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ABSTRACT

The major purposes of the study were to describe the attitudes held by occupational orientation teachers toward career education/occupational orientation and to determine what personal, experience, training, and teaching behavior variables contributed to high positive attitudes. Also included was an investigation of differences in the frequency of teaching behaviors when these behaviors were associated with classes of personal, experience, and training variables. Nine conclusions are presented relative to occupational orientation teachers. Chapter one presents background information, a statement of the problem, purpose of the study, questions for investigation, definition of terms, and limitations and organization of the study. Chapter two discusses foundations of attitude measurement and foundations of career education, reviews literature related to personal experience and training variables, and a summary of the literature reviewed. Chapter three describes methods and procedures, population, instrumentation, data collection, statistical models, and scoring of attitude statements. Chapter four details results, purpose, and analysis of data. Chapter five provides a summary and discussion, conclusions, and recommendations, followed by the survey questionnaire and a bibliography. Fifteen tables present data on attitude scores, relationships, and distributions tabulated by various categories, and test-retest means and correlation coefficients. (Author/NH)

A STUDY OF THE ATTITUDES AND TEACHING RELATIONS OF OCCUPATIONAL ORIENTATION TEACHERS IN MISSISSIPPI

DISSERTATION

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

By

William Kent Brooks

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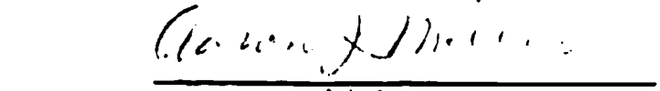

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Daugherty, Ronald D.; Brooks, W. Kent; and Hyder, Carroll R. Expansion of Vocational-Technical School Programs to Accommodate Highway Safety Manpower Requirements. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, August, 1971.

Brooks, W. Kent. Junior College Guide for Training Service Specialists in Automotive Systems. Mississippi State, Mississippi: Research and Curriculum Unit, Mississippi State University, (In Progress).

Brooks, W. Kent. Power Circuit Breakers: Assembly Operations Manual. Mississippi State, Mississippi: Research and Curriculum Unit, Mississippi State University, June, 1973.

Brooks, W. Kent. Electric Power Tools: Machining Operations Manual. Mississippi State, Mississippi: Research and Curriculum Unit, Mississippi State University, October, 1973.

Brooks, W. Kent. Electric Power Tools: Assembly Operations Manual. Mississippi State, Mississippi: Research and Curriculum Unit, Mississippi State University, October, 1973.

FIELDS OF STUDY

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

BACKGROUND

During the past several years, vast amounts of energy and money have been expended through federal and state sources in an effort to bring school content and learning experiences into closer harmony with the needs of students and society. Exemplary projects labeled "career education" emerged after the enactment of the Vocational Education Act of 1963 and the Amendments to this Act in 1968. In addition to defining vocational education in terms of the needs of the student as well as the needs of the labor market, these acts created new opportunities for expanding the concept of vocational education. The acts placed particular emphasis upon the need for a full partnership to be formed between general education and vocational education. The 1968 Amendments emphasized the need to provide career planning and development opportunities for youth in elementary as well as secondary and post-secondary schools.

Edwin Herr, an influential leader in career education, takes the following position regarding the contribution of the 1963 Vocational Education Act and the 1968 Amendments to the emergence of career education:

> Fundamentally, the 1968 Amendments to the Vocational Education Act significantly expanded those portions of the 1963 Act which charted new directions for vocational education and began the process of converting rather vague conceptions into operational programs. Without being so identified the 1968 Amendments

provided many of the major dimensions for career education.[1]

Few would argue that career education is not today a major new thrust in American schools. Many would argue about what career education is and how it should be implemented. At the time of this writing, no one clear definition for career education exists. The new educational concept has been cited as a basis for rebuilding school curriculums which will expose students of all ages to the nature and values of a work oriented society. It is focused upon the problems of obsolescence and irrelevancy of much of the general and vocational education curriculums. This study will not attempt to deal with the many specific reasons why the American system of education is unproductive for many students. However, Sidney P. Marland, Jr., former U.S. Commissioner of Education, suggested that:

> Parents and other taxpayers have the right to assume that the $85 billion annual costs of education in the United States is buying America's youngsters a public school education that prepares them for immediate employment or for further education. But for a variety of reasons, this is not the case.[2]

U.S. Department of Labor data[3] indicate that about forty million youth will seek assistance in career planning, occupational training, and job entry in the 1970's. The large number of youth who face the tasks

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[1]Edwin L. Herr, Review and Synthesis of Foundations for Career Education (Columbus: The Center for Vocational and Technical Education, The Ohio State University, 1972), p. 3.

[2]Sidney P. Marland, Jr., "America's Need for Career Education," Occupational Outlook Quarterly, Vol. XVI, No. 2 (Summer, 1972), p. 2.

[3]U.S. Department of Labor, Manpower Report of the President and a Report on Manpower Requirements, Resources, Utilization, and Training (Washington: U. S. Government Printing Office, 1970), p. 362.

of discovering themselves and utilizing new opportunities for career development reflects the magnitude of the need for effective career education programs.

Congressional interest in career education was manifested in the Educational Amendments of 1972. Although this comprehensive Act was vetoed by the President, it recognized career education as a viable educational concept and called for a long-range strategy for infusing occupational orientation, counseling, guidance, and placement into all elementary and secondary school curriculums.

While the Vocational Education Amendments of 1968 authorized funds to stimulate the establishment of preliminary forms of career education programs at the local level, it was clearly the responsibility of the states to interpret the need for career education in light of state and local needs, and to provide leadership and other support services for implementing such programs.

In 1969, the Mississippi Vocational-Technical Education Division, State Department of Education, introduced occupational orientation in the Mississippi system of public education. Designed primarily for grades 7 - 12, the purpose of the occupational orientation program was to stimulate the career-decision making process in secondary school youth. The placement of occupational orientation at the secondary level was premised on the fact that students at this level face immediate crucial life and career decisions with little prior knowledge of self in relation to educational and occupational opportunities. It was

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Hector Sciascia, "From Washington," editorial, School Shop, Vol. XXXIII, No. 1 (September, 1973), p. 1.

recognized that more comprehensive career education programs in the lower grades would be long in the making, and that this would be the only opportunity for most students to acquire an awareness of occupational and educational opportunities and to acquire the essential background and skills for making meaningful career-life decisions.

In 1973, there were almost 8000 students enrolled in 196 occupational orientation programs across the State.[5] More than 8000 students have participated in the program during a three-year period. The 196 teachers providing leadership for programs of instruction in occupational orientation represent diverse backgrounds in vocational education and other school subject areas. The 1973 Mississippi State Plan for the Administration of Vocational Education projects that 41 new occupational orientation programs will be needed to accommodate the needs of increased enrollments in 1973. A total of 304 new programs will be needed by 1977. Student enrollments will increase to 10,000 in 1973, and by 1977 it is estimated that 17,000 students will be enrolled in occupational orientation in the State. An additional 720 teachers were engaged in five K-12 career-centered programs in 1972 funded through Part D of the Vocational Education Amendments of 1968. More than 1,200 teachers will be needed to accommodate the expansion of K-12 career education programs in 1977.[6]

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[5] Mississippi State Department of Education, 1973 Mississippi State Plan for the Administration of Vocational Education Amendments of 1968 (Jackson, Mississippi: Vocational-Technical Education Division, State Department of Education, 1973), p. II - 196.

[6] Ibid., p. II - 56.

Educational agencies and institutions throughout the State have provided assistance in preparing teachers for this dynamic area of instruction. Curriculum materials were developed by the Mississippi Curriculum Coordinating Unit for Vocational-Technical Education. Supportive audio-visual materials and other pertinent literature and equipment have been purchased by the State and furnished to the local schools either on a loan basis or as a permanent component of the curriculum. Additionally, local school systems have provided leadership personnel, adapted facilities, and purchased materials and equipment to help students benefit from this new educational opportunity.

All this has occurred without adequate knowledge of the characteristics of the occupational orientation teachers themselves.

Noted authorities in the field have spoken out concerning the importance of appropriate attitudes among those who influence the structure and functions of career education programs.

Marland[7] suggests that if an educational system is to be designed to serve the individual and to develop his creative potential in a self-directing way, educators have work to do and attitudes to change.

The first report of the National Advisory Council on Vocational Education directed a sharp attack against the national attitude that vocational education is designed for somebody else's children. The Council indicates that this attitude is shared by businessmen, labor leaders, administrators, teachers, parents, and students. They

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[7] Sidney P. Marland, Jr., "Career Education" paper presented at the 63rd Convention of the National Education Association of Secondary School Principals, Houston, Texas, January 23, 1971 (mimeo.).

recommended that the federal government immediately exercise its leadership and allocate sufficient funds to cure the country of the national sin of academic snobbery.[8]

Larimore[9] has indicated that there is substantial scientific evidence that supports the proposition that the attitudes of local participants in educational programs relate directly to the success of the programs. For example, unfavorable teacher attitudes toward the program in which they endeavor to work likely affects persistence or retention in the teaching profession. The teacher's attitude would most likely affect the ability to communicate with students about substantial educational or occupational information. Worse still is the likelihood that negative attitudes of teachers could have a direct effect upon the attitudes of students.

Wright and Tuska[10] purport that a teacher's attitudes are generally considered basic to effective performance in the classroom. Lagana[11] concludes that attitudes are indeed a vital key in regard to the high

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[8] First Annual Report, National Advisory Council on Vocational Education, Vocational Education Amendments of 1968 (Washington, D.C.: U.S. Office of Education, July, 1969), p. 5.

[9] David L. Larimore, "The Structure and Social Antecedents of Teacher Attitudes" (unpublished Ph.D. dissertation, The Ohio State University, 1969), p. 1.

[10] Benjamin D. Wright and Shirley Tuska, "From Dream to Life in the Psychology of Becoming a Teacher," The School Review, LXXVI (September, 1968), p. 276.

[11] Joseph E. Lagana, What Happens to the Attitudes of Beginning Teachers? (Danville, Illinois: The Interstate Printers and Publishers, Inc., 1970), p. 2.

attrition of new teachers and the personal satisfaction of those remaining in the profession.

Anastasi[12] and Fishbein[13] emphasize that an attitude is first and foremost an expression capable of predicting behavior. It is a readiness or tendency to react in a certain manner. Although expressed opinions do not always correspond to action in the classroom, there is ample evidence that the investigation of the educational attitudes of teachers can lead to predicting the development of attitudes.

Teachers in occupational orientation programs need to be attitudinally directed to carry out the goals of career education at the secondary level. In the past, persons who have shown interest in teaching occupational orientation have had little objective basis for determining which of the many possible personal, training, and experience variables might be useful in predicting success in teaching in this area. There has been little objective information which would guide prospective teachers, school administrators, and teacher educators in the problems one might encounter in trying to be satisfied in teaching occupational orientation. This study was planned to supply background and attitudinal data to aid in solving some of these problems. What is the influential occupational orientation teacher like? Can he be differentiated from other occupational orientation teachers?

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[12]Anne Anastasi, Psychological Testing (New York: The MacMillan Company, 1968), p. 482.

[13]Martin Fishbein, ed., Readings in Attitude Theory and Measurement (New York: John Wiley and Sons, Inc., 1967), p. 8.

Although a comprehensive career education program encompasses several components related to occupational awareness, exploration and preparation, Mississippi schools have chosen to place special emphasis on occupational orientation in grades 7-10. This component of career education is of central importance in a comprehensive career education program, since these teachers must articulate the educational and occupational needs of students at all grade and age levels. For this reason, this study has looked at teacher perceptions in terms of a comprehensive program of career education.

STATEMENT OF PROBLEM

Career education is a major priority in Mississippi schools. Numerous occupational orientation programs have been established, utilizing teachers with diverse backgrounds. Teachers assigned to these programs should have positive attitudes toward career education/occupational orientation. It is also desirable that these teachers be properly trained to conduct programs of instruction in accordance with prescribed teaching behaviors.

A valid set of criteria is needed to assist the staffs of the State Division of Vocational-Technical Education and local school districts in counseling, selecting, training, and placing occupational orientation teachers.

PURPOSE OF STUDY

The major purposes of this research were to describe the attitudes held by occupational orientation teachers toward career education/occupational orientation and determine what personal experience,

training, and teaching behavior variables contributed to high positive attitudes. The study also included an investigation of differences in the frequency of teaching behaviors when these behaviors were associated with classes of personal, experience, and training variables.

QUESTIONS FOR INVESTIGATION

1. How significant were the following variables in predicting the attitudes held by occupational orientation teachers toward career education?
   a. Type of school district in which teachers work
   b. Race of teachers
   c. Sex of teachers
   d. Age
   e. Number of years teaching occupational orientation
   f. Non-educational occupational experience of teachers
   g. Hours of credit earned by teachers in vocational guidance courses
   h. Amount of time devoted to teaching occupational orientation
2. How significant were the following interactions of variables in predicting the attitudes held by occupational orientation teachers toward career education?
   a. Type school district and number of years of experience in teaching occupational orientation
   b. Type school district and hours of credit received in vocational guidance
   c. Type school district and amount of time devoted to teaching occupational orientation

d. Race and sex

e. Race and number of years experience in teaching occupational orientation

f. Race and hours of credit earned by teachers in vocational guidance

g. Race and amount of time devoted to teaching occupational orientation

h. Sex and hours of credit received in vocational guidance

i. Sex and years of experience teaching occupational orientation

j. Sex and amount of time devoted to teaching occupational orientation

k. Sex and age

l. Age and number of years teaching occupational orientation

m. Age and amount of time devoted to teaching occupational orientation

3. How significant were the following teaching behaviors in predicting the attitudes held by occupational orientation teachers toward career education?

a. Number of workers who came to talk to occupational orientation classes

b. Number of discussions with guidance counselors and other teachers about what to teach in occupational orientation

c. Frequency of occupationally-related field trips

d. Number of discussions with local businessmen about what to teach in occupational orientation

e. Number of off-campus work experience stations located for

students

f. Number of attempts to show or tell students how school subjects relate to the world of work

4. What is the relationship between the frequency of reported teaching behaviors and the following variables?

a. Type school district

b. Sex

c. Race

d. Age

e. Hours of credit received in vocational guidance courses

f. Amount of time devoted to teaching occupational orientation

DEFINITION OF TERMS

The following terms are used throughout the study. They are defined here to insure clarity and understanding.

Career Education. The development of motivational attitudes and interests in the world of work, knowledge of the world of work, and the skill necessary to function and to continue functioning in the world of work.[1]

Occupational Orientation Program. An element within the total career education concept denoting grades 7-12 of the traditional school organization. This denotes the segment of education used to introduce the student to the world of work and explorin students' occupational interests, while developing certain decision-makin skill

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[1] Four Proposed Definitions of Career Education (Washington: Bureau of Adult, Vocational and Technical Education, U.S. Office of Education, 1971).

Occupational Orientation Teacher. A teacher who spends 20 percent or more of his teaching assignment in the teaching of occupational orientation at the seventh, eighth, ninth, and/or tenth grades.

Attitude. 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 with which it is related.[15]

Teaching Behavior. Conduct or action on the part of a teacher which causes students to learn. In this study, behaviors suggest conduct which is expected or required of teachers in order to accomplish the goals of the occupational orientation program.

School Districts.

1. County--embraces all the territory of a county exclusive of the territory embraced within the limits of a municipal separate school district, and exclusive of the territory embraced within the limits of any line school district.

2. Municipal separate--embraces and includes the territory within the corporate limits of a municipality or the territory within the corporate limits and added territory outside the corporate limits...

3. Consolidated--includes those school districts embracing territory in two or more counties.[16]

Personal Variables. For purposes of this study, race, sex, and age.

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[15] Gordon W. Allport, "Attitudes," Readings in Attitude Theory and Measurement, ed. by Martin Fishbein (New York: John Wiley and Sons, Inc., 1967), p. 1.

[16] Mississippi State Department of Education, A Compilation of the School Laws of Mississippi (Jackson: Mississippi State Department of Education, 1969), pp. 173-174.

Experience Variables. For purposes of this study, experience in teaching occupational orientation, amount of time devoted to teaching occupational orientation, and non-educational occupational experience of teachers.

Training Variable. For purposes of this study, semester hours of credit earned by occupational orientation teachers in vocational guidance courses.

LIMITATIONS OF STUDY

The findings of this study are generalizable only to occupational orientation teachers with vocational education experience. All subjects were employed in Mississippi public schools that provided occupational orientation programs.

The survey instrument used in the study measured the "process" (quantity) of teaching behaviors, rather than the "product" (quality) of teaching behaviors.

ORGANIZATION OF REMAINDER OF STUDY

The second chapter contains a review of the literature related to the problem being considered. This review contains literature findings related to the foundations of attitude measurement, the foundations of career education (of which occupational orientation is a part), and research impacting on the variables included in this study.

The third chapter describes the attitude scale/questionnaire used in the study, data collection procedures, and statistical procedures for analyzing the data.

The fourth chapter describes the results of the study. Conclusions and recommendations are presented in the fifth chapter.

CHAPTER II

REVIEW OF LITERATURE

The first section of this chapter will review selected literature concerning the meaning of attitudes, the conditions which influence the development of attitudes, and the relation of attitudes to behaviors. It also examines theory of attitude measurement and underlying problems in measuring attitudes.

