attitudes of Elementary and Secondary Teachers." Unpublished Doctoral Dissertation, United States International University, 1972.
- Travers, M. W. An Introduction to Educational Research. London: The MacMillan Company, 1969.
- Triandis, Harry C. "Toward an Analysis of the Components of Inter-Personal Attitudes." Attitude, Ego-Involvement and Change. Ed. by Muzafer Sherif and Carolyn Sherif. New York: John Wiley and Sons, Inc., 1967.
- Virginia State Advisory Council on Vocational Education. Fifth Annual Evaluation Report on Vocational Education in Virginia. Virginia State Board of Education, 1974.

Worthington, R. M. "A U. S. Office of Education View of Career Education." Journal of Industrial Teacher Education. 10:2, (Spring, 1973).

APPENDICES

APPENDIX A

DATA COLLECTION INSTRUMENT

Directions: Blacken the spaces which apply to you. Make all marks heavy and black. Make all erasures clean. Use only a No. 2 pencil. Make no stray marks. Fill spaces between dotted lines completely. Do not fold, roll, dog-ear or tear this sheet.

A. Area of subject matter taught: (0) Agri. (1) Bus. (2) D.E. (3) Health (4) Home Ec. (5) T & I

B. Fill in your age in items B1 & B2. Example: If your age is 37.

B1 0 1 2 3 4 5 6 7 8 9

B2 0 1 2 3 4 5 6 7 8 9

C. Fill in your number of years of work experience outside of teaching in items C1 & C2. Example: If the number is 5 years

C1 0 1 2 3 4 5 6 7 8 9

C2 0 1 2 3 4 5 6 7 8 9

D. Fill in your number of years of teaching experience in items D1 & D2. Follow example C.

E. Sex: (0) male (1) female

IDENTIFICATION NUMBER

A	0	1	2	3	4	5	6	7	8	9
B1	0	1	2	3	4	5	6	7	8	9
B2	0	1	2	3	4	5	6	7	8	9
C1	0	1	2	3	4	5	6	7	8	9
C2	0	1	2	3	4	5	6	7	8	9
D1	0	1	2	3	4	5	6	7	8	9
D2	0	1	2	3	4	5	6	7	8	9
E	0	1	2	3	4	5	6	7	8	9

Directions: Blacken the space which reflects your feelings. 1. agree; 2. tend to agree; 3. tend to disagree; 4. disagree; 5. no opinion

1. Vocational education is the best preparation for students who do not have the financial resources to go to college.
2. Students who are undecided about career plans should take college preparatory courses.
3. Every vocational teacher should earn a degree.
4. Vocational education is good preparation for low income students who will have to finance a college education at a later date.
5. Vocational programs are primarily for students of lesser abilities.
6. To really achieve the highest level of prestige and career fulfillment, a college degree is essential.
7. I encourage my most able students to go to college at some time.
8. Some college training is vital for success in teaching vocational subjects.
9. If a student does not have the ability to succeed in college, the student should enroll in a vocational program.
10. Vocational education students do not have to learn as much as students who are going to college.
11. Vocational education programs are as good as college preparation.
12. Part-time college attendance is a good practice for students who have entered a vocation after high school.
13. Part-time college attendance would help a person advance in their vocation.
14. Part-time college attendance would help a person advance from a vocational to a professional occupation.
15. A college degree is more desirable than trade preparation in today's world.
16. Any student who is capable should go to college if he can.
17. Bright students should be encouraged to go to college.
18. A person who graduates from a vocational program generally cannot make as important a contribution to society as a person who is a college graduate.
19. A person who graduates from a vocational program can generally be just as important to society as a college graduate.
20. I would encourage my best students to enter college immediately after high school if they are financially able.
21. College graduates enjoy greater prestige than graduates of other programs.
22. College graduates enjoy greater pay and rewards than graduates of other programs.
23. College graduates are more important to society than graduates of other programs.
24. Vocational graduates enjoy greater job security than do college graduates.
25. Vocational graduates must perform harder, more physical tasks than college graduates.
26. College training does not equip the individual for the world of work like vocational training does in specialized areas.
27. A vocational education program is not as acceptable as a college preparatory program for entry into some areas offered in college.
28. Vocational skills are more practical than the problem solving skills learned in college.
29. General brain power as taught in college is more applicable to the world of work than is vocational education.
30. It is more satisfying to the individual to work in a job which requires college training.

