A STUDY OF ATTITUDES, INTERESTS, AND CURRENT PRACTICES RELATED TO CAREER ORIENTATION ACTIVITIES IN THE ELEMENTARY SCHOOLS IN OKLAHOMA

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The modern democratic society in America may be looked upon as fundamentally industrial when its economic nature is viewed. Historically speaking, the trend toward this industrial orientation has occurred quite rapidly. During this period of industrial development and technological advancement, our country had and is continuing to experience a tremendous change. We are no longer a nation that is basically rural and agricultural, but one which is considered to be urban and industrial. Accompanying this change are many new problems which have not been previously encountered by our society. These modern problems are primarily social, cultural, economic, and ecological in nature, and their increasing complexity is becoming the basic concern of our education systems.

In addition to the changing location of population, it may be observed that the number of families in which both the husband and wife are employed is becoming increasingly larger. The opportunity for a child to enter the occupation of his parent seldom exists. The son no longer works alongside his father in providing food, clothing, and shelter for the family while at the same time learning a skill. The daughter may also miss her mother's instruction in the area of home maintenance and other family responsibilities. In short, many of today's children are being deprived of meaningful participation in activities

which educate directly for total living. With the disappearance of these out-of-school experiences, modern educational systems are faced with the rising responsibility of providing reasonable equivalents for these practical and career oriented skills. Contemporary education must realize the important and unique place of the study of occupations within the total curriculum. Furthermore, it seems apparent that the practical nature of directed physical activities associated with these occupations fosters the desirable changes in behavior and consequently in the idea that work is honorable.

There appears to be a definite need for a continuous program of broad-based, exploratory activities beginning at the elementary school level which can be beneficial to all students regardless of the development of future interests. The early initiation of career information along with an introduction to a cluster of basic skills would help make the student become aware of the vast scope of occupations present in our technically oriented society. Regardless of the efficiency of, and need for, such an approach at the elementary level, no effort can have much probability of success until we gather information to ascertain the attitudes, interests, and current practices of educators related to this matter.

Purpose of the Study

The overall purpose of this study is to identify the attitudes, levels of interest, and current activities, of persons presently involved in public education concerning career orientation for the elementary schools.

The specific purposes of this study are to: (1) Survey the attitudes of elementary teachers, secondary vocational-technical and practical arts teachers, and school administrators concerning the need for career orientation programs at the elementary level, (2) Identify existing programs at the elementary level, (3) Compile information which might be useful in coordinating effective educational programs with implications for provisions outlined in Title I, Part D of Public Law 90-576 (amendments to the Vocational Education Act of 1968).

Need for the Study

The responsibility for exploratory education, for vocational guidance, and for the acquisition of basic skills has been traditionally and philosophically that of the practical arts program and especially industrial arts.[1] In Oklahoma, as in most other states, there has been an attempt at coordinating these activities through professional organizations in conjunction with the State Department of Education. These efforts toward curriculum coordination at the state level have been relevant primarily for grades 7-12 with little notice or mention of elementary levels.[2] To state that exploratory and career orientation activities are nonexistent in the elementary schools in this state would be quite untrue. There are, in fact, many classroom teachers who provide instruction of this type on an individual basis. The situation may be, however, that many children do not have the opportunity to become involved in these activities because of a lack of information on the part of a teacher or administrator. The ever increasing responsibility of public education to establish a total curriculum which will serve all the students makes research a major priority for all educators.

The information gathered from this study could be of significant value in the coordination of career orientation activities at the elementary school level.

Research Questions

This study provides an analysis of three basic and common groups of public school educators concerning their perceptions of actual and proposed career orientation, basic skills, and construction activities as a part of the contemporary elementary school curriculum. In addition, it will attempt to identify any such concepts presently included in individual cases. Specifically, an attempt will be made to answer the following questions:

1. How do elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators perceive the institutional mission and basic curricular approach of the elementary school?

2. To what extent are career orientation and basic skills activities included within the present curricula of the elementary schools of Oklahoma?

3. How do elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators perceive career orientation, basic skills, and construction activities in the elementary curricula?

4. Would elementary teachers expand career orientation, basic skills, and construction activities if a group of consultants was available to assist in an advisory capacity?