A theoretical basis for career education will be described in the second section. This will include details of the concepts upon which the attitude instrument used in this study were based.

Literature directly and indirectly related to the research problem will be presented in the third section of this chapter.

FOUNDATIONS OF ATTITUDE MEASUREMENT

A Concept of Attitude. Ryans[17] indicated a need to appraise the attitudes of prospective teachers before or during pre-service training and at the time of employment by school systems. He suggested that this would help improve teacher selection and assignment. It would aid in identifying teachers who, at the time of selection for employment or in connection with promotion, have

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[17]David G. Ryans, Characteristics of Teachers: Their Description, Comparison and Appraisal (Washington: American Council on Education, 1960), pp. 1-4.

characteristics similar to those deemed important or desirable by the particular school system. He further emphasized that such appraisal would aid teacher education institutions to better understand teacher characteristics, contribute to improved procedures for selecting teacher candidates, and serve as a basis for improving professional courses and curricula.

An individual's interests, attitudes, motives, and values have been described as representative of important aspects of personality. These characteristics have a significant effect on education, vocational adjustment, interpersonal relations, and personal enjoyment and fulfillment.[18] Attitudes are usually classified into three general components: (1) cognitive (beliefs); (2) emotional (feelings); and (3) action-taking (behavior). There is much evidence that the three components are interrelated. However, these components may differ in valence and multiplexity. A given attitude may incorporate highly favorable beliefs about its object, mildly favorable feelings, and some slight tendency to take favorable action with respect to that object. The available evidence suggests that there is a general trend for consistency among these components and their valence and complexity.[19]

Attitudes are learned. They are formed and developed in order to "... understand the world around, to protect self esteem, to adjust

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[18] Fishbein, Attitude Theory and Measurement, p. 7.

[19] A. N. Oppenheim, Questionnaire Design and Attitude Measurement (New York: Basic Books, Inc., 1966), pp. 165-166.

to a complex world, and to express fundamental values. Attitudes are learned through direct exposure to the object."[20]

An attitude is a form of readiness that provokes behavior that is positive or negative, favorable or unfavorable. "A double polarity direction is often regarded as an attitude's most distinctive feature."[21] Additionally, Sherif and Sherif[22] emphasize that attitudes are not temporary states but are enduring once they are formed. As a person experiences a rewarding state of affairs in association with attitude objects, his affect toward the object will become more favorable. Conversely, if the experience is punishing, the person will change his affect in a negative direction.[23]

Theory of Attitude Measurement. Measurement of attitude is indirect as are most psychological measurements. Attitudes can be measured only on the basis of inferences drawn from the responses of individuals toward an object, either in terms of verbal statements of belief, feelings and disposition, or overt actions.[24]

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[20] Harry C. Triandis, "Toward An Analysis of the Components of Interpersonal Attitudes," Attitude, Ego-Involvement and Change, ed. by Muzafer Sherif and Carolyn W. Sherif (New York: John Wiley and Sons, Inc., 1967), pp. 101-102.

[21] David Krech, et al., Individual in Society (New York: McGraw-Hill Book Company, Inc., 1962), p. 139.

[22] Muzafer Sherif and Carolyn W. Sherif, "Attitudes As the Individual's Own Categories: The Social Judgment Involvement Approach to Attitude and Attitude Change," Attitude, Ego-Involvement and Change, ed. by Muzafer Sherif and Carolyn Sherif (New York: John Wiley and Sons, Inc., 1967), pp. 112-113.

[23] Krech, Individual in Society, p. 74.

[24] Fishbein, Attitude Theory and Measurement, p. 7.

Attitude scales are used extensively to measure attitudes. An attitude scale consists of a set of statements or items to which a person responds. The items are a sample of the content which makes up the object under study. The pattern of his response provides a way of inferring something about his attitude. Scales differ markedly in type and method of construction, but in every case their objective is identical: to assign an individual a numerical position in a continuum. This position (score) may be taken as representative of their behavior as described by the universe of the content elements.[25]

The concept of a unidimensional scale is important. A unidimensional scale measures a single variable. This means that people with the same score have about the same attitude. In order for attitude scales to be unidimensional, items on the scale must be highly interdependent.[26]

Two major types of items have been used to construct attitude scales. The most widely used is an evaluative statement about the object which taps the cognitive and feeling components of attitude.

The Thurstone scale gives a list of items weighted by a numerical representation along an 11-point favorable to unfavorable continuum. The Likert-type scale is arranged on a 5-point favorable to unfavorable continuum.[27]

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[25] Ibid., p. 10.

[26] Frederick G. Brown, Principles of Educational and Psychological Testing (Hindsdale, Illinois: The Dryden Press, Inc., 1970), p. 77.

[27] Krech, Individual in Society, p. 154.

The second type of item used for attitude scales consists of a description of a specific action toward the attitudinal object in a particular situation. The subject is asked if he would or would not take the action specified.[28]

The Likert-type scale differs from the Thurstone technique in several important ways. The Thurstone scaling method depends upon the agreement of judges as to the proper scale. The following steps represent the Likert[29] method:

1. The collection of a large number of statements considered by the researcher to relate to the attitude object in question.
2. The administration of these statements to a group of subjects who indicate in each statement whether they strongly agree, agree, have no opinion, disagree, or strongly disagree.
3. The determination of a total score for each individual by summing his response to all the items. The scale is reversed in unfavorable items.
4. The carrying out of an item analysis to select the most discriminating items.

The item analysis is applied to determine if the numerical values of the item alternatives are properly assigned, and if the statements are "differentiating." The item analysis calls for

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[28] Ibid.

[29] Renses Likert, "The Method of Constructing An Attitude Scale," Readings in Attitude Theory and Measurement, ed. by Martin Fishbein (New York: John Wiley and Sons, Inc., 1967), p. 51.

calculating the correlation coefficient for each statement with the battery of statements. A negative correlation coefficient indicates that the numerical values are not assigned properly and they should be reversed. A zero or very low correlation indicates that the statement fails to measure that which the rest of the statements measure. These statements do not differentiate and are irrelevant or ambiguous. In summary, item analysis indicates whether those persons who fall toward one end of the attitude continuum on the battery do so on the particular statement. The size of the correlation coefficient required between a particular item and the battery of items is a function of the type of study undertaken. A general survey of teachers of diverse backgrounds will produce a higher correlation coefficient than a more specialized study.[30]

Reliability and validity are important considerations in developing attitude scales. The sampling of items, the circumstances of a particular administration, and the characteristics of the respondent may introduce inconsistency (error) into the measurement. An estimation of the magnitude of this error is obtained by a reliability coefficient, which is the correlation between an individual's performance (score) on two sets of scales. The reliability coefficient indicates the proportion of persons who would change their classification on a second administration of the scale.[31]

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[30] Ibid., p. 93.

[31] Bert F. Green, "Attitude Measurement," Problems of Human Assessment, ed. by Douglas N. Jackson and Samuel Messick (New York: McGraw-Hill Book Company, 1967), p. 725.

The consistency of measurement also encompasses the concepts of homogeneity and unidimensionality. Homogeneity is defined in terms of consistency of performance over all items on a scale. The concept of unidimensionality is defined in terms of the degree to which the scale measures one variable (object) as opposed to a combination of variables. If the scores on the various items are positively intercorrelated, the scale is said to be homogeneous. Kuder-Richardson formulas are widely used to obtain indices of homogeneity.[32]

Validity is concerned with (1) what the scale measures and (2) how well it measures. One frequent use of psychological measures is to predict an individual's future attitude or behavior on some significant independent variable. An index of this predictive accuracy is often referred to as criterion-related validity. In regard to criterion-related validity, the major concern is to select items that will predict the criterion. The content of the scale is irrelevant for this type validity.[33]

Content validity is concerned with how well the content of the scale samples the object under investigation. The scale must represent a well-defined universe of attitudes and behaviors in order to have content validity. Evaluation of the validity of the scale is made in terms of the adequacy of sampling. "Because no quantitative index of sampling adequacy is available, evaluation will necessarily be a rational, judgmental process."[34]

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[32] Brown, Psychological Testing, pp. 70-72.

[33] Ibid.

[34] Ibid., p. 161.

Construct validity is concerned with what object the scale measures. Validation consists of an accumulation of evidence concerning what it does, in fact, measure. As evidence is accumulated, the definition of the object becomes sharper. "As with content validity, there is no quantitative index of the construct validity of a test, evaluation being a judgmental process."[35]

Relationship of Attitudes to Teaching Behaviors. The primary purpose for investigating teachers' educational attitudes is to be able to predict the development of the attitudes of teachers or prospective teachers, and their behavior in actual teaching situations. Often attitude scales have not been shown to be good predictors of behavior. It is possible to predict behavior from attitudes but without a great deal of precision. Evans[36] states that one of the problems is that researchers have been expecting too much. He indicates that the predictability of such many-faceted criterion as that for teacher behavior is so limited by the problems of measuring both criterion and predictors that relationship representing common variance of one-fifth to one-fourth of the total variance approaches the maximum expectancy. There is little doubt that the prediction accuracy can be improved when "environmental" factors are taken into consideration. If the behaviors call for extraordinary resources, no matter how attractive the behavior, it cannot be implemented if the school lacks the resources to call upon. Additionally, the teacher

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[35] Ibid.

[36] K. M. Evans, Attitudes and Interests in Education (London: Routledge and Kegan Paul, Ltd., [illegible]).

who lacks the trial behavioral experiences will likely have a different behavioral preference than the experienced person.

Bass and Rosen[37] cite a number of possible explanations for the problem of finding relationships between attitudes and behaviors. Behavior is related to an attitude only if the behavior serves some functional value relevant to that attitude. It must be socially significant to that individual. The object being measured must be behaviorally relevant and motivationally involving to the respondent. In order to receive maximum prediction benefits from attitude measures, the respondents must have had experience with the issue, understand the issue, and not be confused about its meaning from day to day.

The extent of consistency between attitudes and behaviors depends upon the fear or difficulty associated with the behavior. One might act counter to his attitudes in order to conform to social pressures. "A person's behavior occurs in part because of his habits, and in part because of norms or roles, or his expectations of reinforcement."[38]

Ryans[39] suggests that teacher behavior is a function of situational factors and the attitudes of individual teachers. This behavior is characterized by some degree of consistency. The sources of attitudes are both of a generic (unlearned) and experiental (learned)

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[37] A. R. Bass and H. Rosen, "Some Potential Moderator Variables in Attitude Research," Educational and Psychological Measurement (Summer, 1969), pp. 331-332.

[38] Trandias, Ego-Involvement and Change, pp. 52-54.

[39] Ryans, Characteristics of Teachers, pp. 15-25.

background. Knowledge of such background contributes to the prediction of teacher behavior. Different sub-populations of teachers classified according to subject matter taught, age, and sex differ substantially in teacher behavior. The motivational orientation of the teacher is the result of interplay among these variables.

FOUNDATIONS OF CAREER EDUCATION

The following review of literature has provided a frame of reference for understanding career education attitudes and behaviors. This section reviews the broad concept of career education and the thrust of career education at the junior high school and early high school level--the grade levels which teachers used in this study represent.

A Concept of Career Education. A report by the National Institute of Education describes a career as:

> ...An individual's entire or principal work that extends over a lifetime and that provides an accustomed means of livelihood. The term implies productive interaction with the economic sector in a series of jobs that collectively constitute a career. Education is the acquisition of knowledge and development of specific and general abilities in both formal and informal situations.
>
> Therefore, career education is the development of knowledge, and of special and general abilities to help individuals interact with the economic sector. Learning in this context would occur in both formal and informal situations which motivate the learner by causing him to experience work directly.[4]

These statements imply that career education is intended primarily for youth, mid-career adults, and minority groups. Younger

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[4] Manpower and Vocational Education Weekly, IV (May 23, 1973), p. 3.

children appear to be excluded. However, the career education emphases in Mississippi and other states also include younger children as a major target group for a comprehensive program of career education. A number of the proponents of the new concept of career education advocated the infusion of learning activities related to careers throughout all levels of the existing educational system. Career education "...simply recognizes that our current post-industrial occupational society finds relationships between education and business, industry, and labor becoming closer and closer each year."[1] The major focus of career education is to design and implement an educational program that will insure that each person who leaves high school will be prepared for a career pursuit whether it involves direct employment or continuing education.

The Center for Vocational and Technical Education at The Ohio State University proposed a plan which could accomplish this goal. This plan sought to restructure curriculums at all grade levels around the following set of career development concepts:

1. Self-awareness
2. Educational awareness
3. Career awareness
4. Economic awareness
5. Decision making
6. Beginning occupational competencies

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[1] Chamber of Commerce of the United States of America, Career Education and the Businessman: A Handbook of Action Suggestions (Washington: Chamber of Commerce of the United States of America, 1973), p. 4.

abilities, to undertake a study of careers and to participate in career-related experiences."[46]

In Mississippi, the occupational orientation teacher serves as a coordinator of all program activities during the exploration stage of career education. Regular academic teachers and vocational teachers are called upon to cooperate in integrating career development activities into the existing curriculum. Occupational orientation teachers give distinctive impetus to career exploration by directing students through a study of occupations clustered according to the Anne Roe schema.[47] In this schema, all occupations are clustered into eight major categories. Each category is further classified into six levels. The eight major groups are known as "Interest Groups." Occupations are placed in the respective groups on the basis of the primary interest of persons engaged in these occupations. The eight groups are: (1) service, (2) business contact, (3) organization, (4) technology, (5) outdoor, (6) science, (7) general cultural, and (8) arts and entertainment.

The six levels are based upon the responsibility, capacity, and skill requirements of the occupations. The major distinction between levels is found in the degree of responsibility for decisions. Persons in some occupations require little decision-making responsibility. The levels follow: level 1, professional and managerial

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[46] Ken Morris, "Mississippi's Career Centered Curriculum," Mississippi Personnel and Guidance Association Newsletter, Vol. III, No. 3 (May, 1972), p. 2.

[47] Anne Roe, The Psychology of Occupations (New York: John Wiley and Sons, Inc., 1956), pp. 143-152.

(independent responsibility); level 2, professional and managerial; level 3, semi-professional and small business; level 4, skilled; level 5, semi-skilled; and level 6, unskilled.

In the Mississippi occupational orientation program, students in grades 7 and 8 explore careers on a broad base. Students in grade 9 narrow their fields of exploration to particular career clusters of their own interests. Simulated work experiences which allow students to assess their work performances, aptitudes, and interests are emphasized. The occupational orientation teacher arranges for students to use shops and laboratories related to different studies as natural settings for work simulation.[48]

The tenth grade student is prepared to select a career cluster that he wishes to study in depth. The occupational orientation teacher intensifies guidance efforts to add more assurance that the student will make a wise selection. The occupational orientation teacher works with the teachers of English, mathematics, science, and social studies to help the student relate these subjects to the career cluster.[49]

LITERATURE RELATED TO PERSONAL, EXPERIENCE, AND TRAINING VARIABLES

This section will describe in more detail the personal, experience, and training variables investigated in the study. The review shows clearly the need for more research in this area. There is a void of factual evidence about attitudes related to career education

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[48] Morris, "Career Centered Curriculum," p. 7.

[49] Ibid.

programs and about the personal, experience, and training variables related to these attitudes. Although there have been several studies of attitudes toward vocational education, it would be risky to generalize these results to career education.

Type School District. Palmer[50] describes school districts as having certain characteristics which enable them to be set apart and studied as social entities. Schools have a definite population. They represent a compact network of social relationships and have a culture that is definitely their own. Each district is affected by the people who (1) influence the prevailing values of the community, (2) set guidelines for the allocation of material and other resources as well as what is to be included in the school curriculum, (3) place certain prestige ratings on certain educational programs, and (4) provide the economic enterprises in which students will enter after training.

Ryans,[51] in a classical study of teacher attitudes, behaviors and other characteristics, found that teachers classified according to school size significantly differed in verbal understanding, attitudes toward other teachers, and emotional stability. The pattern was fairly clear. Teachers in larger schools (seventeen to fifty or more teachers) scored higher in verbal understanding, attitudes toward other teachers, and emotional stability in the classroom than teachers from small schools. The Minnesota Teacher Attitude Inventory was used to

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[50] Charles E. Palmer, "Attitudes Toward Vocational Education and the College Preparatory Curriculum in a Northeast Mississippi Trade Area by Four Selected Groups" (a thesis for the Degree of Master of Arts, Mississippi State University, 1[illegible], pp. [illegible].

[51] Ryans, Characteristics of Teachers, p. [illegible].

measure teacher attitudes toward other teachers. Paper and pencil tests designed and validated by Ryans were used to obtain scores on verbal understanding and emotional stability in the classroom.

Rogers and Svenning state that teachers from small schools tend to be:

> ...limited cosmopolities. They have usually been raised in a community similar to the one in which they are teaching. Their contact with the larger world and with other teachers in other school systems is severely limited. The diffusion of new educational ideas that occur among school personnel in urban areas is thus more difficult for rural school staff.[52]

No significant research findings which impacted on attitudes toward career education and school districts were reported in the literature reviewed. However, a report by Murray[53] based upon site visits to occupational orientation programs in the three type school districts in Mississippi indicated that occupational orientation teachers in county schools place a higher value on occupational orientation than teachers in municipal separate schools. This is because students from county schools have been deprived of diversified occupational orientation experiences. Students in municipal separate schools already know of many work opportunities. It was concluded that they are not as eager to discuss career planning and work opportunities. Additionally, students in county schools do not have the benefit of guidance and counseling services. Thus, occupational orientation

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[52] Everette M. Rogers and Lynne Svenning, Change in Small Schools (Las Cruces, New Mexico: Educational Resources Information Center, Clearinghouse on Rural Education and Small Schools, New Mexico State University, 1969), p. 12.