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☐ Check here to receive results of study.

APPENDIX B

PERMISSION LETTER FOR INSTRUMENT USE



COLLEGE OF EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

November 17, 1975

Dr. G. E. Baker
Coordinator for Graduate Studies
in Industrial Arts
North Carolina State University
Raleigh, North Carolina 27607

Dear Dr. Baker:

I am in the process of writing a doctoral dissertation dealing with a study of the attitudes of a selected group of vocational teachers in Virginia toward vocational education and college preparation.

Through my search of the related literature, I discovered that you, along with two of your colleagues, Dr. F. E. Clark and Dr. F. M. Miller, developed an instrument capable of measuring attitudes of vocational teachers toward academic preparation and vocational education.

I respectfully request your permission to utilize the attitude scale as the instrument to collect the data for the study which I am conducting. If your reply is affirmative to this request, please send me a copy of your instrument and other statistical data such as reliability, validity, etc., including, if possible, a statistical technique used for the analysis.

The findings of this study will be shared with you.

Thank you.

Sincerely,

Joseph E. Moore
Graduate Student
Vocational & Technical Education

Letter authorized by:

Dr. William E. Dugger, Jr.
Chairman of Dissertation Committee

APPENDIX C

REPLY OF PERMISSION LETTER FOR INSTRUMENT USE

NORTH CAROLINA STATE UNIVERSITY | AT RALEIGH

SCHOOL OF EDUCATION

INDUSTRIAL ARTS EDUCATION
Box 5096 Zip 27607
TELEPHONE: 737-2236

November 24, 1975

Mr. Joseph E. Moore
417 University Apartments
Blacksburg, VA 24060

Dear Mr. Moore:

Thank you very much for your inquiry about the study that Dr. Clark, Dr. Miller, and I conducted. I'm sure that they will concur with me in granting you full permission to use the instrument in any way. I will notify them and if you do not hear otherwise by December 5th, you may be assured that they concur.

Unfortunately, I do not have any copies of the scale. However, the full 30 questions are shown in figure 1 of the article. The responses to these were compared with the responses to the demographic data, shown in figure 2 using the Stepwise regression process. You should find a copy of the SAS by Barr and Goodnight. This manual will describe the strengths and procedures for you. Stepwise regression results in a cumulative, squared coefficient. You should remember that a decimal figure, when squared, results in a smaller number. With this in mind, you might find the figures cited a bit more reassuring. However, this method does not isolate single relationships (and with humans, no single factor works well anyway.) Therefore, we dichotomized the demographic variables on the general assumption of no college work versus teachers with college background. This then gave us two groups of responses to compare. The ANOVA was common and sufficient. However, it also tested the basic underlying assumption that college graduates are biased with regards to vocational training. The discriminate function analysis (DFA) was then performed upon the factors indicating significant results. It was basically a test of validity for both the assumptions and the instrument. There was no practical statistical means available to us to do this. Thus we tested both the results and the scale. There are no validity results per se, but with the levels of significance shown in Table 3, they are not needed. Validity figures are usually artificial comparisons of results with assumptions and are usually "good" if above .60. The levels of significance we found were much more meaningful, at least in our opinions. The same reasoning was applied to reliability. However, split half comparisons on a part of the data (the 30 statements) gave us a .8+ but I do not have the figures.

As to the configuration of the instrument, it was printed as a 4" x 5½" booklet and responses were made on a standard answer sheet. The answer sheet was shoved into the gaping maw of some machine which converted them to punched data cards.

Mr. Joseph E. Moore
Page 2
November 24, 1975

There were fed, in turn, into another machine. After being digested, debugged and cursed properly, the computer regurgitated some three inches of printout. We ran three separate runs, one for each analysis. The ANOVA and DFA were performed only on items showing significance. This continually refined the random chance factor as well as the overall strength of the findings.