5. Would secondary vocational-technical and practical arts teachers cooperate with the elementary staff in developing more effective career orientation and basic skills activities?

6. Would public school administrators cooperate in providing a common time and location for elementary teachers and advisory groups to better plan career orientation and basic skills activities?

Assumptions Basic to the Study

The following assumptions are basic to this study:

(1) The subjects who provided data were capable of providing responses which were accurate to the best of their knowledge, and

(2) The instruments for gathering data were sensitive to the research questions under study and no systematic biases were discovered.

Limitations of the Study

This study was limited to the resources and constraints available to the researcher at the time of this study. More specifically, the study was limited in the following ways:

Limitations as to geographic area - - The study was conducted in the state of Oklahoma.

Limitations as to population - - This study included a random sample of elementary teachers, secondary vocational-technical and practical arts teachers, and school administrators from independent school districts in Oklahoma. This sample was selected from a population of schools having no more than one high school within the system. Parochial schools and one-to two-classroom elementary schools were not included.

Limitations as to time - - This study is based on the assessed attitudes and interest of the previously mentioned groups in the Spring of 1971 and not for any other time frame.

Definition of Terms

The terms used in this study, although common in educational literature, are often confused or receive different interpretations by various groups. It is, therefore, necessary to define the meaning of certain terms. The investigator perceives these critical terms to include:

Career Orientation. This term, sometimes referred to as career development, includes the major functions of providing opportunities for developing and implementing an accurate self-concept, teaching basic decision-making skills, providing vocational information and exploratory experiences, and helping students choose and locate appropriate curricula or occupational training.[3]

Constructive Activities. A term which refers to the process of building, forming, or fashioning two and three dimensional objects.[4]

Departmentalization. A type of elementary school organization in which each teacher instructs in a single subject matter area. Students at the different grade levels usually change classrooms at scheduled intervals; however, sometimes the teacher may go to the respective classrooms of the pupils. The results of a recent U. S. Office of Education study revealed that slightly less than 10 percent of the elementary schools in America were using partial departmentalization, generally for grades 4-6. The degree of complete departmentalization was found to be negligible.[5]

Dependent School Districts. Dependent school districts shall be those which have not met the enumerated standards established in Section 39 of the Oklahoma School Laws Handbook and have not been designated as independent school districts by the State Board of Education (70-4-3-).[6]

Elementary School. The term elementary in this study refers to kindergarten through grade six in the 6-3-3 pattern of organization.[7]

Exploratory. In industrial arts, "exploratory" is the term used to define the concept of a broad approach to the various curricular areas in order to provide the students with experiences which help to assess abilities, interests, and potentialities for preparation and employment as a contribution to educational and vocational guidance.[8]

General Agriculture. General agriculture is the practical study of such activities as home gardening, soil conservation, landscaping, purchasing agricultural products, and identification of animals and plants.[9]

General Business. General business consists of educational experiences for the purpose of preparing all students to carry on effectively the daily business activities of their homes and professional lives.[10]

General Homemaking. Sometimes referred to as home and family life, general homemaking provides opportunities to study the relationship of the home, family, and community. This includes a study of foods, clothing, the intelligent use of family resources, mental hygiene, and other areas designed to help members of a family participate more harmoniously and effectively in family life.[11]

Independent School Districts. All independent school districts in Oklahoma shall be those so designated by the State Board of Education and meeting the following requirements:

a. Shall have maintained during the previous year a four year high school fully accredited by the State Board of Education.

b. Shall have a school plant, equipment, and faculty which meet minimum standards prescribed by the State Board of Education. Such standards shall be in keeping with those usually required by a first-class high school and comparable to those required by recognized accrediting agencies.

c. Shall be in good financial condition and shall give to the State Board of Education sufficient evidence of being able to administer the fiscal affairs of the district in a proper manner.[12]

Industrial Arts. A division of industrial education, and also of the practical arts, industrial arts offer those learning experiences which assist boys and girls in understanding the industrial and technical aspects of life today. The curriculum emphasizes orientation in the areas of production, consumption, and recreation through actual experiences in planning, producing, servicing, and repairing various types of consumer goods in common usage.[13]

Industrial Education. This is a generic term used in referring to vocational education, industrial arts, technical education, apprenticeship, and the offerings of private trade schools; it is concerned with all education which has been adapted to meet the needs of industrial technology.[14]

Occupational Education. For the purposes of this study, the term occupational education should be considered to mean the total program of career development activities including career orientation, practical arts, and industrial education for grades K-14.