[53] Morris Murray, "A Description of Occupational Orientation Programs in Mississippi Schools" (unpublished report to the Research and Curriculum Unit, Mississippi State University, July 17, 1973), p. 2.

teachers in these districts have a more distinct role regarding the guidance and counseling of students.

Race of Teachers. Black adolescents, in contrast to white, "see their occupational future as virtually predetermined and as involving limited and primarily undesirable possibilities."[54] Murray[55] suggests that black teachers in occupational orientation programs see this as a factor to overcome. They realize that the black student must work hard to succeed in a career. Therefore, both male and female black occupational orientation teachers perceive the program as a vehicle for teaching black students how to project themselves into the vocational future. In general, this dedication will be reflected only if black students are in occupational orientation classes. Most of the black occupational orientation teachers are teaching classes comprised largely of black students.

Johnson[56] observed that fewer black occupational orientation teachers express themselves verbally (either orally or in writing) at in-service teacher workshops. He suggested that this might be due to the lack of satisfactory role models regarding career development and the deprivation of verbal skills during their education in segregated schools.

Indeed, the attitudes of black educators regarding career

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[54] E. P. Kirchner, What Do You Want To Be When You Grow Up? (University Park, Pennsylvania: Institute for the Study of Child Development, Pennsylvania State University, 1973), p. 1.

[55] Murray, "Occupational Orientation," p. 1.

[56] Norbert Johnson, "Sex and Race Differences Among Occupational Orientation Teachers in Mississippi" (unpublished report to the Research and Curriculum Unit, Mississippi State University, June 13, 1973), p. 1.

education seem to be positive only if there is some guarantee that black students are equally served by education. The Educational Policy Information Center, the National Urban League, states:

> ...as black and minority educators, we must guard against the danger of creating another ghetto in our public schools where even now our children are subjected to denigrating labels - "special," "tracked," or "slow." [57]

Moore asserts that creating a positive image for career education among blacks will be difficult.

> On the one hand, for blacks, at least, while they were being channeled into semi-skilled and other low-level jobs by counselors (regardless of their abilities), they were being denied entry into the trades and other apprenticeship programs on the other.... It seems rather obvious and the literature supports the observation that there will be attempts to track minority groups and the poor into occupational education and the indoctrination will start in kindergarten.... For these reasons non-whites, at this juncture, do not consider career education a good thing...[58]

Research findings reported by Larimore[59] indicated that race is significantly related to teacher attitudes. White teachers are generally more positive in their attitudes toward education than black teachers. This report stemmed from several studies dealing with teacher attitudes toward educational concepts only indirectly related to career education. These findings could be loaded, since Larimore did not study cultural bias in the instruments utilized in the studies.

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[57] Educational Policy Information Center, "The Crises of Career Education," EPIC, Vol. I, No. 1 Summer, 1972, p. 2.

[58] William Moore, Jr., "Administrative Needs and Problems in the Installation of Career Education Programs" (paper presented to the National Conference on Career Education for Professors of Educational Administration, The Ohio State University, May 1-5, 1972), p. 4.

[59] Larimore, "An Assessment of Teacher Attitudes," p. 7.

Palmer[60] hypothesized that race would be a significant factor in the attitudes of teachers in a northeast Mississippi trade area. He theorized that this difference would be due to "structural disparity." This condition exists when blacks are hindered from moving to equal employment opportunities. This obstacle causes the individual to lower his occupational goal. If the Negro is affected by structural disparity, then they would tend to favor vocational education more than individuals who are not affected by structural disparity. As Palmer hypothesized, black teachers responded more favorably toward vocational education than white teachers. The sample was comprised of 31 high school teachers. A semantic differential type scale was used in the study.[61]

Sex. Bernard[62] states that the environment in which women develop and learn differs from that of men and this makes males and females categorically different. Larimore[63] emphasizes that in view of the occupational stereotypes and cultural expectations which apply to members of each sex, this variable must be considered as a relevant factor whenever attitudes are being investigated.

Sex appears to be a significant variable in predicting the career development of men and women. A survey of 1,[illegible] members of

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[60] Palmer, "Attitudes Toward Vocational Education," p. 11.

[61] Ibid., p. [illegible].

[62] Jessee Bernard, Women and the Public Interest; An Essay on Public Policy and Protest, Chicago: Aldine-Atherton Publishing Company, 1971, p. 179.

[63] Larimore, "Antecedents of Teacher Attitudes," p. [illegible].

the class of 1[illegible] at five Pennsylvania colleges found that the most significant variable influencing career choice in and out of college is the sex of the student. Women are more restricted in career range expectations. They feel they have less occupational mobility due to fewer career opportunities and career alternatives. The most significant finding of this study was that women are less achievement oriented toward a particular career. They tend to choose careers in which they can be less than totally committed.

Myral and Klein[65] recognize that women must make more career adjustments than men, including definite planning for the two roles of homemaker and breadwinner, a serious attitude toward work, and care to keep work skills up-to-date. Skilled counseling is an essential part of their education. It helps women to enlarge their horizons regarding work capabilities and fosters ways to overcome the hurdles encountered by women workers.

Differences between the sexes of teachers were found in Ryans'[66] monumental study of the characteristics of a national sample of school teachers. Women who taught in secondary schools tended to attain significantly higher scores than men on scales measuring stimulating and imaginative classroom behavior, attitudes toward students, "permissive" educational viewpoints, and verbal understanding.

[illegible] Gottlieb, Youth and Meaning of Work (Washington: U.S. Department of Labor, 1[illegible]), p. [illegible].

[illegible] Alva Myral and Viola Klein, Women's Two Roles (London: Routledge and Kegal Paul, 1[illegible]), pp. 1[illegible]-1[illegible].

[illegible] Ryans, Characteristics of Teachers, p. [illegible].

Lagana[1] found that women entered the teaching profession with a more favorable attitude toward teaching and students than men teachers. Using the Minnesota Teacher Attitude Inventory, to collect data, Lagana studied 770 teachers who began their teaching careers during the school year 1968-69 in 45 western Pennsylvania school districts. He also found that during the initial five-month period in the classroom, the women teachers underwent a greater attitude change in an unfavorable direction than did the men teachers. In interviewing the women teachers to learn why this happened, Lagana observed that although beginning women teachers were optimistic about teaching, they tended to become disenchanted with the apathy expressed by students and were discouraged with the instructional practices required to achieve a satisfactory learning environment.

Murray[2] indicated that men occupational orientation teachers in Mississippi appear to take a broader approach to teaching careers than women teachers. He suggests that this may be due to the fact that the women have looked upon work as an "activity," rather than a grave matter of bread-winning. Men think more definitely regarding careers and are willing to deal with all fronts.

Coulson[3] suggests that the women occupational orientation teachers in Mississippi appear to be more home and family oriented than men teachers. This is due in part to the fact that most of the teachers are married and in the child-bearing age. He also indicated

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[1] Lagana, Attitudes of Beginning Teachers, pp. 1-4.

[2] Murray, "Occupational Orientation," p. 1.

[3] Coulson, "Sex and Role Differences," p. .

that this characteristic is an advantage because it influences the degree of sincerity and interest in students in a positive manner. Johnson's observations of occupational orientation teachers at in-service workshops indicate that women teachers are more interested in students, more creative, and are more open to new ideas. He suggests that the competition between men and women at workshops may account for these findings.

Age and Teaching Experience. The variables age and teaching experience will be considered together since several of the studies reviewed discussed them in combination.

Ryans found little doubt about the existence of significant differences between teachers comprising different age groups with respect to a number of teacher characteristics. These included patterns of attitudes, educational viewpoints, verbal understanding, and emotional adjustment. Among [illegible] different F tests computed with the data acquired from the national sample of teachers, 46 of the sets of differences between mean scores were found to be significant at or beyond the .05 level. Generally, scores of older teachers (55 years and above) showed this group to be at a disadvantage, compared to younger teachers. Ryans could only speculate as to whether these age differences are dependent on changes in the teacher's characteristics as he or she grows older and becomes more experienced, or on cultural influences through training programs which differentiate a given generation of teachers.

Ryans, Characteristics of Teachers, [illegible].

Ryans[71] concluded that age must be taken into account as a relevant independent variable whenever teacher characteristics are considered. Additionally, he found trends with regard to the extent of teaching experience similar to those noted when teachers were classified according to age. There was a tendency for teachers with extended experiences to score lower than less experienced teachers on most of the variables investigated in the study.

Similar trends are seen in research by Lagana,[72] Welhelms,[73] Charters,[74] and Payne.[75] The attitudes of teachers do change when they embark upon the realistic world of teaching. This is especially acute during the first year of teaching when their attitudes toward students and teaching change in a negative direction.

Larimore[76] reviewed seven research reports which investigated the effect of age on teacher attitudes. Six of the seven reported significant relationships. Most often, the older teachers exhibited more positive attitudes toward the concepts being investigated.

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[71] Ibid.

[72] Lagana, Attitudes of Beginning Teachers, pp. 3-7.

[73] Fred T. Welhelms, "Before the Beginning," The Bulletin of the National Association of Secondary School Principals, Vol. LII (October, 1968), p. 127.

[74] W. W. Charters, Jr., "Some Facts About the Teaching Career," Education Administration Quarterly, Vol. III (Spring, 1967), p. 1-4.

[75] Osborn A. Payne, Teacher Attitudes and Attrition, Washington, D. C.: National Education Association Printing Service, 1968, p. 1.

[76] Larimore, "Antecedents of Teacher Attitudes," p. 4.

Lippit, et al.,[77] report that younger and older teachers are more favorable toward educational change. The "between" group appear to be doing the least in regards to innovations in their classrooms.

Murray[78] observed that the work ethic is less important to younger occupational orientation teachers in Mississippi. An older teacher recognizes what a high school student must do to prepare for work or college. They tend to provide more resources than younger teachers and give more advice and information regarding career development. The older teacher is more a "parent" to students than the younger teacher. The younger teacher tends to take a rival or competitive point of view with regard to students in the occupational orientation classes, and tend to have equal status with students. The older teacher doesn't want what the students want and is less competitive with the students.

Murray's observations of occupational orientation teachers revealed also that the older and experienced teachers are more "educated" to the needs of the students, the teacher's role in providing these needs, and the resources available to the teacher. New occupational orientation teachers who were apprehensive about their roles in leading occupational orientation students in exploratory experiences felt less threatened by the task after several years of teaching experience.

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[77] Ronald Lippit, et al., "The Teacher as Innovator, Seeker, and Sharer of New Practices," Perspectives On Educational Change, ed. by Richard I. Miller (New York: Appleton-Century-Crofts, 1967), pp. 322-32[illegible].

[78] Murray, "Occupational Orientation," p. [illegible].

Murray elaborates further that a distinct difference in attitudes and interests is evident among teachers who are involved only part-time in an occupational orientation program. When teachers are involved less than fifty percent in the program, they regard it as a "stepchild." Once the teachers recognize and accept the fact that the occupational orientation program is the "bread and butter" subject, they begin to devote more time to lesson plans, acquiring outside resources, and counseling students. Murray cites numerous instances where teachers became "better teachers" when their roles shifted from part-time to full-time in the occupational orientation program.

Hoppock [7] states that the teachers more closely identified with the occupational orientation program are the ones who provide better occupational information to students. Full-time teachers are more likely to be the experts on the major occupations than part-time teachers. He insists that understanding the concepts of the occupational orientation program and the teaching skills involved in making it successful are related to the percentage of time devoted to teaching in the program.

Teacher Training. Hoppock indicates that the "best" school courses in occupational orientation are taught by persons as well trained for this job as the teachers of English, chemistry, math, and social studies.

> ...The miserable dull courses in school after school have long ... demonstrated the futility of trying to

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[7] Robert Hoppock, Occupational Information (New York: McGraw-Hill Book Company, 1963), pp. 1[illegible].

> get good instruction in occupations from teachers who have not been specifically trained for this work.[30]

The literature reviewed in connection with this study seems to support the notion that teacher training influences group and individual attitudes. Teachers become more closely identified with the philosophy and desirable teaching behaviors of an educational program when they collaborate to analyze student needs and solve problems related to these needs. A high degree of homogeneity within groups is found when there is interaction among them. "It is through such interpersonal communication that greater homogeneity (at least in attitudes and beliefs) result over time."[31]

Mann[32] also states that an individual's attitudes are related to the group to which he belongs and whose membership he values.

In trying to explain why teacher training programs influence the educational viewpoints of teachers, Lavana[33] theorized that they evaluate their educational aims during training and organize and structure them into an accepted system. He suggests also that the longer duration of these programs, the more likely that teacher attitudes are influenced. This theory is supported in research results by

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[30] Ibid., p. 1 .

[31] Everette M. Rogers and Nemi C. Jain, Needed Research on Diffusion Within Educational Organizations (East Lansing, Michigan: Michigan State University, 1), p. .

[32] John Mann, Changing Human Behavior (New York: Charles Scribner's Sons, 1 , p. .

[33] La ana, Attitudes of Junior Teachers, . . .

Berelson and Steiner.[1] Their findings follow:

1. The more homogeneous the social environment of the individual, the more intensely he holds opinions, attitudes and beliefs, and the more likely he will act on them.
2. The more personal contact among members of a group, the more likely they will agree on attitudes, opinions, and beliefs.
3. The more salient or important an issue is to a group, the more closely its members will agree on their opinions, attitudes, and beliefs.
4. The more complex or ambiguous or unpredictable the consequences of the opinion, attitude or belief, the more people rely on group ties as a basis for decision.

SUMMARY

A portion of the literature reviewed employed subjects somewhat different from those employed in this study. However, they seem to offer extensive evidence to support the following statements.

Relationship of Attitudes to Teaching. The attitudes of teachers have a significant effect upon their classroom performance and their tenure in the teaching profession. Knowledge of these attitudes appears to contribute to all improved methods of teacher selection and placement, and it serves as a basis for improved teacher training methods and curricula.

Measurement of Attitudes. The purposes of studying teacher

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[1] Bernard Berelson and Gary A. Steiner, Human Behavior: An Inventory of Scientific Findings (New York: Harcourt, Brace and World, Inc., 1964), pp. [illegible].

attitudes are to: (1) learn to better predict attitude development; (2) determine the interrelations of teacher attitudes and overt behavior in teaching; (3) describe the development of attitudes during the process of adjusting to teaching situations; and (4) to discover factors related to the development of attitudes, and indicate the nature of the relationships involved.

However, the researcher can only be effective in studying teacher attitudes when he has reliable and valid instruments. In the past, research on attitudes has not been highly successful in predicting behaviors. In order to achieve maximum predictive benefits from attitude measures, the respondents must have had experience with the issue, understand the issue, and not be confused about its meaning from day to day.

Career Education Foundations. It appears there is wide agreement among educators on a set of concepts related to career awareness, orientation, and preparation. If this is a valid assumption, it should be possible to develop an instrument which can be used to accurately measure the attitudes of occupational orientation teachers toward career education.

Factors Which Relate to the Attitudes of Teachers. When teachers are classified according to school size, significant differences on the scores of attitudes toward teachers and verbal understanding have been found. Teachers in larger schools tend to score higher on inventories which measure attitudes toward other teachers, verbal understanding, and emotional stability in the classroom. However, the literature is not so clear on the attitudes that occupational orientation teachers hold

toward career education. Occupational orientation teachers in county school districts appear to regard career education as more valuable to their students than teachers in municipal separate school districts.

The past limitations in the career development of black people in Mississippi is a motivating factor for black teachers who teach black students in occupational orientation programs. If black students are enrolled in occupational orientation programs coordinated by black teachers, then the black teachers will have positive attitudes toward the goals of the program.

The literature shows extensive support for including sex as a variable when measuring attitudes toward students, stimulating and imaginative classroom behavior, and verbal understanding. Women tend to attain significantly higher scores in these areas than men. However, there is evidence that the attitudes of female teachers change in a negative direction more so than male teachers during the first and second years of service. In regards to occupational orientation teachers, male teachers tend to be more knowledgeable about the career development needs of students.

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 attitudes 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 students and the teacher's role in providing for 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 program have a better understanding of the program and devote a greater amount of their attention to making the program successful.

The literature provides support for the hypothesis that teacher training through college and university courses influence group and individual attitudes. A strong basis for making such inference is that these courses bring teachers together and result in homogeneity within the groups in terms of attitudes and beliefs. The longer in duration these courses are, the more likely teacher attitudes will be influenced.

CHAPTER III

METHODS AND PROCEDURES

POPULATION

This study consisted of the 196 teachers who devoted at least 2[illegible] percent of their time to teaching occupational orientation at grades 7-10 in Mississippi public schools during the 1972-73 school year. There were 158 male and 38 female teachers. Of this group, 124 were white and 72 black. The teachers included in the study had met professional requirements for teaching occupational orientation and had their budgets approved by the State Director of Vocational and Technical Education.