This particular combination of analyses is an unusual one, but will provide very strong findings. It was originally developed by Baker, King and Morrison (JITE, Vol. 12, No. 1) and is called the "Baker-Morrison Super Analysis and Laundry Marking Systems" (BM SALMS).

Since none of this was a part of anybody's dissertation, there are no "full reports" or longer versions. We conducted the two studies on vocational teacher attitudes and on teacher evaluation as data finding studies that might lead to further grants and such.

At any rate, I hope that you will find this helpful. Best wishes for your success. My personal regards to Dr. Dugger. Please contact me if you need further information.

Cordially,



G. E. Baker, Associate Professor
Graduate Studies Coordinator
Industrial Arts Education

GEBrw

APPENDIX D

PERMISSION LETTER TO STATE DIRECTOR OF
VOCATIONAL EDUCATION



VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

COLLEGE OF EDUCATION

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

November 17, 1975

Mr. George Orr
State Director of Vocational Education
State Department of Education
Richmond, Virginia 23216

Dear Mr. Orr:

I have chosen a topic for my doctoral dissertation dealing with a study of the attitudes of the teachers of the Area Vocational-Technical Centers in Virginia toward vocational education and college preparation.

This study, if successful, will provide evidence as to whether the attitude of the vocational teacher is a positive or negative value in the training of students for job entry skills at the secondary school level. This information is pertinent to vocational education in the high schools because available statistics show that each year approximately 65 percent of our young people will be going into occupations that do not require formal learning beyond high school. Teacher education institutions could also utilize this type of appraisal in the selection of teacher candidates.

The findings of the study will be shared with your office. The instrument to be used for gathering the data will be an attitude scale.

I respectfully request your permission to use the above mentioned population to collect the data for the study. If your reply is affirmative to this request, please address a letter to me giving your support to this study.

Please forward a copy of the 1975-76 Directory of Trade and Industrial Education Programs in Virginia so that I may select a list of the teachers.

Thank you.

Letter authorized by:

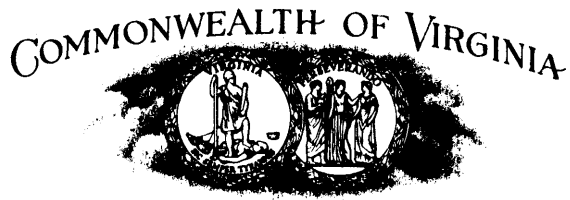
William E. Dugger, Jr.
Dr. William E. Dugger, Jr.
Chairman of Dissertation
Committee

Sincerely,

Joseph E. Moore
Joseph E. Moore
Graduate Student
Vocational & Technical Education

APPENDIX E

REPLY OF PERMISSION LETTER TO STATE DIRECTOR
OF VOCATIONAL EDUCATION



STATE DEPARTMENT OF EDUCATION
RICHMOND. 23216

November 24, 1975

Mr. Joseph E. Moore
417 University Apts.
Blacksburg, VA 24060

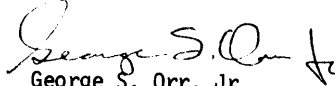
Dear Mr. Moore:

This will acknowledge your letter regarding your doctoral dissertation dealing with the study of attitudes of teachers in area vocational technical centers throughout the State. I concur the group you have identified would be a valuable source of information for your study. I am not in position to grant permission to use this population to collect data, but I see no problem with you soliciting these individuals in your study.

Please be advised that if you refer to your contact with this office in a mailing to superintendents or teachers, you should indicate that the Division of Vocational Education is aware of the study and feels the information will be helpful in the future. Other references of support or approval should not be included.

Best wishes to you for the successful completion of your dissertation. We will look forward to receiving a final copy of your study.