Practical Arts. Practical arts is that part of the general education division of the school curriculum which is concerned with the area of study which emphasizes practical activities and understanding

typified by basic business, general agriculture, home living, and industrial arts.[15]

Practical Arts Teachers. With reference to this study, any teacher whose responsibilities include the instruction of one or more classes in the areas of industrial arts, general agriculture, home economics (sometimes called family living), or general business, typing, bookkeeping et cetera, is a practical arts teacher.[16]

Secondary School. The terms "elementary schools" and "secondary schools" are often confusing because there has never been a clear-cut official distinction between the two programs. Various patterns include the 6-3-3, 8-4, 6-6, 7-5, and 6-2-4 patterns of organization. More than two-thirds of the schools in the United States favor the 6-3-3 pattern. This pattern is also typical in Oklahoma. For this study, secondary will mean grades 6-12.[17]

Self-Contained Classroom. In the elementary school, the self-contained classroom is that type of organizational plan in which each teacher is responsible for guiding all the experiences of a particular group of pupils, usually in a single classroom or area. Seventy-five percent of America's elementary schools use the one-teacher-per-classroom organization.[18]

Technical Education. Technical education is a curriculum of planned sequences of classroom and laboratory experiences designed to prepare persons for a cluster of job opportunities in a specialized field of technology. The program of instruction normally includes the study of the underlying sciences and supporting mathematics inherent in a technology. Technical education prepares for the occupational area between the skilled craftsman and the professional person.[19]

Vocational Education. A generic term, vocational education embraces all the experiences an individual needs to prepare for some useful occupation. Vocational education presupposes that the student is beyond the exploratory stage and that his special interests are primarily directed to occupational preparation.[20]

Vocational-Technical Teachers. This term, with reference to this study, includes any teacher who instructs one or more classes in the major divisions of vocational agriculture, business and office education, health occupations education, technical education, distributive education, vocational home economics, trade and industrial education, and cooperative vocational education.[21]

FOOTNOTES

[1]G. Harold Silvius and Estell H. Curry, Teaching Multiple Activities in Industrial Education (Bloomington, Illinois: McKnight & McKnight Publishing Company, 1965), p. 8.

[2]"Philosophy of Industrial Arts," A Guide to Improvement of Industrial Arts in Oklahoma Schools (The Oklahoma State Department of Education, 1965), p. 2.

[3]Kenneth B. Matheny, "The Role of the Middle School in Career Development," American Vocational Journal (Washington, D. C.: American Vocational Association, Inc., 1969), XXXXIV, No. 9, p. 18.

[4]W. R. Miller and Gardner Boyd, Teaching Elementary Industrial Art (South Holland, Illinois: The Goodheart-Willcox Company, Inc., 1970), p. 7.

[5]Robert W. Richey, Planning for Teaching, An Introduction to Education (New York: McGraw-Hill Book Company, 1968), p. 256.

[6]"School Districts and Boards of Education," School Laws of Oklahoma (Oklahoma City: State Department of Education, 1970), pp. 34-35.

[7]Robert W. Richey, Planning for Teaching, An Introduction to Education (New York: McGraw-Hill Book Company, 1968), pp. 352-53.

[8]G. Harold Silvius and Ralph C. Bohn, Organizing Course Materials for Industrial Education (Bloomington, Illinois: McKnight & McKnight Publishing Company, 1961), p. 147.

[9]M. W. Giachino and Ralph O. Gallington, Course Construction in Industrial Arts, Vocational and Technical Education (Chicago: American Technical Society, 1967), p. 41.

[10]Ibid.

[11]Ibid.

[12]"School Districts and Boards of Education," School Laws of Oklahoma (Oklahoma City: State Department of Education, 1970), pp. 34-35.

[13]Melvin V. Keil and John W. Neubauer, "What Is Industrial Education?" Phi Delta Kappan (Dayton, Ohio: The United Color Press, 1965), XLVI, No. 8, pp. 402-03.