INSTRUMENTATION

The attitude scale is the most widely used method for measuring attitudes. It is constructed by assigning a numerical value to each of the alternatives used with each attitude statement. Therefore, the statements are said to be scaled.

Of the different types of attitude scales, the Likert scale is the most commonly used scale. As with all attitude scales, the objective of the Likert scale is to assign individuals a numerical position along a continuum which indicates the valence of their attitudes toward an object.[25]

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[25]Krech, Individual in Society, p. 145.

The Likert-type scale formed the first part of the data collection instrument used in this study. It was used to measure the attitudes of occupational orientation teachers toward career education (research questions 1-3). The scale consisted of 35 statements representing career education concepts or principles underlying the goals of the occupational orientation program.

Each statement was arranged on a favorable to unfavorable five-point scale as the following example shows:

A student should graduate from high school with a salable skill he can use on a job.

strongly agree	agree	no opinion	dis-agree	strongly disagree

A measure of "no opinion" means noncommittal in regard to the respondent's position toward the statement. A measure of noncommittal is important to the prediction of attitude. "No opinion" on a particular statement can originate in one of three ways: (1) by having a balanced number of positive and negative experiences with the object in question; (2) by having only neutral experiences; or (3) by having no registered experience with the object.[86]

A second part of the instrument was used to quantify the predictor variables to be investigated in questions 1-3. There included personal, experience, and training variables.

A third part of the instrument consisted of six behavioral statements. These statements were used to collect data concerning the

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[86] John J. Edwards and Thomas M. Ostrom, "Cognitive Structure of Neutral Attitudes," Journal of Experimental Social Psychology, Vol. VII, No. 3 (Summer, 1971), p. 281.

extent to which teaching behaviors considered important to implementing occupational orientation goals can be used to predict attitudes toward career education (research question 3). These statements were also used to collect data concerning differences between the frequency of reported teaching behaviors according to sub-groups of occupational orientation teachers (research question 4). The behavioral statements were arranged much as the example which follows:

Check the frequency in which each student was provided an opportunity to take occupationally related field trips this school year.

Never	1-5	6-1	11-15	16-20	More than 20

The behavioral statements were based upon a content analysis of the occupational orientation program and the attitude scale. This analysis was conducted in conference with members of the State Vocational and Technical Education Division who have been closely associated with occupational orientation and K-12 career education programs in Mississippi. Six statements which seemed to more nearly represent occupational orientation goals were selected from among fifteen behavioral statements generated by the group. Also, the logic was to select important behavioral statements which might be correlated with the attitude scale.

The attitude scale used in this study is a revision of a Likert-type scale developed in January, 1972, by the Institute for Educational Development[17] under contract with The Center for Vocational and Technical Education, The Ohio State University. An affiliate of the

[17] The Institute for Educational Development, Attitudes Toward Career Education: A Report to The Center for Vocational and Technical Education, The Ohio State University (Columbus: The Center for Vocational and Technical Education, 1972).

Educational Testing Service of Princeton, New Jersey, the Institute was the external evaluator for the Comprehensive Career Education Project conducted at The Center. The purpose of the instrument was to measure the extent to which the Comprehensive Career Education Project affected the attitudes of the groups it touched, including the professional growth and performance of staffs in the six local school systems cooperating in the project.

The attitude scale was administered to 4,000 teachers, principals, and other professional staff members in the following schools: (1) Pontiac, Michigan; (2) Hackensack, New Jersey; (3) Atlanta, Georgia; (4) Mesa, Arizona; (5) Jefferson County, Colorado; and (6) Los Angeles, California. Computation of an item analysis by the researcher on a sample of the respondents resulted in an index of homogeneity of .88. This correlation coefficient gives a summary statement, or an index, of the average degree of relationship between scores on items and the total score on the attitude battery. A modified Kuder-Richardson 20 formula[88] was used to compute the index. This formula assumes that the items on the scale are measuring career education.

The computer program used in performing the item analysis also provided an index of how scores on each item correlated with the total score on the attitude battery. This allowed the researcher to identify items for which numerical values appeared to be improperly assigned to the scale. This was indicated by a high negative correlation between scores on the item and the total score on the battery. Additionally,

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[88] Donald J. Veldman, Fortran Programming for the Behavioral Sciences (New York: Holt, Rinehart and Winston, 1967), pp. 177-181.

three items were correlated less than .10 with the total score. Items falling within the above categories were either deleted or modified according to recommendations provided by a panel which was selected to assist in improving the reliability and validity of the scale for the present study.

Seven persons with experience and expertise in developing career education programs in Mississippi were selected to review the original attitude battery. A meeting was arranged with the panel to accomplish the following tasks:

1. To determine if the attitude statements corresponded with the goals underlying the occupational orientation program in Mississippi.
2. To determine if the statements were so worded that the reaction of some respondents would be more toward one end of the attitude continuum and others more in the middle or toward the other end of the continuum.
3. To determine if the statements were expressions of desired attitudes as opposed to statements of fact.
4. Assign a positive or negative value to each attitude statement.

Many of the suggestions provided in this meeting were incorporated into the revised attitude scale. Some of the statements were reworded and rearranged to add clarity or structure to the scale. Several statements were eliminated completely because they did not meet one or more of the prescribed criteria, or were personal statements. A copy of the refined questionnaire is presented in the Appendix.

DATA COLLECTION

A list of occupational orientation teachers was acquired from the State supervisor of occupational orientation programs in Mississippi schools. The data necessary for the conduct of the study was collected by one instrument. The researcher mailed it directly to each of the 146 teachers appearing on the list. An attempt was made to minimize the threats of the validity of the findings by: (1) selecting the entire population for the study, (2) obtaining a high rate of returns from the teachers, and (3) obtaining candid responses from the participants. A letter accompanying the instrument contained the following information:

> An important survey is being conducted to find out how occupational orientation teachers in Mississippi feel about certain issues in career education. The information obtained from this survey will be used to plan future programs of occupational orientation; therefore, you are asked to help.
>
> All you need to do is follow the directions in the enclosed questionnaire and provide the information asked for. Your name will not be identified with the information you provide, so please be honest in your response to each question.

The instrument was also accompanied by a self-addressed, stamped envelope for prompt return of completed instruments. All instruments were mailed the same day.

Instructions for completing the instrument appeared at appropriate points in the instrument, as well as in the accompanying letter. Respondents were not required to identify themselves by name. A coding system was used to identify respondents and nonrespondents by number, rather than by name.

One hundred and eighty-five or 94 percent of the teachers contacted returned the instrument. Eight subjects' responses were discarded because of incomplete data.

STATISTICAL MODELS

The questions framed in this study are multi-dimensional because of the several variables which apparently underlie teacher attitudes and behaviors. The data analyses involved the use of a combination of continuous predictor variables and mutually exclusive categorical data. Additionally, the attitude measurements taken in this study were conceived to be linear continuums. The multiple linear regression analysis appeared to be a logical approach to attacking data of this nature. The linear regression approach was flexible in that it handled the large number of variables under consideration.

The data for research questions 1-3 were analyzed with Program LINEAR. As suggested by Kelly, et al.,[39] the first test made was to determine whether knowledge of all the predictor variables (age, race, years teaching, occupational orientation, etc.) produced an R^2 that was significantly different from zero. The logic is that if the knowledge of all the information contained in the questions does not prove to be significantly different from no information in predicting attitudes, then no single prediction variable will be significant. This model was constructed so that a single analysis would (1) test the collective effects of age, race, years teaching, occupational orientation, etc. on

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[39] Francis J. Kelly, et al., Research Design in the Behavioral Sciences, Multiple Regression Approach (Carbondale, Illinois: Southern Illinois University Press, 1969), p. 95.

attitude scores (research question 1); and (2) test the specified combined interaction effects of race and sex, etc. on attitude scores (research question 2). The purpose for testing for interactions was to determine if the effects of the predictor variables on attitude scores were the same across all "levels" of the predictor. It was assumed that if the multiple regression analysis showed significant relationship of the predictor variables collectively to attitude scores, the researcher could not make a global statement to this effect until it was known whether these variables interacted. Knowledge of the interaction aided in a full description of the data by comparing the results across more than one level of the variable.

The full model for the multiple regression procedure was expressed as $Y_1 = A_0 U + A_1 X_1 + A_2 X_2 \ldots + A_p X_p + E_1$. Y was the predicted variable, attitude scores in this case. A's were the least square weights. U was the unit vector (a constant) which allowed for computation of the F ratios; X's were the predictor variables; and E was the error variable.[1]

The restricted model which contained no information was expressed as $Y = A_0 U + E_0$. Y_1 was the predicted variable; U_0 was the unit vector; E_0 was the error variable; and A_0 was the least square weight. This model yielded an R^2 of zero.

The restricted models used to predict from some information were stated as the full model except the predictor variable that the researcher wished to exclude did not appear in the model.

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[1] Ibid., pp. 1-6 - 1-7.

In summary, this procedure shows the relationship of the combined personal, experience, and training variables and select interactions of these variables to attitude scores by generating a multiple regression coefficient R^2, an F ratio, and the probability level for the predictors. It yielded the same type information as analysis of variance. It enabled the researcher to study continuous and non-continuous variables, how much variation was due to each of these variables, whether the variables were significant in predicting attitudes, and what percent of the variation was accounted for in the prediction when the variables were considered collectively and independently.

The full and restricted models described above were also used to answer research question 3. The full model used teaching behaviors as predictors. No interactions were accounted for in this model.

Since most of the data for answering research question 4 were categorical, the chi square test was used to compare frequency distributions of subject responses on the teaching behaviors being investigated. The chi square technique has the advantage that no assumption need be made regarding the specific characteristics of the distribution under study. The nature of the data in research question required that contingency tables be set up to check against the probability that there were significant differences in teaching behaviors by various groups of personal variables.[1]

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[1] George A. Ferguson, Statistical Analysis in Psychology and Education (New York: McGraw-Hill Book Company, 1966), pp. 211-219.

As suggested by Dixon[2], the BMD 07D program for cross tabulation with the variables stacking was used to obtain the chi square values.

SCORING OF ATTITUDE STATEMENTS

It is necessary to know whether an attitude statement is presented in a positive or negative manner before a score for each item can be interpreted. This information is available from the survey instrument presented in the Appendix.

Persons who strongly agreed with a positive statement received a score of 5. Those who strongly disagreed with the statement received a score of 1. Negative statements were scored in a reversed order. Persons who strongly agreed with a negative statement received a score of 1. Those who strongly disagreed with a negative statement received a score of 5. Therefore, individuals who strongly disagreed on negative statements held high positive attitudes toward career education/occupational orientation.

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[2] W. J. Dixon, ed., BMD Biomedical Computer Program (Los Angeles: University of California Press, 1967), pp. 109-117.

CHAPTER IV

RESULTS

PURPOSE

The primary purpose of this research was to identify and describe the attitudes held by occupational orientation teachers toward career education and to examine the relationship of these attitudes to personal, training, experience, and teaching behavior variables. Additionally, the study included an investigation of differences in the frequency of teaching behaviors when these behaviors were associated with classes of personal, experience, and training variables.

ANALYSIS OF DATA

Internal Consistency of Attitude Scale. Prior to the statistical analyses of the attitude scores, an item analysis was performed from the responses on the attitude scale. The item analysis is presented in Table 1. Each item was arranged on a 1-5 point continuum. There were 35 items in the battery. The possible mean attitude score range for each individual was 35 to 175.

The item analysis provided a mean score for each item, the standard deviation for each item, the correlation coefficient for each item, and a Kuder Richardson 21 reliability coefficient. With exceptions of three items (2 , 25, and 35), mean item scores were well

TABLE 1

ITEM ANALYSIS OF ATTITUDE SCALE

Item	Mean	Standard Deviation	Correlation Coefficient
1	4.55	.54	.38
2	3.14	1.23	.24
3	4.28	.76	.39
4	4.21	.76	.24
5	3.54	.95	.47
6	4.34	.74	.33
7	3.67	.95	.47
8	3.90	.84	.38
9	4.34	.56	.36
10	4.21	.70	.49
11	4.04	.66	.32
12	3.68	.94	.27
13	3.28	1.43	.34
14	3.91	.91	.24
15	3.76	1.02	.51
16	3.47	1.21	.34
17	4.24	.83	.46

TABLE 1 (Continued)

Item	Mean	Standard Deviation	Correlation Coefficient
18	4.02	.81	.39
19	3.71	.79	.33
20	2.89	1.21	.19
21	3.95	.83	.30
22	3.66	.88	.30
23	4.14	.68	.33
24	3.84	.88	.38
25	2.39	1.06	.11
26	3.56	1.00	.31
27	3.76	.87	.34
28	3.47	1.09	.37
29	3.63	.89	.39
30	3.98	.78	.49
31	3.51	.93	.24
32	3.25	1.13	.22
33	4.10	.90	.38
34	3.86	.64	.33
35	2.76	1.16	.14

above 3.00 on a possible five-point scale. A score of 1.00 indicated a low negative attitude toward the item, and a score of 5.00 indicated a high positive attitude toward the item. It was concluded that the occupational orientation teachers held a positive attitude toward most of the attitude statements included in the study.

The correlation coefficients for each item were above .20 except for items 27, 25, and 35. The coefficients indicate the degree to which the various items on the attitude scale were positively correlated with the total score on the battery of items. In essence, each coefficient indicated the discrimination power of a particular item among occupational orientation teachers. Items with indices of +.30 or higher were good items; items with indices of .20 or higher contributed to discrimination but probably could have been improved; items with lower indices probably contributed little to discrimination.

The Kuder-Richardson 20 reliability coefficient was .72. This coefficient is a summary index of the average degree of relationship between scores on individual attitude items and the total score on the test. It indicates the proportion of variance that was due to variance in true scores and the proportion that was due to measurement error. Thus, it can be stated that 72 percent of the variability in obtained attitude scores was due to differences in the true scores and only 28 percent was due to errors of measurement.

Mean Attitude Scores. Mean attitude scores were used in performing the statistical analyses for research questions 1-3. The two-way mean attitude scores presented in the following tables were obtained through a least squares analysis of variance model. The

scores are best estimates of the true mean. Mean attitude scores were obtained by summing the ratings from the respondents on each attitude item. A higher mean score was indicative of a more positive attitude. The mean score range was 103-154.

Table 2 shows the group attitude scores and distributions of occupational orientation teachers by type school district, race, and years experience teaching occupational orientation. The best estimate for the mean score was 133.[illegible] with a standard error of 2.31. The standard error of estimate (2.31) could be used to set limits around attitude score estimates.

There was little difference between the attitude scores of teachers employed by county units (132.97) and consolidated districts (132.37). However, the mean score estimate for teachers from municipal separate districts was higher (135.15) than the scores of teachers from county units and consolidated districts.

White occupational orientation teachers had a higher (134.62) mean attitude score than black teachers (132.10). This finding is somewhat surprising since the literature indicated that black educators in Mississippi feel that career education can advance the cause of equal rights and opportunities. Apparently, black teachers had some difficulty in equating career education with the aspirations and needs of black students.

When years of experience was included as a variable, first year occupational orientation teachers had a lower mean score (12[illegible]) than second year teachers (13[illegible]). Lower mean scores were observed for first year teachers from [illegible] school districts and for black an

TABLE 2

MEAN ATTITUDE SCORES AND DISTRIBUTION OF POPULATION BY TYPE SCHOOL DISTRICT, RACE, AND YEARS EXPERIENCE TEACHING OCCUPATIONAL ORIENTATION

Variable	Years Experience Teaching Occupational Orientation					Group Mean	Standard Error	N	%
	1	2	3	4	5				
Type School District									
County Unit	(N=32) 128.52	(N=23) 136.03	(N=40) 133.33	(N=31) 133.47	(N=10) 132.00	132.67	2.32	136	76.8
Municipal Separate	(N=9) 132.55	(N=5) 138.01	(N=5) 129.61	(N=7) 140.28	(N=1) 135.28	135.15	3.59	27	15.3
Consolidated	(N=3) 128.33	(N=5) 139.42	(N=2) 139.64	(N=2) 125.77	(N=2) 128.68	132.37	4.73	14	7.9
Race									
White	(N=29) 130.13	(N=11) 138.21	(N=33) 135.81	(N=25) 133.64	(N=10) 135.29	134.62	2.50	108	61.0
Black	(N=15) 129.46	(N=22) 137.43	(N=14) 132.57	(N=15) 132.71	(N=3) 128.69	132.16	3.49	69	39.0
Total	(N=44) 129.80	(N=33) 137.82	(N=47) 134.19	(N=40) 133.17	(N=13) 132.99	133.40	2.31	177	100

white teachers. The mean score for teachers with three years experience teaching occupational orientation was lower (133.19) than the score for teachers with two years experience (137.32). This pattern was observed for teachers whether they were classified by type school district or race. One exception was second and third year teachers from consolidated districts whose mean scores were 139.42 and 139.64 respectively. Generally, experience was positively related to high attitude scores. The attitudes associated with years of experience tended to decline somewhat after two years of experience, particularly with regard to teachers from county units and consolidated districts. This could mean than new programs received a greater amount of supervision than the established programs.