Sincerely yours,


George S. Orr, Jr.
Director, Division of
Vocational Education

GS0Jr/dlv

cc: Dr. William E. Dugger, Jr.
Chairman of Dissertation Committee

APPENDIX F

COVER LETTER FOR SURVEY INSTRUMENT



COLLEGE OF EDUCATION
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

February 17, 1976

Dear Fellow Educators:

I would like to obtain your assistance on a study I am conducting as my doctoral dissertation in Vocational Education at Virginia Polytechnic Institute and State University.

I am engaged in research to examine the attitude of teachers in the Area Vocational-Technical Centers in the State of Virginia toward vocational education and college preparation. The results of this study can be a valuable asset to the educator who has the responsibility of orienting our young people to the world of work. All responses will be treated confidentially. Only group information will be used in the analysis of data.

Completion of this form will require about twenty minutes of your time. Please return this form within five days using the self-addressed envelope enclosed. Your immediate response will be greatly appreciated.

If you would like to receive a summary of the study findings, please check the space provided in the lower left corner of the form.

Thank you.

Letter authorized by:

William E. Dugger, Jr.

Dr. William E. Dugger, Jr.
Chairman of Dissertation
Committee

Sincerely,

Joseph E. Moore

Joseph E. Moore
417 University Apartments
Blacksburg, Virginia 24060

APPENDIX G

FOLLOW-UP POST CARD

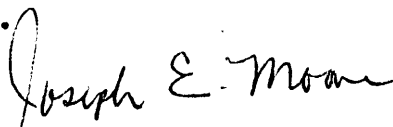
Date February 28, 1976

Dear Fellow Educator:

About two weeks ago I mailed forms to a number of vocational teachers across Virginia and requested assistance with a study I am conducting. The response to this request has been greatly appreciated.

I realize you are very busy, however, your completed form has not been received. Won't you please take a few minutes to fill out the form and return it today.

Thank you.


Joseph E. Moore

APPENDIX H

FOLLOW-UP LETTER



COLLEGE OF EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

March 5, 1976

Dear Fellow Educator:

Recently you, as well as other teachers of the Area Vocational-Technical Centers of Virginia, were mailed an instrument designed to examine the attitudes of vocational teachers. A large percentage of the teachers have responded, which is quite gratifying. However, I am desirous of having a more complete return so that the findings will be of greater significance and of more value to all concerned.

I hope to complete this study within the very near future. Won't you please complete and return the instrument while it is in your hand and has your attention. For your convenience, an additional copy of the instrument is enclosed along with an envelope for its return.

Your cooperation in this study and prompt reply will be appreciated.

Sincerely,

A handwritten signature in cursive script that reads "Joseph E. Moore".

Joseph E. Moore

APPENDIX I
RESPONDENT DATA

RESPONDENT DATA

Area	Number of Males	Percent of Males	Number of Females	Percent of Females	Total Male- Female	Total Percent Male-Female
Agriculture	13	6.46	1	.50	14	6.69
Business & Office	5	2.49	15	7.46	20	9.95
Distributive	0	0	0	0	0	0
Health Occupations	0	0	42	20.40	42	20.40
Home Economics	0	0	20	9.95	20	9.95
Trade & Industrial	105	52.24	1	.50	106	52.74
TOTAL	123	61.19	79	38.81	202	100.00

VITA

Joseph Elwood Moore was born April 30, 1932 in Wakefield, Virginia. At an early age he moved with his family to Newport News, Virginia where he attended public schools. He graduated from Huntington High School in June, 1951, and in September, 1951, enrolled at the Norfolk Division of Virginia State College, Norfolk, Virginia where he completed two years of undergraduate study. He transferred to Virginia State College in September, 1953 and attended for one semester.

He entered the United States Army in August, 1954 and was honorably discharged two years later with a rank of Specialist 3rd Class. The United States Post Office Department in New York and Newport News provided employment as a distribution clerk, assistant timekeeper, letter carrier, and carrier technician from 1957 to 1968. While in New York, he attended Brooklyn Technical School for one year.

He enrolled at Norfolk State College as a full-time student in September, 1968 and received his Bachelor of Science degree in Industrial Education in June, 1970. He completed his Master of Education degree at Virginia State College in August, 1971 and has done additional graduate work at the National Aeronautics and Space Administration through Virginia State College.