[14]G. Harold Silvius and Estell H. Curry, Teaching Multiple Activities in Industrial Education (Bloomington, Illinois: McKnight & McKnight Publishing Company, 1965), p. 8.

[15]Ibid.

[16]Ibid.

[17]Robert W. Richey, Planning for Teaching, An Introduction to Education (New York: McGraw-Hill Book Company, 1968), p. 352.

[18]Ibid., p. 256.

[19]Donald S. Phillips, "Personal and Social Background Characteristics of Entering Technician Education Students at Four Post-High School Institutions." (unpub. Ed.D. dissertation, Oklahoma State University, 1968), p. 6.

[20]M. W. Giachino and Ralph O. Gallington, Course Construction in Industrial Arts, Vocational and Technical Education (Chicago: American Technical Society, 1967), p. 41.

[21]"A Guide to Vocational and Technical Education," Oklahoma State Vocational and Technical Education (Stillwater, Oklahoma: Curriculum and Instructional Materials Center, 1971), pp. 9-32.

CHAPTER II

REVIEW OF LITERATURE

This chapter contains a review of literature relative to career orientation at the elementary level with implications for the development of related research questions. The area under study lends itself to the following organization for review purposes: (1) Survey research methods, (2) Career orientation, (3) The influence of federal legislation, (4) Professional discussion of the national scene, (5) Current developments in Oklahoma, and (6) Summary.

Survey Research Methods

In the area of descriptive research, one of the generally accepted methods of data collection is that of the survey study. A survey study collects detailed descriptions of existing phenomena for the purpose of employing the data to justify current conditions and practices or to make more intelligent plans for improving them. Their objective may not only be to ascertain status but also to determine the adequacy of the status by comparison with selected or established standards.[1]

There are many types of surveys which, according to Kerlinger, can be classified as follows: (1) Personal interview, (2) Mail questionnaire, (3) Banel, (4) Telephone, and (5) Controlled observation. As a general rule, the personal interview is the preferred method of data collecting.[2] However, when the individuals to be surveyed are located

over a large geographical area, the mail questionnaire is perhaps the most practical. Good and Scates state:

> The questionnaire is especially useful in descriptive survey study in securing information from widely scattered sources and when it is not practical or feasible to see the respondent personally. In addition, it has been pointed out that questionnaires are impersonal in nature, they use standardized instructions, and do not pressure the subject for an immediate response to questions.[3]

A review of the related literature revealed that much has been written about attitudes and interests, and the measurement of attitudinal change. Apparently, however, there is considerable disparity among the definitions of attitude, opinion, and interest. For this study an extensive review and research of the literature was not attempted, but rather the investigator chose to rely on a generally accepted consensus of the available definitions and to use techniques previously developed by others. The rationale for this approach is that this study involves the identification of certain attitudes and ~~interests rather than~~ the ~~measurement of changes in attitudes~~.

It appears that attitudes and interests are two sides of the same coin. Either is difficult to define in such a manner that will please everyone. Two commonly accepted definitions of attitudes are:

1. A process of individual conscience which determines real or possible activity of the individual in a social world.[4]

2. A relatively permanent determining tendency to find an interest in, to form an opinion about, or to act with respect to values, persons, or events to which it has direct reference. It is the readiness to respond intellectually, emotionally, and volitionally, and to act in accordance with whatever tendencies are aroused.[5]

In view of the above definitions of attitudes, interest then may be best defined as a readiness to be concerned with or moved by an object

or class of objects, or as a willingness to induce or persuade, to participate or to engage.[6]

Although attitudes are not apparent, they do exist and can be measured. The two most common methods of securing data concerning attitudes are the interview and the questionnaire. According to Noll:

> ...attitudes range by degrees from one extreme to the other. An unfavorable attitude will usually cause a reaction either of avoidance or of aggression; a neutral attitude, indifference; and a favorable attitude, a seeking behavior.
>
> ...the measurement of attitudes is carried out by self-report methods. One method is to present to the subject a list of statements expressing attitudes varying widely from very favorable to very unfavorable; the subject is asked to check those with which he agrees.[7]