Table 3 shows the mean attitude scores and the distribution of occupational orientation teachers by type school district, race, sex, and semester hours of credit received in vocational guidance courses. When all teachers were included, the mean score of teachers with 3-6 semester hours of credit in vocational guidance courses was lower (134.38) than the score for teachers with 7-12 semester hours of credit (137.35). The mean score for teachers with 13 semester hours of credit or more was lower (136.61) than those with 7-12 semester hours of credit (137.35), but slightly higher than the score of teachers with only 3-6 semester hours of credit. A similar pattern of scores was observed for teachers when they were classified according to type school district, race, and sex. These findings are similar to those concerning teaching experience. The attitudes associated with training also declined after some course work had been completed.

TABLE 3

MEAN ATTITUDE SCORES AND DISTRIBUTION OF POPULATION BY TYPE SCHOOL DISTRICT, RACE, SEX, AND SEMESTER HOURS OF CREDIT RECEIVED IN VOCATIONAL GUIDANCE COURSES

Variable	Hours of Credit Received in Vocational Guidance Courses			Group Mean	Standard Error	N	%
	0-6	7-12	13+				
Type School District							
County Unit	(N=89) 132.52	(N=34) 133.77	(N=13) 131.73	132.67	2.32	136	76.8
Municipal Separate	(N=13) 131.15	(N=11) 140.32	(N=3) 133.97	135.15	3.59	27	15.3
Consolidated	(N=5) 127.48	(N=6) 137.95	(N=3) 131.68	132.37	4.73	14	7.9
Race							
White	(N=68) 131.29	(N=28) 137.60	(N=12) 134.95	134.62	2.50	108	61.0
Black	(N=39) 129.47	(N=23) 137.09	(N=7) 129.96	132.16	3.49	69	39.0
Sex							
Male	(N=87) 127.38	(N=42) 136.12	(N=15) 128.93	130.81	2.14	144	81.4
Female	(N=20) 133.38	(N=9) 138.57	(N=4) 135.98	135.98	3.58	33	18.6
Total	(N=107) 130.38	(N=51) 137.35	(N=19) 132.46	133.40	2.31	177	100

Table 3 also shows a higher mean score for female occupational orientation teachers (135.08) than the score for male teachers (130.81). Female teachers appeared to be more perceptive of student needs, at least in terms of career education/occupational orientation.

Table 4 shows the mean attitude scores and the distribution of occupational orientation teachers by type school district, race, sex, and time devoted to teaching occupational orientation. The mean attitude score for part-time occupational orientation teachers was lower (131.41) than the score for full-time teachers (135.28). This held true for each group variable, except the score for full-time teachers from municipal separate districts was slightly lower (134.08) than the score of part-time teachers from municipal separate districts (135.33).

Analysis of Data Concerning Research Questions 1 and 2. The first questions posed by the researcher were:

1. How significant were the following variables in predicting the attitudes held by occupational orientation teachers toward career education?
   a. Type of school district in which teachers worked
   b. Race of teachers
   c. Sex of teachers
   d. Age
   e. Number of years teaching occupational orientation
   f. Non-educational occupational experience of teachers
   g. Hours of credit earned by teachers in vocational guidance courses

TABLE 4

MEAN ATTITUDE SCORES AND DISTRIBUTION OF POPULATION BY TYPE SCHOOL DISTRICT, RACE, SEX, AND TIME DEVOTED TO TEACHING OCCUPATIONAL ORIENTATION

Variable	Time Devoted to Teaching		Group Mean	Standard Error	N	%
	Part-Time	Full-Time				
Type School District						
County Unit	129.88 (N=104)	135.47 (N=32)	132.67	2.32	136	76.8
Municipal Separate	135.30 (N=17)	134.98 (N=10)	135.15	3.59	27	15.3
Consolidated	129.36 (N=10)	135.38 (N=4)	132.37	4.73	14	7.9
Race						
White	131.99 (N=86)	137.25 (N=22)	134.62	2.50	108	61.0
Black	131.04 (N=45)	133.31 (N=24)	132.16	3.49	69	39.0
Sex						
Male	130.08 (N=110)	131.53 (N=34)	130.81	2.13	144	81.4
Female	132.94 (N=21)	139.02 (N=12)	135.98	3.58	33	18.6
Total	(N=131) 131.51	(N=46) 135.28	133.40	2.31	177	100

f. Amount of time devoted to teaching occupational orientation

2. How significant were the following interactions of variables in predicting attitudes held by occupational orientation teachers toward career education?

a. Type school district and number of years of experience in teaching occupational orientation

b. Type school district and hours of credit received in vocational guidance

c. Type school district and amount of time devoted to teaching occupational orientation

d. Race and sex

e. Race and number of years experience in teaching occupational orientation

f. Race and hours of credit earned by teachers in vocational guidance

g. Race and amount of time devoted to teaching occupational orientation

h. Sex and hours of credit received in vocational guidance

i. Sex and years of experience teaching occupational orientation

j. Sex and amount of time devoted to teaching occupational orientation

k. Sex and age

l. Age and number of years teaching occupational orientation

m. Age and amount of time devoted to teaching occupational orientation

The data for these questions were analyzed by the multiple linear regression technique. The first test was to determine whether knowledge of all the variables specified in the questions significantly increased the predictability of mean attitude scores. This was discerned when R^2 was significantly different from zero. The data analysis model was constructed so that a single analysis would (1) test the collective effects of age, race, sex, etc., on mean attitude scores (research question 1); and (2) test the interaction effects of race and sex, sex and age, etc., on attitude scores (research question 2). The logic was that if knowledge of all the information contained in the questions did not prove to be significantly different from no information 'zero' in predicting attitudes, then no single variable would aid in predicting attitudes. The personal, experience, and training variables were important to the extent that they made unique contributions to attitudes.

An R^2 (.23) was produced by comparing the full linear model with a restricted model which contained no information. Twenty-three percent of the variance in attitude scores was explained by knowledge of group membership according to personal, experience, and training variables. As indicated by the data in Table , no more than a chance amount of the total variance was accounted for. The attitudes of the various teacher groups investigated were not significantly different. Another way to explain this inference is that the probability of encountering a significant reduction of accounted for variance was

greater than five times in one-hundred when teachers were classified according to personal, experience, and training variables.

TABLE 5

RELATIONSHIP OF PERSONAL, EXPERIENCE AND TRAINING VARIABLES, AND THEIR INTERACTIONS, TO MEAN ATTITUDE SCORES (MULTIPLE REGRESSION ANALYSIS FOR QUESTIONS 1 AND 2)

Test	R^2		F	P
	Full	Reduced		
Full Model (full information against no information)	.230	.009	1.29	.154*

*Not significant at .05 level

Following the logic of the multiple linear regression program, no further tests were necessary for questions 1 and 2 because knowledge of full information did not prove to be significantly different from zero. However, for reference purposes, a least squares analysis of variance was performed to obtain F values for each of the variables included in the linear regression model. The F values are presented in Table 6. As expected, none of the values were significant.

The results shown in Table 6 indicate that the attitudes of occupational orientation teachers toward career education were consistently positive across the various modes of classification.

TABLE 6

MEAN SQUARES AND F RATIOS OF PERSONAL, EXPERIENCE AND TRAINING VARIABLES, AND THEIR INTERACTIONS, TO MEAN ATTITUDE SCORES (LEAST-SQUARES ANALYSIS OF VARIANCE FOR QUESTIONS 1 AND 2)

Source	df	Mean Squares	F	P
Type District	2	23.21	.224	Not Significant
Race	1	39.95	.385	" "
Sex	1	206.05	1.987	" "
Age	3	169.39	1.634	" "
Years Experience	4	71.65	.691	" "
Non-educational experience	1	13.45	.130	" "
Hours credit	2	91.15	.879	" "
Time Devoted to Teaching	1	121.66	1.173	" "
Type District x Years Experience	8	33.99	.328	" "
Type District x Hours Credit	4	68.24	.658	" "
Type District x Time Devoted to Teaching	2	67.17	.648	" "
Race x sex	1	95.37	.920	" "
Race x years experience	4	20.01	.193	" "
Race x hours credit	2	18.46	.178	" "
Race x time devoted to teaching	1	43.46	.419	" "
Sex x age	3	36.44	.351	" "
Sex x hours credit	2	27.02	.261	" "
Sex x time devoted to teaching	1	90.98	.887	" "
Age x years experience teaching	12	103.03	.978	" "
Age x percentage of time devoted to teaching	3	29.15	.277	" "

No single group of teachers had a unique conception of career education. Membership in one group did not reflect an average attitude score which was significantly higher than membership in other groups.

Beta weights for the predictor variables were computed for the model. These weights are a function of the correlations between the predictors. The beta weights are partial regression coefficients of the attitude scores on the predictor variables. The mean attitude scores and the beta weighted means of the predictor variables were utilized to compute a constant for the raw beta weights. This is known as the "intercept."

Standardized betas were also computed for each of the predictor variables. Standard errors then were computed for each of the beta weights. The accuracy with which it was possible to predict attitude scores using the regression equation was determined by the standard error. An estimate of R^2 was then derived from the results of these computations.

Analysis of Data Concerning Research Question 3. The third question posed for the study was:

3. How significant were the following teaching behaviors in predicting the attitudes held by occupational orientation teachers toward career education?

   a. Number of workers who came to talk to occupational orientation classes

   b. Number of discussions with guidance counselors and other teachers about what to teach in occupational orientation

c. Frequency of occupationally-related field trips

d. Number of discussions with local businessmen about what to teach in occupational orientation

e. Number of off-campus work experience stations located for students

f. Number of attempts to show or tell students how school subjects relate to the world of work.

The significance of the relationship between the teaching behaviors and the mean attitude score was also determined by the multiple regression technique. The first test made was to determine whether knowledge of group membership concerning all levels of teaching behaviors produced an R^2 significantly different from zero. An R^2 (.24) was produced by comparing the full regression model with a restricted model which contained no information. As indicated by Table 7, all the information on teaching behaviors produced an R^2 that was significantly different (at the .05 level) from zero. The R^2 indicates that 24 percent of the variance in the mean attitude scores of occupational orientation teachers was accounted for by the information on teaching behaviors. The F value shows that this was a greater than chance variation. Another way to state this inference is that the probability of encountering a reduction of explained variance is less than five times in one-hundred when the information on teaching behaviors is known.

Therefore, it was necessary to perform other tests with restrictions placed upon the model and observe the influence of these restrictions on variance (error). This problem was handled by

TABLE 7

RELATIONSHIP OF TEACHING BEHAVIORS TO MEAN ATTITUDE SCORES
(MULTIPLE REGRESSION ANALYSIS FOR QUESTION 3)

Test	R^2 Full	R^2 Reduced	R^2 Full − R^2 Reduced	F	P
Full Model (All teaching behaviors versus no information)	.240	.[illegible]	.240	1.[illegible]	Significant at .05 level
Full versus all except workers to classes	.2[illegible]	.214	.026	.21	not significant
Full versus all except discussions with school personnel	.2[illegible]	.199	.05	.41	not significant
Full versus all except field trips	.2[illegible]	.2[illegible]	.031	.25	not significant
Full versus all except discussions with businessmen	.2[illegible]	.1[illegible]4	.046	.37	not significant
Full versus all except off-campus work experience stations	.240	.2 1	.039	.31	not significant
Full versus all except times students were told of relationship of courses	.240	.198	.042	.34	not significant

systematically removing one teaching behavior set at a time, and observing the effect of this reduction on R^2. The full and reduced models were compared and the significance of the reduced R^2 determined by an F test. The level of significance established was .05. As shown in Table 7, each reduced model contributed only a small percentage (2 to 5 percent) of the variance in the mean attitude scores of occupational orientation teachers. The F values indicate that R^2 was not significantly different from zero.

Knowledge of the teaching behaviors taken independently did not significantly increase the predictability of attitude scores. Information in addition to knowledge of teaching behaviors will be required to accurately predict the attitudes of occupational orientation teachers.

Analysis of Data Concerning Research Question 4. The fourth question posed for the study was:

4. Were there significant differences in the frequency of reported behaviors among occupational orientation teachers when the following variables were considered?
   a. Type school district
   b. Race
   c. Sex
   d. Age
   e. Years of experience teaching occupational orientation
   f. Hours of credit received in vocational guidance courses
   g. Amount of time devoted to teaching occupational orientation

This part of the research concerned the six teaching behavior sets cited in question 3. For each behavior, occupational orientation teachers responded to one of six categories that indicated the extent they engaged in this behavior during the school year. Analysis of the data included frequency counts to determine how many teachers responded to each category in each behavior set. Then, the chi square statistic was employed to determine if the frequency distributions for each mode of classification were significantly different from each other. Table 8 shows the chi square values of the frequency of teaching behaviors compared by type school district, race, sex, age, years experience teaching occupational orientation, hours of credit received in vocational guidance, and amount of time devoted to teaching occupational orientation. The inference drawn from the significant results is that the different sub-groups do not represent the same population distributions. Another way to explain this inference is that distributions in the modes of classification in the contingency table are different.

Percentage distributions were used to describe the significant chi square findings presented in Table 8. The frequency counts on the two modes of classification were used to compute percentage distributions. These results are presented in Tables 9-14.

Table 9 shows the extent that community workers came to each occupational orientation class during the year to talk about their jobs, and the extent to which occupational orientation teachers held discussions with school personnel about what to teach in occupational orientation classes. The percentage distributions were recorded by type school district, race, sex, and age.

TABLE 8

DIFFERENCES IN THE FREQUENCY OF REPORTED TEACHING BEHAVIORS BY TYPE SCHOOL DISTRICT, SEX, RACE, AGE, TEACHING EXPERIENCE, CREDITS IN VOCATIONAL GUIDANCE COURSES, AND TIME DEVOTED TO TEACHING OCCUPATIONAL ORIENTATION

Variable	df	Chi Square Values for Teaching Behaviors					
		Workers to Classes	Discussions with School Personnel	Field Trips	Discussions with Businessmen	Off-Campus Work Stations	Students Told Relation of School to Work
Type School District	10/8	13.49	28.03**	7.75	5.82	8.00	32.81**
Race	5/4	1.05	3.86	4.24	2.19	4.32	15.45**
Sex	5/4	6.94	6.97	1.55	2.28	5.97	9.73
Age	15/12	24.31*	9.20	19.12	16.14	11.27	20.35
Years Experience Teaching Occupational Orientation	5/4	7.74	6.60	9.91	7.22	5.43	3.79
Hours of Credits Earned in Vocational Guidance Courses	10/8	17.58	6.07	14.13	9.97	20.66**	10.74
Amount of Time Devoted to Teaching Occupational Orientation	5/4	10.26	18.86**	5.34	4.27	9.10	11.07*

** Significant at .001 level
* Significant at .05 level

TABLE 9

PERCENT DISTRIBUTIONS BY WORKERS TO CLASSES, DISCUSSIONS WITH SCHOOL PERSONNEL, TYPE SCHOOL DISTRICT, RACE, SEX, AND AGE

Percent Distributions

Variable	School District			Total	Race		Total	Sex		Total	Age				Total
	C.U.	M.S.	Cons.	%	White	Black	%	Male	Female	%	-30	30-39	40-49	50+	%
Workers to classes															
More than 20	.02	.00	.07	.03	.02	.04	.03	.03	.00	.03	*.01	*.05	*.00	*.06	.03
16-20	.02	.00	.00	.02	.02	.01	.02	.02	.00	.02	.01	.02	.03	.00	.02
11-15	.10	.04	.07	.08	.07	.09	.08	.07	.12	.08	.03	.22	.06	.03	.08
5-10	.35	.28	.43	.34	.35	.34	.34	.34	.36	.34	.33	.24	.44	.43	.34
Less than 5	.38	.57	.07	.41	.42	.40	.41	.44	.31	.41	.51	.34	.38	.32	.41
None	.13	.11	.36	.12	.12	.12	.12	.10	.21	.12	.11	.13	.09	.16	.12
N =	135	28	14		107	70		144	33		73	41	32	31	
Discussions with school personnel															
More than twice each week	.05**	.00**	.07**	.05	.05	.04	.05	.03	.10	.05	.05	.08	.00	.03	.05
Twice each week	.06	.00	.00	.05	.06	.03	.05	.03	.10	.05	.05	.05	.06	.00	.05
Once each week	.14	.07	.07	.12	.13	.11	.12	.12	.15	.12	.10	.20	.09	.13	.12
Once each month	.30	.32	.43	.32	.33	.29	.32	.34	.21	.32	.31	.29	.32	.39	.32
Less than 5	.37	.61	.07	.38	.37	.40	.38	.38	.42	.38	.41	.29	.47	.35	.38
None	.08	.00	.36	.08	.06	.13	.08	.10	.02	.08	.08	.09	.06	.10	.08
N =	135	28	14		107	70		144	33		73	41	32	31	

**Significant difference at .001 level
*Significant difference at .05 level

The percentage distributions revealed that 31 percent of the teachers arranged for less than 5 community workers to participate in each class during the school year. Thirty-four percent arranged for 5-1 workers and 15 percent of the teachers arranged for more than 10 workers to participate in classes during the school year. A substantial number of teachers (12 percent) did not arrange for any workers to participate in their classes Apparently, teachers experienced a great deal of difficulty recruiting classroom participants from the community.