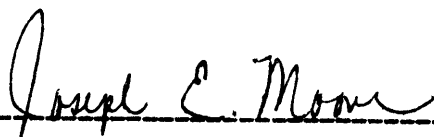
The writer has been an industrial arts teacher and department chairman in Chesapeake, Virginia public school system and an industrial

arts instructor at Virginia Polytechnic Institute and State University in Blacksburg, Virginia during the 1974-75 school year.

Organizations to which he belongs include: Bank Street Memorial Church, Norfolk State College and Virginia State College Alumni Associations, Phi Delta Kappa, Epsilon Pi Tau, American Council on Industrial Arts Teacher Education, Virginia Industrial Arts Association, Norfolk Model City Commission, Model City Neighborhood Assembly and the Community Civic League.

During his spare time, he enjoys copper tooling, photography, drawing, and painting.

Joseph is married to the former Senie Arona Thatch of Norfolk, Virginia. They are proud parents of a son, Vincent, and two daughters, Tracey and Kimberly.



Joseph Elwood Moore

ATTITUDES OF SELECTED VOCATIONAL TEACHERS
TOWARD VOCATIONAL EDUCATION AND
COLLEGE PREPARATION

by

Joseph Elwood Moore

(ABSTRACT)

The purposes of this study were: (1) to assess the attitude of the vocational teachers of the Area Vocational-Technical Centers in the State of Virginia towards vocational education and college preparation; and (2) to determine to what extent combinations of personal characteristics were predictive of the vocational education and college preparation preference of the vocational teachers.

Eight research questions were derived for the purpose of clarifying the direction of the study. The variables were: (1) the area of subject matter taught; (2) the age; (3) the number of years of work experience outside of teaching; (4) the number of years of teaching experience; and (5) sex (male-female).

Data were collected on data processing sheets through a mail survey. The subjects were teachers of 17 Area Vocational-Technical Centers. The 17 centers were randomly selected from a total of 27. A total of 201 or 72.92 percent of the 277 vocational teachers responded to the survey. The survey instruments were fed into a

computer and the scores from the respondents were recorded on data processing cards. The SAS (Statistical Analysis System) was utilized in programming the cards. Analysis of variance (ANOVA) was used to analyze the data pertinent to the research questions.

On the basis of the information presented in this study, the following conclusions resulted relative to the vocational teacher's attitude toward vocational education and college preparation:

1. Attitude is not influenced by the combination of the area of subject matter taught and the age of the teachers.
2. Attitude is not influenced by the combination of the area of subject matter taught and the number of years of work experience of the teachers.
3. Attitude is influenced by the combination of the area of subject matter taught and the number of years of teaching experience of the teachers.
4. Attitude is not influenced by the combination of the age and the number of years of work experience of the teachers.
5. Attitude is not influenced by the combination of the age and the number of years of teaching experience of the teachers.
6. Attitude is not influenced by the combinations of the number of years of work experience outside of teaching and the number of years of teaching experience of the teachers.
7. Attitude is not influenced by the sex (male-female) of the teachers.

When analyzed, all data was tested at the alpha level of 0.05.

The lack of difference in the combinations of the personal characteristics variables tend to indicate that the personal characteristics of the teachers might not serve as a valid indicator of teacher vocational education and college preparation preference.

The overall criterion mean scores of 195.787 was a deviation of 14.213 from the arithmetic mean of 210. This implied that the vocational education/college preparation preference of the vocational teachers, as a group, had a tendency to lean toward college preparation as opposed to vocational education.

The results of the study suggested that age, when viewed in terms of the criterion measures, and the area of subject matter taught and the number of years of teaching experience, in combination, were valid indicators in predicting the preference of vocational teachers of the Area Vocational-Technical Centers in Virginia. However, preference of these vocational teachers did not differ significantly in terms of the remaining variables of this study. The data appeared to suggest that vocational teachers of these centers were biased against vocational education in favor of college preparation.