The Likert method of measuring attitudes also begins with a number of statements of attitude toward something. With each statement the respondent may be decidedly favorable or decidedly unfavorable. Each statement usually has five possible responses: "SA" (Strongly Agree); "A" (Agree); "U" (Undecided); "D" (Disagree); and "SD" (Strongly Disagree). The person answering the questionnaire reacts to every statement by marking one of the five responses. The responses can then be weighed for statistical treatment.[8]

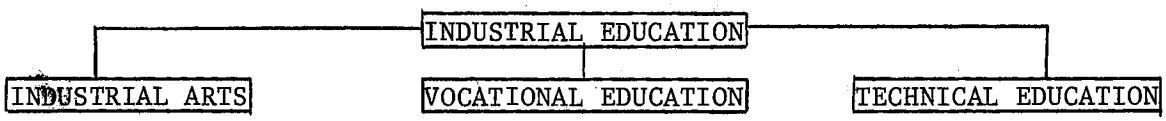
One of the chief problems in connection with attitude scales is their validity. In this area there is still much to be accomplished. As with all self-report instruments, the value of the score is dependent upon the cooperation of the person responding. There is no way of determining whether or not the subject is honestly expressing what he believes. Furthermore, what he endorses on the scale is one thing, but his actual behavior may not be consistent with his responses. It should be recognized, however, that much of the research suggests that there is

a positive correlation between scores on attitude scales and actual performance or behavior.[9]

Career Orientation

Before developing the operational definitions and terms which appear in Chapter One, it was necessary to review the literature and explore its implications for career orientation activities in this state. The importance of the need for clarification in terminology cannot be taken lightly if effective lines of communication are to be developed between the various levels of education. Occupational education curricula have their place in general education as a part of the elementary, junior and senior high school programs, and in the more specific programs of vocational and technical education as well. The multiplicity of terms used in referring to this field, however, has produced a great deal of confusion and some disagreement among teachers and administrators. Keil and Neubauer, in a publication entitled, "What is Industrial Education?", have attempted to eliminate some of this difficulty in communications. They perceive industrial education as generic, all-encompassing term used to describe various types of education which concern the production of material goods, including industrial arts, vocational education, and technical education.[10]

Figure 1 presents an appropriate graphic comparison of the three major areas of industrial education which comprise the organizational pattern similar to that used by a majority of institutions. At Oklahoma State University, however, the major heading of industrial education is referred to as occupational and adult education with industrial arts, trade and industrial education, and technical education as its major divisions.



	INDUSTRIAL ARTS	VOCATIONAL EDUCATION	TECHNICAL EDUCATION
Type of Training	General exploratory education or industrial processes	Specialized training in a trade skill	Extensive knowledge of a field of specialization
Grade Levels	Grades 1-12	Grades 9-12	Post-high school or junior college
Hours per Week	1-10 hours per week	Minimum of 15 hours per week	Specified
Time and Location	Classes during regular school day on school grounds	During school day, school may or may not be on high school grounds	Classes day and night, on post-high school campus
Curriculum	Introduction to American Industry through courses in woods, metals, textiles, photography, electricity, and others	Subjects vary with needs of community	Mathematics sciences, and engineering processes as related to the field
Teacher Preparation	College graduate	Skilled tradesman, need not be a college graduate	College graduate (minimum)
Job Placement	No effort for job placement	Students placed and followed	Students placed and followed, or may be oriented toward higher education
Equipment Necessary	Hand tools; small, less expensive equipment	Modern production equipment essential	Modern production equipment essential
Federal Aid	No Federal Aid	Federal Aid	Federal Aid

Figure 1. A Comparison of Industrial Arts, Vocational Education, and Technical Education

Source: Melvin V. Keil and John W. Neubauer, "What Is Industrial Education?" Phi Delta Kappan (Dayton, Ohio: The United Color Press, 1965) XLVI, No. 8, pp. 402-03.