When the teachers were grouped according to type school district, race and sex, no significant differences were found in the number of community workers who participated in occupational orientation classes during the school year. However, a significant difference at the .05 level was observed in the number of community participants when age was used as a classification variable. Fewer community workers participated in the classes taught by teachers in the less than 3 age group. Thirty-three percent of the teachers in the less than 30 group reported that 5-1 community workers participated in their classes. Forty-four percent of the 40-49 age group and 43 percent of the over 50 group reported that 5-1 workers participated in their classes during the school year. Although only 2 percent of the teachers in the 3 -39 age group reported that -1 community workers participated in their classes, 22 percent of the teachers in this age group reported that more than 1 community workers participated in their classes during the school year.

Many teachers (31 percent) in the less than 3 age group reported

fewer than 5 workers participated in their classes than did the number of teachers (34, 38, and 32 percent respectively) in the other age groups. Younger teachers were probably acquainted with fewer community workers. However, young teachers may have provided for other important learning activities which were not accounted for in this research.

Further examination of the data in Table 9 shows that a similar number of teachers (11, 13, 9, and 16 percent respectively) in each age group reported that no community workers came to talk to occupational orientation classes. With the exception of teachers in the 30-39 age group, a small number of teachers (5, 7, and 9 percent respectively) in each age group reported that more than 15 workers participated in occupational orientation classes during the year.

Table 9 also shows that 38 percent of the teachers held less than five discussions during the school year with other teachers and guidance counselors about what to teach in occupational orientation classes. Thirty-two percent of the teachers held discussions once each month, and 12 percent of the teachers held discussions once each week. Eight percent of the teachers did not hold discussions with school personnel and 1 percent of the teachers held discussions two times or more each week. It was observed that occupational orientation teachers performed this task more frequently than they performed out-of-school work, such as discussing occupational orientation with local businessmen.

When the teachers were grouped according to race, sex and age, no significant differences were found regarding the number of discussions occupational orientation teachers held with school personnel

about what to teach in occupational orientation classes. A significant difference at the .001 level was observed when type school district was used as a classification variable. Teachers from county units held discussions with school personnel more frequently than the teachers from municipal separate and consolidated school districts. This finding might mean that occupational orientation programs in small schools were more "visible" than programs in large schools, and this factor promoted a greater amount of discussion of the program among family members.

Thirty-seven percent of the teachers from county units reported that they discussed their programs less than five times during the school year, whereas, 21 percent of the teachers from municipal separate districts responded to this category. Thirty-six percent of the teachers in consolidated districts indicated that they did not discuss their programs with school personnel during the year.

Thirty percent of the teachers from county units and 32 percent of the teachers from municipal separate districts reported that they discussed their programs once each month with other school personnel. Forty-three percent of the teachers from consolidated districts reported that they discussed their programs once each month with other school personnel. Table 4 also shows that 14 percent of the teachers from county units reported that they discussed their programs once each month with school personnel and only 7 percent of the teachers from municipal separate districts and 7 percent of the teachers from consolidated districts made this report. Furthermore, 11 percent of the teachers from county units reported that they discussed their

programs two or more times each week with other school personnel. None of the teachers from municipal separate districts discussed their programs more than two times each week with other school personnel and only 7 percent of the teachers from consolidated districts made this report.

Eight percent of the teachers from county units reported that they did not discuss their programs during the school year with other school personnel.

Table 15 shows the extent that occupationally-related field trips were taken during the school year by occupational orientation classes, and the extent that occupational orientation teachers held discussions with local businessmen during the year about what to teach in occupational orientation classes. The percentage distributions were recorded by type school district in which the teachers worked, race, sex, and age of teachers.

Fifty-six percent of the occupational orientation teachers reported that occupational orientation classes were involved in less than five occupationally-related field trips during the school year. Twenty-one percent of the teachers reported that their occupational orientation classes did not engage in field trips. Nineteen percent of the teachers indicated that 5-10 field trips were taken by their classes during the school year. Only 4 percent of the teachers involved their classes in more than ten field trips during the school year.

No significant difference in frequency distributions were observed in the number of field trips taken when the teachers were

TABLE 10

PERCENT DISTRIBUTIONS BY FIELD TRIPS, DISCUSSIONS WITH BUSINESSMEN, TYPE SCHOOL DISTRICT, RACE, SEX, AND AGE

Variable	School District			Total	Race		Total	Sex		Total	Age				Total
	C.U.	M.S.	Cons.	%	White	Black	%	Male	Female	%	-30	30-39	40-49	50+	%
	Percent Distributions														
Field trips															
More than 20	.01	.00	.00	.01	.01	.00	.01	.01	.00	.01	.00	.02	.00	.00	.01
16-20	.01	.00	.00	.01	.01	.00	.01	.01	.00	.01	.00	.00	.00	.03	.01
11-15	.02	.00	.07	.02	.02	.03	.02	.03	.03	.02	.01	.05	.03	.00	.02
5-10	.19	.21	.14	.19	.22	.14	.19	.19	.18	.19	.11	.30	.28	.16	.19
Less than 5	.59	.43	.65	.56	.56	.57	.56	.57	.52	.56	.63	.46	.50	.62	.56
None	.18	.36	.14	.21	.18	.26	.21	.19	.27	.21	.25	.17	.19	.19	.21
N =	135	28	14		107	70		144	33		73	41	32	31	
Discussions with businessmen															
More than twice each week	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Twice each week	.02	.00	.00	.02	.01	.03	.02	.02	.00	.02	.00	.05	.00	.03	.02
Once each week	.06	.04	.07	.06	.05	.07	.05	.05	.09	.06	.03	.07	.09	.06	.06
Once each month	.21	.25	.14	.20	.23	.17	.21	.22	.15	.21	.15	.30	.19	.26	.21
Less than 5	.47	.46	.29	.45	.45	.46	.45	.44	.48	.44	.47	.34	.56	.46	.44
None	.24	.25	.50	.27	.26	.26	.27	.27	.27	.27	.35	.24	.16	.19	.27
N =	135	28	14		107	70		144	33		73	41	32	31	

grouped according to type school district, race, sex, and age.

Table 10 also shows that 45 percent of the occupational orientation teachers held less than 5 discussions during the school year with local businessmen about what to teach in occupational orientation classes. Twenty-seven percent of the teachers did not discuss their programs of instruction with local businessmen. Twenty percent of the teachers discussed their programs of instruction with local businessmen once each month. Only 4 percent of the teachers reported that they held discussions during the school year with local businessmen more than once each month. No significant differences in frequency distributions were observed in the number of discussions when the teachers were grouped by type school district, race, sex, and age.

Similar patterns of percentage distributions were observed in Tables 9 and 10. The majority (77 percent) of the teachers did not involve their students in field trips or involved them in field trips less than five times during the school year. Similarily, 79 percent of the teachers did not hold discussions or held less than 5 discussions with local businessmen during the school year. There is considerable evidence that occupational orientation teachers experienced much difficulty in performing out-of-school educational tasks. This problem does not appear to stem from a lack of community resources, since teachers from municipal separate school districts did not utilize community resources more frequently than teachers from county units.

Table 11 shows the extent that off-campus exploratory work stations were located for students during the year by occupational orientation teachers, and the extent that occupational orientation

TABLE 11

PERCENT DISTRIBUTIONS BY OFF-CAMPUS WORK STATIONS, RELATION OF SCHOOL TO WORK, TYPE SCHOOL DISTRICT, RACE, SEX, AND AGE

Variable	Percent Distributions														
	School District			Total	Race		Total	Sex		Total	Age				Total
	C.U.	M.S.	Cons.	%	White	Black	%	Male	Female	%	-30	30-39	40-49	50+	%
Off-campus work stations															
More than 20	.01	.00	.00	.01	.01	.00	.01	.01	.00	.01	.00	.02	.00	.00	.01
16-20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11-15	.03	.00	.07	.03	.02	.04	.03	.04	.00	.03	.01	.02	.03	.06	.03
5-10	.15	.14	.14	.15	.11	.20	.15	.16	.09	.15	.14	.13	.19	.16	.15
Less than 5	.32	.25	.58	.33	.35	.32	.32	.35	.24	.33	.26	.37	.37	.43	.33
None	.49	.61	.21	.48	.51	.44	.49	.44	.67	.48	.59	.46	.41	.35	.48
N =	135	28	14		107	70		144	33		73	41	32	31	
Students told of relation of school to work															
More than twice each week	.15**	.14**	.21**	.16	.10**	.24**	.16	.12	.30		.14	.22	.13	.16	.16
Twice each week	.07	.00	.14	.06	.04	.10	.06	.06	.09		.10	.02	.09	.00	.06
Once each week	.24	.43	.21	.27	.28	.24	.27	.27	.24		.32	.17	.22	.32	.27
Once each month	.44	.36	.30	.41	.46	.35	.41	.45	.24		.33	.44	.53	.46	.41
Less than 5	.10	.07	.00	.09	.12	.04	.09	.09	.12		.11	.10	.03	.06	.09
None	.00	.00	.14	.01	.00	.03	.01	.01	.00		.00	.05	.00	.00	.01
N =	135	28	14		107	70		144	33		73	41	32	31	

**Significant difference at .001 level

teachers attempted to show or tell students how English, math, science, and social studies related to the world of work. The distributions were classified according to type school district, race, sex, and age.

Forty-eight percent of the occupational orientation teachers did not locate off-campus exploratory work stations for their students. Thirty-three percent of the teachers located less than 5 exploratory work experience stations, and 15 percent reported that they located from 5 to 15 exploratory work experience stations. Only 4 percent indicated that they located more than 15 work stations during the school year. No significant difference in frequency distributions was observed in the number of work stations located when the teachers were classified according to type school district, race, sex, and age. Community resources were utilized little to provide exploratory work experiences for students.

Table 11 also shows that 41 percent of the occupational orientation teachers told their students once each month the relation of school subjects to the world of work. Twenty-seven percent of the teachers involved their students in this type discussion once each week. A substantial number (17 percent) of the teachers reported that they discussed this subject with their students more than twice each week during the school year. Nine percent of the teachers reported that they discussed this subject less than [illegible] times each week during the school year. Teachers discussed the relationship of school subjects to the world of work much more frequently than they engaged in the other teaching behaviors investigated in the research. Again,

this evidence suggests that in-school tasks were less difficult to accomplish than out-of-school learning activities.

No significant differences were observed in the number of times that teachers discussed the relation of school subjects to the world of work when the teachers were classified according to sex and age. However, significant differences at the .01 level were observed in the frequency counts when the teachers were classified according to type school district and race. Teachers from municipal separate and consolidated school districts discussed the relation of school subjects to the world of work somewhat more frequently than the teachers from county units. This is evident when the percentage distributions in the behavioral categories were collapsed into two categories: (1) once each week or more often; and (2) once each month or less often. Forty-six percent of the teachers from county units and 57 percent of the teachers from municipal separate districts indicated that they discussed the relation of school subjects to the world of work at least once each week. Fifty-six percent of the teachers from consolidated districts reported that they discussed this subject at least once each week. These findings indicate that teachers from county units are less oriented to work knowledge, skills and attitudes, and the relationship of school subjects to these characteristics.

Black teachers discussed the relation of school subjects to the world of work more frequently than white teachers. Twenty-four percent of the black teachers held discussions with their students more than twice each week, whereas, only 1 percent of the white teachers held discussions this often. Ten percent of the black teachers indicated

that they held discussions twice each week and only 4 percent of the white teachers reported holding discussions this often. It followed that 12 percent of the white teachers and 4 percent of the black teachers held discussions less than 5 times during the school year.

When the frequency distributions were collapsed into two categories, it was observed that 58 percent of the black teachers told their students the relation of school subjects to work one or more times each week, and 42 percent of the white teachers reported that they held discussions one or more times each week during the school year. One interpretation of this finding is that black teachers were more sensitive about the irrelevancy of school subjects when these subjects are separated from career goals. No doubt, black teachers were also aware of the increased emphasis on black students to stay in school longer. Therefore, they were more active in teaching their students how to achieve occupational goals through school subjects.

Table 12 shows the extent to which community workers participated in classroom learning activities during the school year, and the extent to which teachers held discussions with local school personnel about what to teach in occupational orientation classes. The original data concerning semester hours of credit received in vocational guidance, amount of time teaching occupational orientation, and years experience teaching occupational orientation were collapsed into two and three categories to increase the expected frequency in which teachers could fall into response categories. No significant differences in the frequency of community worker participation were observed when the

TABLE 12

PERCENT DISTRIBUTIONS BY WORKERS TO CLASSES, DISCUSSIONS WITH SCHOOL PERSONNEL AND CREDIT HOURS, AMOUNT TIME TEACHING, AND YEARS EXPERIENCE

Variable	Percent Distributions									
	Credit Hours			Total	Amount Time Teaching		Total	Years Experience		Total
	0-6	7-12	13+	%	Part-time	Full-time	%	1-2	3-5	%
Workers to classes										
More than 20	.02	.00	.16	.02	.04	.00	.02	.03	.03	.02
16-20	.01	.04	.00	.02	.02	.00	.02	.00	.03	.02
11-15	.07	.10	.05	.08	.05	.15	.08	.04	.11	.08
5-10	.34	.33	.42	.35	.33	.35	.35	.31	.37	.35
Less than 5	.44	.39	.32	.41	.40	.46	.41	.48	.36	.41
None	.12	.14	.05	.12	.16	.04	.12	.14	.10	.12
N =	107	51	19		131	46		77	100	
Discussions with school personnel										
More than twice each week	.04	.06	.05	.05	.03**	.09**	.05	.06	.03	.05
Twice each week	.05	.04	.05	.05	.03	.09	.05	.01	.07	.05
Once each week	.10	.18	.11	.12	.07	.26	.12	.13	.12	.12
Once each month	.32	.27	.47	.32	.34	.28	.32	.29	.35	.32
Less than 5	.42	.35	.21	.38	.43	.24	.38	.39	.37	.38
None	.07	.10	.11	.08	.10	.04	.08	.12	.06	.08
N =	107	51	19		131	46		77	100	

**Significant at .001 level

teachers were grouped by number of semester hours of credit received in vocational guidance courses, amount of time (part-time or full-time) spent teaching occupational orientation, and the number of years experience teaching occupational orientation. Also, no significant differences in the frequency of discussions with school personnel were observed when the teachers were grouped by number of semester hours of credit received in vocational guidance courses and years of experience teaching occupational orientation. Again, these data show that the best sources for current occupational information were used little during the school year.

A significant difference at the .001 level was observed in the frequency of discussions with school personnel when the teachers were grouped by the amount of time (part-time or full-time) spent teaching occupational orientation during the school year. The percentage distributions in Table 12 show that full-time teachers held discussions with school personnel concerning what to teach in occupational orientation classes more often than part-time teachers. Ten percent of the part-time teachers did not hold discussions with school personnel, and only 4 percent of the full-time teachers did not discuss what to teach with the school personnel. Forty-three percent of the part-time teachers held less than five discussions with school personnel as compared to only 24 percent of the full-time teachers. Thirty-four percent of the part-time teachers held discussions with school personnel once each month, and 25 percent of the full-time teachers held discussions with school personnel once each month.

The difference in the frequency of discussions held with school

personnel by part-time and full-time teachers was also observed when the following response sets were collapsed into one category: (1) once each week; (2) twice each week; and (3) more than twice each week. Fourty-four percent of the full-time teachers held discussions with school personnel once each week or more often. Only 13 percent of the part-time teachers reported that school personnel were consulted once each week or more often. This is important evidence that part-time teachers were less active than full-time teachers in attempts to unite occupational orientation programs with the existing school curriculums. Their regular instructional assignments probably absorbed the time required for performing occupational orientation duties.

Table 13 shows the extent to which each occupational orientation class was involved in field trips during the year, and the extent to which occupational orientation teachers held discussions with local businessmen about what to teach in occupational orientation classes. No significant differences in the frequency of field trips were observed when the teachers were grouped according to semester hours of credit received in vocational guidance courses, amount of time spent teaching occupational orientation, and years experience teaching occupational orientation. Also, no significant differences in the frequency of discussions with local businessmen concerning what to teach in occupational orientation classes were observed when the teachers were grouped according to these training and experience variables. This finding is consistent with the other findings concerning the use of off-campus resources in occupational orientation programs. Although

TABLE 13

PERCENT DISTRIBUTIONS BY FIELD TRIPS, DISCUSSIONS WITH BUSINESSMEN AND CREDIT HOURS, AMOUNT TIME TEACHING, AND YEARS EXPERIENCE

Variable	Credit Hours			Total	Amount Time Teaching		Total	Years Experience		Total
	0-6	7-12	13+	%	Part-time	Full-time	%	1-2	3-5	%
	Percent Distributions									
Field Trips										
More than 20	.00	.02	.00	.01	.00	.02	.01	.00	.01	.01
16-20	.00	.00	.05	.01	.01	.00	.01	.00	.01	.01
11-15	.03	.00	.05	.02	.02	.04	.02	.01	.03	.02
5-10	.17	.24	.21	.19	.20	.05	.19	.10	.26	.19
Less than 5	.59	.54	.53	.57	.56	.62	.57	.64	.52	.57
None	.21	.20	.16	.20	.21	.17	.20	.25	.17	.20
N =	107	51	19		131	46		77	100	
Discussions with businessmen										
More than twice each week	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Twice each week	.01	.04	.00	.02	.02	.02	.02	.01	.02	.02
Once each week	.05	.08	.05	.06	.04	.11	.06	.06	.05	.06
Once each month	.22	.16	.32	.21	.22	.19	.21	.16	.26	.21
Less than 5	.40	.52	.53	.45	.44	.48	.45	.42	.48	.45
None	.32	.20	.10	.26	.28	.20	.26	.35	.19	.26
N =	107	51	19		131	46		77	100	

the need for such involvement was understood, teachers did not know how such goals could be attained.

Table 14 shows the extent to which off-campus exploratory work experience stations were located for occupational orientation students during the school year, and the extent to which occupational orientation students were told of the relation of school subjects to the world of work. No significant differences in the frequency of off-campus exploratory work stations located for students were observed when the teachers were grouped according to amount of time spent teaching occupational orientation, and years experience teaching occupational orientation. A significant difference at the .001 level in the frequency of off-campus work stations located for students was observed when the teachers were grouped by number of credit hours received in vocational guidance courses.

Teachers with 7-12 credit hours in vocational guidance courses reported locating off-campus work stations more often than teachers in the other two groups. In fact, 24 percent of the teachers in this group reported that they located 5-10 or more off-campus work stations. Only 10 percent of the teachers in each of the other groups reported that they located 5-10 or more off-campus work stations. It is also important to recognize that approximately 50 percent of the teachers in each category reported that they did not locate exploratory work experience stations for students during the school year. Similarly, a large percentage (36, 34, and 32 percent respectively) of the teachers in each group reported that they secured less than 5 off-campus work experience stations for their students. The remaining teachers

TABLE 14

PERCENT DISTRIBUTIONS BY OFF-CAMPUS WORK STATIONS, RELATION OF SCHOOL TO WORK, CREDIT HOURS, AMOUNT TIME TEACHING, AND YEARS EXPERIENCE

Variable	Percent Distributions									
	Credit Hours			Total	Amount Time Teaching		Total	Years Experience		Total
	0-6	7-12	13+	%	Part-time	Full-time	%	1-2	3-5	%
Off-campus Work Stations										
More than 20	.00**	.02**	.00**	.01	.00	.02	.01	.00	.01	.01
16-20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11-15	.02	.00	.16	.03	.02	.06	.03	.01	.04	.03
5-10	.14	.22	.00	.14	.14	.17	.14	.10	.18	.14
Less than 5	.36	.29	.32	.34	.37	.23	.34	.33	.35	.34
None	.48	.47	.52	.48	.47	.52	.48	.56	.42	.48
N =	107	51	19		131	46				
Students told of relation of school to work										
More than twice each week	.12	.20	.26	.16	.16*	.13*	.16	.19	.13	.16
Twice each week	.05	.06	.16	.06	.04	.13	.06	.08	.05	.06
Once each week	.28	.27	.16	.27	.23	.38	.27	.29	.25	.27
Once each month	.42	.43	.31	.41	.46	.28	.41	.34	.47	.41
Less than 5	.11	.04	.11	.09	.10	.06	.09	.09	.09	.09
None	.02	.00	.00	.01	.01	.02	.01	.01	.01	.01
N =	107	51	19		131	46				

**Significant at .001 level

*Significant at .05 level

tended to cluster in a few cells, leaving other cells blank. These factors may have inflated the highly significant results of the chi square test. However, it is possible that the series of vocational guidance courses enabled teachers to acquire skills in conducting off-campus exploratory work experiences.

Table 14 also shows that no significant differences in the frequency in which students were told of the relation of school subjects to the world of work were observed when the teachers were grouped according to semester hours of credit received in vocational guidance courses and years experience teaching occupational orientation.

A significant difference at the .05 level in the frequency that students were told of the relation of school subjects to the world of work was observed when the teachers were grouped according to the amount of time spent teaching occupational orientation. Full-time teachers told their students the relation of school subjects to the world of work more often than part-time teachers. This difference is especially apparent when the following behavior sets were collapsed into a single category: (1) once each week, (2) twice each week, and (3) more than twice each week. Sixty-four percent of the full-time teachers reported that they told their students the relation of school subjects to the world of work once each week or more often. In contrast, 43 percent of the part-time teachers reported that they discussed this subject with their students once each week or more often.

There was much variation in how often different groups of teachers told students the relation of school subjects to the world of work.

Apparently, many occupational orientation teachers did not have sufficient knowledge and skills to communicate such relationships to students.

External Consistency of Attitude Scale. Eight weeks after the study began, a group of 25 occupational orientation teachers were chosen for a second administration of the attitude scale. The purpose of this exercise was to determine how stable the attitude scores of these teachers were over time. Fifteen teachers returned the completed forms.

The stability of the scores was tested by correlating the scores on the first administration of the scale with the scores on the second administration of the scale. A correlation coefficient of .82 was obtained between the two administrations. The high value ($r = .82$) obtained for the coefficient of stability indicates that the attitude object (career education) tested is quite stable, at least over a period of two months. There did not appear to be a practice effect operating in that the mean on the second administration of the scale (132.80) was almost the same as the mean on the first administration of the scale (132.73). An index to the correlation is presented in Table 15 in the Appendix.

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The primary purposes of this study were to describe the attitudes held by occupational orientation teachers toward career education/occupational orientation and to determine if there were relationships between these attitudes and personal, experience, training, and teaching behavior variables. The study also examined the relationships between teaching behaviors and personal, experience, and training variables.

These purposes were stated as four broad questions. The first part of this chapter deals with a summary and discussion of the results in terms of the questions posed. The second part of the chapter presents the conclusions and recommendations drawn from the findings.

SUMMARY AND DISCUSSION

The study consisted of 196 teachers who devoted at least 20 percent of their time to teaching occupational orientation in grades 7-10 during the 1972-73 school year. There were 158 male and 38 female teachers. The group consisted of 124 white teachers and 72 black teachers. County unit school districts were represented by 136 teachers. Twenty-seven teachers were employed by municipal separate districts, and 14 teachers were employed by consolidated school districts.

A Likert-type attitude scale was selected for use in the research. It was modified and refined for use in the study, and additional data

collection devices were built into the scale. The scale was administered to the 196 teachers. Following the return of the completed forms, an item analysis was performed on the attitude scale in order to determine the internal consistency (reliability) of the scale. The item analysis produced an overall reliability coefficient of .72. This moderately high coefficient indicated that the scale items were quite consistent in measuring the attitudes held by occupational orientation teachers toward career education. Scale items 20, 25, and 35 (see Table 1) each had a correlation coefficient of less than .20. Although the literature indicates that it is appropriate to keep items with a coefficient of .10 or more, it is possible that these marginal coefficients reduced the significance of the statistical analyses.

Since mean attitude scores were used in performing the statistical analyses for research questions 1-3, two-way mean attitude scores were presented. These scores were best estimates of the true means. The best estimate for the combined mean score was 133.40 with a standard error of 2.31. There was a tendency for mean score estimates to differ in the following manner:

1. The attitude score for teachers from municipal separate districts was higher than the scores of teachers from county units and consolidated districts.
2. White teachers had a higher attitude score than black teachers.
3. First year teachers had a lower attitude score than second year teachers.

4. Third year teachers generally had a lower attitude score than the score for teachers with two years experience.
5. The attitude score of teachers with 0-6 semester hours of credit in vocational guidance courses was lower than the score of teachers with 7-12 semester hours of credit.
6. The attitude score of teachers with 13 or more semester hours of credit in vocational guidance courses was lower than the score of teachers with 7-12 semester hours of credit.
7. The attitude score of female teachers was higher than the score for male teachers.
8. The attitude score for part-time teachers was lower than the score for full-time teachers.

The inferential statistics did not prove that these differences were significant. However, the tendency for the scores to differ in this study deserves some discussion.

Teachers from municipal separate school districts have at their disposal a greater number of occupationally related resources than teachers from other districts. An exposure to more resources, occupations, teachers, students, and parents could contribute to a better verbal understanding of career education and reinforce the belief that career education is attainable in the schools. Similarly, teachers who devote full-time to occupational orientation encounter a greater number of learning situations and likely acquire a broader understanding of career education concepts.

Black occupational orientation teachers tended to be less

favorable than white teachers toward the worth of career education. While career education touches occupations at all levels of society, the indication is that black educators are pressing for higher achievement among black students at the professional level. Apparently, black teachers have some difficulty equating career education with the needs and aspirations of the black students. Also, they may feel that the implementation of many of the concepts of career education are unrealistic in communities dominated by white business and industrial leaders.

Most female occupational orientation teachers have teaching experience in home economics. The curriculum content in home economics encompasses many learning activities which are oriented to economic awareness and security, and occupational awareness. The extensive training and experience home economics teachers have in these areas and the high number of curriculum materials which have been developed for the areas could be related to the high positive attitudes female teachers hold toward career education.

There is a similar pattern of attitudes among teachers when they are classified according to number of years experience teaching occupational orientation and hours of credit received in vocational guidance courses. A similar pattern could be expected, since the number of credit hours that occupational orientation teachers have received is directly related to the number of years they have been involved with the occupational orientation program.

The most peculiar aspect of this finding is that some experience and training tend to be related positively to attitudes toward career education. As the experience and training accumulates, these factors

become inversely related to attitude scores. It is important to mention that the attitude scores of the teachers with the greatest number of years experience and the largest number of hours of credit were still higher than the scores of teachers with one year experience and 0-6 hours of credit.

The findings indicate that some of the enthusiasm and support for career education is lost through involvement in the program. Apparently, teacher education activities do not introduce stimulating ideas that challenge the experienced and trained teacher. Perhaps occupational orientation teachers exhaust their ideas and resources over a period of time and become less interested in conducting the program. Additionally, new educational programs which receive adequate attention during the early stages are often overlooked or neglected by school administrators and supervisors once the programs are established.

The next research task was to determine if the differences in the above mean attitude scores were significant in predicting the attitudes held by occupational orientation teachers toward career education. This activity was concerned with obtaining answers for research questions 1 and 2.

Questions 1 and 2. In order to test the effects of the multiple number of predictor variables specified in questions 1 and 2, it was necessary to use a multivariate analysis of variance statistical technique. The multiple linear regression method was used to test whether knowledge of all the variables specified in the questions significantly increased the predictability of mean attitude scores. The accuracy with which it was possible to predict attitude scores

using the regression approach was determined by standard errors in the regression weights.

Knowledge of type school district, race, sex, age, number of years teaching occupational orientation, whether or not teachers had non-educational occupational experiences, hours of credit received in vocational guidance courses, and percent of time devoted to teaching occupational orientation did not significantly increase the predictability of the mean attitude scores held by occupational orientation teachers toward career education (question 1). Similarly, the interactions of select pairs of these variables did not add significantly to the predictability of mean attitude scores (question 2). The R^2 (.23) produced by the full linear model which included all variables specified in questions 1 and 2 was not significant according to the F test. No further tests were necessary because knowledge of all the variables did not prove to be significantly different from zero in predicting the attitudes of occupational orientation teachers.

No group of teachers appear to have been deprived of information relative to the concepts of career education. Additionally, this information has influenced the attitudes of teachers in a high positive manner. In essence, this finding gives a vote of confidence to the Mississippi Division of Vocational and Technical Education, teacher education institutions, and local school districts. Recruiting efforts are effective, teachers are being properly oriented, teachers understand the mission of the career education program, and teachers are satisfied with the results of their efforts. The

occupational orientation teachers by and large feel that their programs are important, and that education will be more relevant if the public schools continue to support their programs.

However, the use of the inferential statistic provided little information about teacher characteristics which will be useful for differentiating teachers and structuring content for future recruitment, preparation, and placement efforts. It is recognized that the mean scores of the respondents may be "masking over" extremely valuable data concerning individual items or groups of items on the attitude scale.

Although the findings indicate that a lot of written and oral information has been presented to occupational orientation teachers, the results do not suggest how this information was communicated to teachers. Also, the results do not provide sufficient causes for the high positive attitudes.

The stereotyped pattern of educational perceptions among occupational orientation teachers could have negative implications. This pattern may be due in part to the standard type curriculums prescribed by teacher education institutions and local school districts. The standard curriculum guides and textbooks prescribed for use in occupational orientation programs probably diminishes the opportunities for teachers to develop different educational perceptions and to exercise freedom in conducting learning activities appropriate for their particular schools.

Question 3. The multiple regression approach was also used to test whether knowledge of the teaching behaviors specified in question

three significantly increased the predictability of mean attitude scores. Knowledge of the number of workers who came to classes, discussions with guidance counselors, field trips, discussions with local businessmen, work experience stations located for students, and the number of times teachers told students the relation of school to work significantly increased the ability to predict the mean attitude scores of occupational orientation teachers. The R^2 (.24) produced by the full regression model indicated that 24 percent of the variance in mean attitude scores was accounted for by the information on teaching behaviors. When each teaching behavior was systematically removed as a source of variance, the R^2 values were not significantly reduced. In fact, each reduced model contributed only a small percentage (2 to 5 percent) of the variance in the mean attitude scores of occupational orientation teachers.

Knowledge of specific behaviors did not significantly increase the predictability of attitude scores. Behaviors appear to be also related to the quality of the environment in which teachers perform their teaching assignments. The characteristics of the teaching situation, such as the availability of resources and school and community cooperation, serve to foster or undermine specific teaching behaviors. No doubt, these factors also influence attitude development. The extent that teachers value the occupational orientation program increases for persons performing in a teaching environment in which it is easy to make desired outcomes happen. It is apparent from this study that the ability to accomplish a single outcome is not so important to attitudes as the ability to accomplish a combination of outcomes.

Question 4. Chi square tests for independence were used to determine if there were significant differences in the frequency that teachers reported the number of workers coming to classes, discussions with school personnel, field trips, discussions with local businessmen, work experience stations located for students, and the number of times students were told of the relation of school subjects to the world of work. The chi square values were computed from contingency tables established from the responses of the teachers. Percentage distributions computed from the contingency tables were used to interpret the significant chi square values. A summary and discussion of the results of these analyses follows.

Workers to Classes. The age of occupational orientation teachers was a contributing factor in the number of community workers who participated in occupational orientation classes. Fewer community workers participated in the classes taught by teachers in the less than 3 age group than in any other age group. More workers came to the classes of the teachers in the 40-49 age group than any other age group. This group was followed closely by the 50 or more age group.

This finding supports Murray's [93] account that the older occupational orientation teachers are more "educated" to the needs of the students, the teachers' role in providing these needs, and the resources available to the teacher and the student. Older teachers are more established in the community and are less apprehensive about involving community workers in their programs of instruction. No

[93] Murray, "Occupational Orientation," p. 1.

doubt, the older vocational agriculture teachers have become acquainted with many local agri-business personnel and farmers through adult education programs.

Discussions with School Personnel. The type school district in which teachers were employed was a contributing factor in the number of discussions held with school guidance counselors and other teachers about what to teach in occupational orientation classes. Teachers from county units held discussions with school personnel more frequently than teachers from municipal separate and consolidated districts.

County schools in Mississippi are relatively small. This finding suggests that the small schools offer the advantage of a closer working relationship between the teaching staff. One reason is that the small schools do not have services to support a highly specialized educational function. Therefore, teachers in the county schools rely more upon other teachers for support than teachers from municipal separate school districts.

This finding also gives support to Murray's [94] observation that teachers from county schools place a higher value on occupational orientation than teachers from municipal separate school districts. Students in county schools do not have access to a broad resource base. This prompts teachers from county units to be more concerned about students' needs, including holding discussions with other teachers about how to meet these needs.

The amount of time spent teaching occupational orientation was also a contributing factor in the number of discussions held with

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[94] Ibid.

school guidance counselors and other teachers about what to teach in occupational orientation classes. Full-time teachers held discussions with school personnel more often than part-time teachers.

This indicates that teachers who are involved in the program full-time understand more fully the goals of occupational orientation and are more active in trying to integrate the goals of the program into the total school curriculum. This could also mean that the regular instructional assignments of part-time occupational orientation teachers usurp the time required for occupational orientation duties.

Field Trips. No personal, experience, or training variable was found to be a contributing factor in the number of occupationally related field trips taken by occupational orientation classes during the school year. This activity is considered to be a basic element of the occupational orientation program. Yet, most teachers reported that this behavior is difficult to fulfill. There are several possible reasons for the inability to take students on field trips: (1) there is a conflict with other class schedules; (2) teachers fail to recognize that any occupational enterprise is a candidate resource for the occupational orientation program; (3) schools do not support the idea of field trips; and (4) teachers are not enthusiastic about the value of field trips. The problem does not appear to be related to the availability of community resources, since teachers from municipal separate school districts did not provide for more frequent field trips than teachers from county units.

Discussions With Local Businessmen. No personal, experience, or training variable was found to be a contributing factor in the number

of discussions held with local businessmen about what to teach in occupational orientation classes. The teachers indicated that it is difficult to accomplish this behavior, regardless of the size community and/or the availability of business personnel.

A similar response pattern was observed between the number of discussions held with local businessmen and the number of field trips taken during the school year. It appears that teachers only discuss their programs with local businessmen when they inquire about classroom participation from the businessmen or during field trips. Evidence was presented that occupational orientation teachers are consulting local businessmen little during the school year about current occupational information.

Off-Campus Work Experience Stations. The hours of credit occupational orientation teachers had received in vocational guidance courses was a contributing factor in the number of off-campus exploratory work experience stations located for students during the school year. Teachers with 7-12 credit hours in vocational guidance courses reported locating off-campus work experience stations more often than teachers in the other two groups. However, there was no discernable difference in the number of work experience stations located by teachers with [illegible] hours and teachers with 13 or more credit hours.

It is difficult to interpret these findings because of the large number of teachers who reported that they did not involve their students in off-campus exploratory work experience stations. It is somewhat surprising that teachers with backgrounds in vocational home economics have so much difficulty in accomplishing this behavior.

Traditional programs in vocational agriculture and home economics emphasize off-campus work experience.

Training in vocational guidance contributes positively to the number of work stations located for students. As the training accumulates, this factor is inversely related to the number of work stations located for students. This finding is similar to the experience and training factor relationships between attitude scores.

Students Told of the Relation of School Subjects to the World of Work. Teachers discussed the relationship of school subjects to the world of work more frequently than they engaged in the other teaching behaviors investigated in the study. In-school teaching tasks were less difficult to accomplish than out-of-school learning activities.

The type school district in which teachers were employed was a contributing factor in the number of times that students were told of the relationship between school subjects and the world of work during the school year. Teachers from municipal separate and consolidated school districts discussed the relation of school subjects to the world of work more often than teachers from county units. There was no discernible difference in the number of times students were told of this relationship by teachers from municipal separate and consolidated school districts.

This finding supports the work of Rogers and Svenning[95]. Teachers from county units appear to have insufficient contact with

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[95]Rogers and Svenning, Change in Small Schools, p. 12.

the world of work to be able to communicate the relation of school subjects to the world of work. Additionally, many county schools are consistent in requiring that school curricula be college preparatory in nature. Therefore, occupational orientation teachers themselves may not comprehend the relationship of regular school subjects to the world of work.

The race of teachers was a contributing factor in the number of times students were told of the relationship between school subjects and the world of work. Black occupational orientation teachers discussed this relationship with their students more often than white teachers. This is consistent with Murray's [96] observation that black teachers perceive the occupational orientation program as a vehicle for teaching black students how to project themselves into the vocational future.

The amount of time spent teaching occupational orientation was also a contributing factor in the number of times students were told of the relationship between school subjects to the world of work. Full-time occupational orientation teachers discussed this relationship with their students more often than part-time teachers. This finding suggests that part-time teachers have fewer career education experiences through the teaching process to prepare them for articulating career-school subject relationships.

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[96] Murray, "Occupational Orientation," p. 1.

CONCLUSIONS

Conclusion 1. Occupational orientation teachers for the most part strongly support the concepts of career education/occupational orientation.

Conclusion 2. Knowledge of the type school district in which teachers are employed, race, sex, age, years experience teaching occupational orientation, hours of credit received in vocational guidance courses, and amount of time spent teaching occupational orientation does not significantly contribute to the prediction of the attitudes that occupational orientation teachers hold toward career education/occupational orientation.

Conclusion 3. Knowledge of the extent that occupational orientation teachers are involved with the following teaching behaviors significantly contributes to the prediction of their attitudes toward career education/occupational orientation: (1) recruiting community worker participation in occupational orientation classes, (2) holding discussions with guidance counselors concerning what to teach in occupational orientation classes, (3) leading classes in occupationally-related field trips, (4) holding discussions with local businessmen concerning what to teach in occupational orientation classes, (5) locating work experience stations for students, and (6) holding discussions with students concerning the relationship of school subjects to the world of work. However, knowledge of the extent that teachers are involved in single behaviors does not increase the predictability of attitudes. This means that the relationships that exist between teaching behaviors and attitudes are too complex to be explained in

terms of a single behavior.

Conclusion 4. Many teachers experience difficulty in accomplishing the teaching behaviors associated with the goals of the occupational orientation program. This problem is especially acute with regard to obtaining community participation in programs of instruction.

Conclusion 5. Younger teachers are less active than older teachers in engaging community workers as instructional resources for occupational orientation programs.

Conclusion 6. Occupational orientation teachers from county schools are more active than teachers from other districts in trying to involve other teachers in their programs of instruction.

Conclusion 7. Teachers who are involved with teaching occupational orientation on a full-time basis are more active than part-time teachers in trying to involve other teachers in their programs of instruction. These teachers are also more committed than part-time teachers to teaching the relationship between school subjects and the world of work.

Conclusion 8. Teachers from municipal separate school districts are able to articulate the relationship of school subjects to the world of work more freely than teachers from county units.

Conclusion 9. Black occupational orientation teachers are more dedicated than white teachers in conveying to students the relationship of school subjects to the world of work.

RECOMMENDATIONS

Recommendation 1. A future in-service training session for occupational orientation teachers should include a discussion of the findings of this research. This discussion should focus on the relationships between their beliefs about career education and the problems encountered in "acting" upon these beliefs. An effort should also be made during the in-service training to (1) identify reasons why groups of teachers differ with respect to the teaching behaviors investigated in this research, and (2) identify other pertinent teaching behaviors not accounted for in this research. A representative group of school administrators, community workers, and business and industrial leaders should be assembled to share in the discussion.

Recommendation 2. Teachers of occupational orientation should be employed on a full-time basis as opposed to a part-time basis.

Recommendation 3. New occupational orientation teachers should be required to spend an internship with teachers who are effectively utilizing community resources in their programs of instruction.

Recommendation 4. Local school administrators should provide additional support and encouragement for diversified field trips, including ventures outside the immediate vicinity if local resources are limited.

Recommendation 5. Prior to the beginning of the school year, a plan of action for the occupational orientation program should be jointly developed by the occupational orientation teacher, the principal, and the guidance counselor. This plan should encompass an

appropriate schedule of necessary instructional preparation time, classroom instruction, and out-of-school activities.

Recommendation 4. Local schools should conduct surveys to identify community workers and business and industrial leaders who would be willing to participate in the planning and conduct of occupational orientation programs. The documentation should include the instructional areas in which the participants can serve, their availability to the school, and the type service that they can render to programs of instruction.

Recommendation 5. Teacher education activities for occupational orientation teachers should be more sensitive to the "behavioral" aspects of occupational orientation programs. This training should focus upon what levels of behavior are realistic according to the nature of the teaching environment, the teachers themselves, and the size of the community. Ways to accomplish these behaviors in different type communities should be a vital part of the instruction. Reinforcement experiences should be incorporated into in-service training events to permit teachers to (1) review their success in behaving consistently with their attitudes and values, and (2) to reassess their commitment to these attitudes.

Recommendation 6. The objectives of the occupational orientation program need to be crystalized and stated in behavioral terms. The ability to conduct research and evaluation is dependent upon realistic and clearly stated objectives. Occupational orientation teachers should be involved in developing these objectives. The data from this research provides an objective base for discussing appropriate teaching behaviors.

Recommendation 9. Future research should study the differences between the attitudes that occupational orientation teachers hold toward career education and teachers who are not associated with these programs. One control group should be comprised of general curricular teachers from the schools which offer occupational orientation. A second control group should be selected from the teaching staffs of schools which do not offer occupational orientation.

Recommendation 10. Additional research is needed to determine if the high, positive attitudes that occupational orientation teachers hold toward career education are meaningful in terms of "good" and "bad" programs. This could be accomplished with the existing data by comparing the score on individual attitude items with the responses on the associated behavioral statement. Additionally, the researcher could identify exemplary occupational orientation teachers and teachers who are considered to be doing the least in terms of specified program criteria and compare the mean attitude scores of the two groups. The groups should be small to permit the researcher to follow up the findings in more detail through personal contacts.

Recommendation 11. Future research should study the developmental sequence which leads to mature attitudes toward career education. A record of experiences relating to the "when," "where," and "how" of attitude development would provide a base for determining which communication techniques are most effective in changing and reinforcing attitudes.

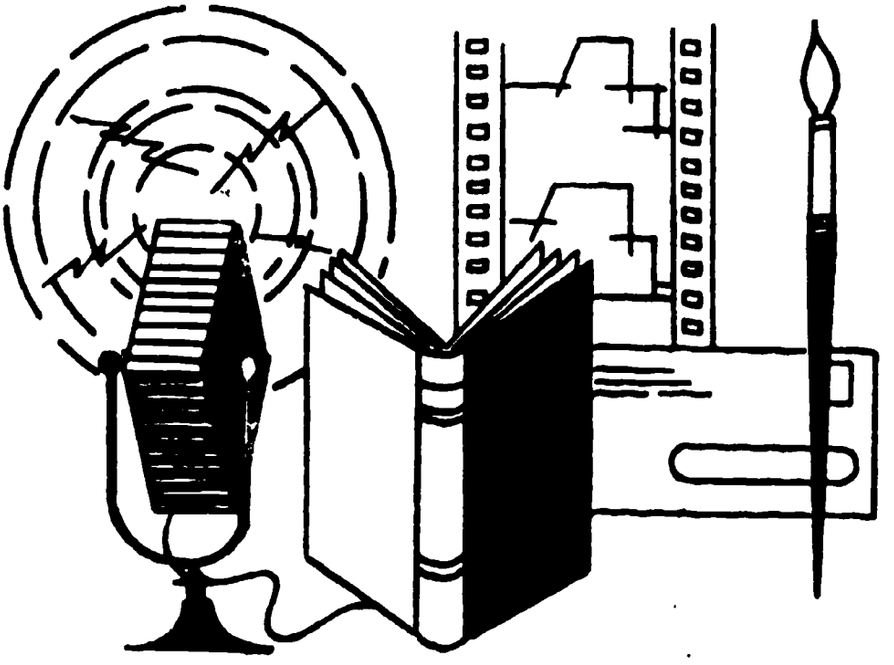
Recommendation 12. Future research efforts should include relationships between psychological variables and attitudes and

behaviors regarding career education. Consideration should be given to using Rosenberg's Self-Esteem Scale and Troldahl and Powell's Dogmatism Scale, since these factors might be related to career education.

Recommendation 13. The relationship between teacher attitudes and behaviors, and student learning is important to improving career education. These factors should be investigated in future research topics.

APPENDIX

CAREER EDUCATION SURVEY



Kent Brooks, Research Director Telephone: 325-2510

Drawer DX

Mississippi State, Mississippi 39762

PART I. Directions: *Please read each statement carefully. There are no right or wrong answers. Just check the box which best describes how you feel about each statement.*

		strongly agree	agree	no opinion	disagree	strongly disagree
	1. High school teachers should spend time showing students how school subjects relate to jobs and job requirements.					
*	2. More boys than girls should be enrolled in career education programs.					
*	3. A college degree should be a requirement for job success.					
	4. A student's choice of a career could be influenced by career education in the schools.					
	5. The elementary school curriculum should be centered around the world of work.					
*	6. A student's eventual career should be determined by his family's ambitions for him.					
	7. Elementary school students should have workmen, such as postmen, electricians, and garment workers, coming to school to talk about their jobs.					
	8. Teaching students about the world of work would lower the dropout rate.					
	9. Teachers should be trained to help students explore occupational tasks and responsibilities.					
*	10. The present high school subjects teach students enough about the world of work.					

* Negative statement scored as follows: strongly agree, 1; agree, 2; no opinion, 3; disagree, 4; and strongly disagree, 5.

		strongly agree	agree	no opinion	disagree	strongly disagree
	11. Students should seek work experiences in several kinds of jobs before graduating from high school.					
*	12. Most high school graduates should go to college.					
*	13. Students going on to college should begin to think about career plans at the time they enter college.					
	14. A student should graduate from high school with a salable skill he can use on a job.					
*	15. Elementary school is too early for a student to start thinking about a career choice.					
*	16. The school guidance counselor should carry the primary responsibility for acquainting students with career opportunities.					
	17. There should be more money set aside in the school budget for career education.					
*	18. Courses, such as art and music, would be damaged by including information about job possibilities in those fields.					
	19. A high school student should receive credit toward graduation for work experience.					
*	20. Career education should be taught as separate courses rather than integrated into existing school subjects.					
	21. The ways mathematics can be used in jobs should be taught in mathematics courses.					

	strongly agree	agree	no opinion	disagree	strongly disagree
22. Local residents would be eager to visit schools to talk to students about their jobs.					
23. Vocational education teachers should be used as consultants in planning occupational orientation experiences for students.					
24. Teachers and guidance counselors should work during the summer months to learn about jobs in the community.					
* 25. Career education should be taught by vocational education teachers rather than by general curriculum teachers.					
* 26. Business and industry, rather than the schools, should be primarily responsible for assisting high school graduates find jobs.					
27. As part of the high school program, students should be allowed to leave school during the day to work.					
28. Students should be permitted to miss regular classes in order to go on a field trip with another class.					
29. The local community should pay for career education if the State and Federal government cannot.					
30. High school teachers should work with elementary school teachers in planning career education programs.					
* 31. Local businessmen should have the primary responsibility for gathering occupational information for teachers & counselors.					

		strongly agree	agree	no opinion	disagree	strongly disagree
*	32. Minority students would benefit more from career education than other students.					
*	33. High ability students should be guided away from vocational education programs.					
	34. Teachers should assist high school graduates make the transition from school to work.					
*	35. "Career education" is another name for vocational education.					

PART II Directions:

Please check the appropriate box or write in your answer to the following questions.

1. Sex:
   [ ] Male
   [ ] Female

2. What is your age classification?
   [ ] Less than 30
   [ ] 30-39
   [ ] 40-49
   [ ] Over 50

3. Years of experience in teaching occupational orientation:_____.

4. Total years of experience as a classroom teacher:_____.

5. Occupational experience other than teaching:

Kind of Experience (Job Title)	Length of Experience (years)	(months)
_____	_____	_____
_____	_____	_____
_____	_____	_____

6. Hours of college credit in vocational guidance (other than vocational education).

_____ semester hours and/or _____ quarter hours.

7. Subjects you are currently teaching <u>in addition to occupational orientation</u>.

[ ] Business and Office Education
[ ] Industrial Arts
[ ] Home Economics
[ ] Vocational Agriculture
[ ] Trades and Industry
[ ] Distributive Education
[ ] Special Education
[ ] Science
[ ] Physical Education
[ ] Mathematics
[ ] Language Arts/Reading/English
[ ] Health Education
[ ] Foreign Language
[ ] Other (please specify) _____

PART III <u>Directions</u>:

Place a check mark in the box which best describes the extent to which you have been able, <u>during this school year</u>, to carry out the following activities.

1. On an average, how many workers came to <u>each</u> occupational orientation class during the school year to talk about their jobs?

[ ] None
[ ] Less than 5
[ ] 5-10
[ ] 11-15
[ ] 16-20
[ ] More than 20

2. During the past school year, how often did you discuss with a guidance counselor or other teachers about what to teach in occupational orientation classes?

[ ] Never
[ ] Less than five times during the year
[ ] About once each month
[ ] About once each week
[ ] About twice each week
[ ] More than twice each week

3. On an average, how many occupationally-related field trips did <u>each</u> occupational orientation student take during the school year?

[ ] None
[ ] Less than 5
[ ] 5-10
[ ] 11-15
[ ] 16-20
[ ] More than 20

4. During the past school year, how often did you discuss with local businessmen about what to teach in occupational orientation classes?

[ ] Never
[ ] Less than five times during the year
[ ] About once each month
[ ] About once each week
[ ] About twice each week
[ ] More than twice each week

5. During the past school year, how many <u>off-campus</u> exploratory work experience stations did you locate for occupational orientation students?

[ ] None
[ ] Less than 5
[ ] 5-10
[ ] 11-15
[ ] 16-20
[ ] More than 20

6. During the past school year, how often did you attempt to show or tell occupational orientation students how English, math, science, and social studies related to the world of work?

[ ] Never
[ ] Less than five class periods during the year
[ ] About one class period each month
[ ] About one class period each week
[ ] About two class periods each week
[ ] More than two class periods each week

TABLE 15

TEST-RETEST MEANS AND CORRELATION COEFFICIENTS

ATTITUDE SCALE ITEMS (n=15)

	Means		Correlation Coefficient
Item No.	First Test	Second Test	
1.	4.46	4.80	.13
2.	3.36	3.27	.20
3.	4.47	4.53	.05
4.	4.27	3.87	.72
5.	3.60	3.73	.63
6.	4.67	4.67	.70
7.	3.73	3.87	.53
8.	4.00	3.80	.69
9.	4.53	4.47	.71
10.	4.53	4.33	.09
11.	4.27	4.00	.41
12.	3.80	3.60	.62
13.	2.66	3.80	.66
14.	4.13	4.33	.06
15.	4.27	4.00	.71
16.	3.00	3.07	.43

TABLE 15 (Continued)

Item No.	Means		Correlation Coefficient
	First Test	Second Test	
17.	4.33	4.13	.77
18.	4.13	4.00	.83
19.	3.20	3.60	.52
20.	2.80	3.33	.68
21.	3.73	3.73	.36
22.	3.53	3.33	.48
23.	4.27	4.07	.38
24.	3.80	3.60	.41
25.	2.46	2.66	.34
26.	3.33	3.33	.14
27.	3.47	3.53	.40
28.	4.07	3.73	.10
29.	3.60	3.80	.19
30.	3.93	4.20	.17
31.	3.67	3.40	.22
32.	3.60	3.13	.76
33.	4.26	4.20	.61
34.	4.00	3.87	.51
35.	2.87	2.93	.62

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