It appears that most industrial educators agree that industrial arts is considered to be a part of the general education program K-12 and is a part of the practical arts curriculum. (See Chapter I.) Philosophically, the practical arts are exploratory rather than vocational with an emphasis on basic concepts and processes valuable to all persons regardless of career choice. The stated objectives of industrial arts include consumer education, acquisition of basic skills, health and safety education, vocational guidance or career orientation, character development, and the development of the problem-solving technique.[12]

Silvius and Curry, authors of numerous texts on the subject of industrial education, support Keil and Neubauer by viewing vocational education as a program organized to prepare the learner for entrance into a chosen vocation or to up-grade employed workers.[13]

Technical education, according to Keil and Neubauer, should be considered as education directed toward an occupation in which success is dependent largely upon technical information and the understanding of the laws of science and technology as applied to modern design, distribution, and service. The technician might be referred to as the link between the skilled craftsman and the engineer.[14]

The Influence of Federal Legislation

Leslie H. Cochran, author of Innovative Programs in Industrial Education, believes that the field of industrial education has been in a constant state of flux and reorientation since its early inception in the schools. Although industrial education can be traced through various historical stages beginning with manual training, the basic

change came with the introduction of federal aid below the college level. The increasing demands of manufacturers, labor leaders, and the general public for more than practical instruction led to the establishment of the Commission of National Aid to Vocational Education in 1914 and later to the passage of the Smith-Hughes Act of 1917. This act virtually created a split between industrial arts and vocational education which lasted until 1968. The responsibility for vocational classes was shifted to separate facilities which allowed industrial arts educators to devote their efforts to the aims of general education.[15]

After the passage of the Smith-Hughes Act, federal legislation continued to influence industrial education and especially vocational education. By 1936, three supplements to the Smith-Hughes Act were passed, followed by the George-Barden Act of 1946. In 1957, with the news of the launching of the Russian satellite Sputnik, the apparent weakness of our educational systems became a major concern. The result was the National Defense Education Act of 1958. Legislators for the first time recognized the shortage of technical personnel, particularly in the science and engineering fields.

The ARA (Area Development Act) and the MDTA (Manpower Development and Training Act) of 1961 and 1962 were passed to provide training for the underemployed as well as the unemployed and to attempt to balance the number of jobs with the number of people. In 1963, the Vocational-Technical Education and Higher Education Acts were passed almost simultaneously. The Vocational-Technical Act amended the Smith-Hughes and George-Barden Acts and created a new and larger program to supplement them, while the Higher Education Act made some provisions for technical education at the post high school level.[16]

The year 1968 brought still further legislation in the form of Public Law 90-576 (Amendments to the Vocational Education Act of 1968). This law is significant in many respects in that it includes several new and potentially important provisions as far as industrial education is concerned. In addition to specific provisions for the disadvantaged and handicapped, this Act in Title I, Part D, implies some form of union or reunion of industrial arts and vocational education into a total program which might extend downward into the elementary levels. Title I, Part D, Sec. 141 states:

> The Congress finds that it is necessary to reduce the continuing seriously high level of youth unemployment by developing means for giving the same kind of attention as is now given to the college preparation needs of those young persons who go on to college, to the job preparation needs of the two out of three young persons who end their education at or before completion of the secondary level, too many of whom face long and bitter months of job hunting or marginal work after leaving school. The purposes of this part, therefore, are to stimulate, through Federal financial support, new ways to create a bridge between school and earning a living for young people, who are still in school, who have left school either by graduation or by dropping out, or who are in postsecondary programs of vocational preparation, and to promote cooperation between public education and manpower agencies.[17]

Further in Sec. 143:

> (a) Grants or contracts pursuant to this part may be made, upon terms and conditions consistent with the provisions of this part, to pay all or part of the cost of -
>
> (1) planning and development of exemplary programs or projects such as those described in paragraph (2), or
>
> (2) establishing, operating, or evaluating exemplary programs or projects designed to carry out the purposes set forth in section 141, and to broaden occupational aspirations and opportunities for youths, with special emphasis given to youths who have academic, socioeconomic, or other handicaps, which programs or projects may, among others, include -

> (A) those designed to familiarize elementary and secondary school students with the broad range of occupations for which special skills are required and the requisites for careers in such occupations;
> (B) programs for projects for students providing educational experiences through work during the school year or in the summer;
> (C) programs or projects for intensive occupational guidance and counseling during the last years of school and for initial job placement;
> (D) programs or projects designed to broaden or improve vocational education curriculum;
> (E) exchanges of personnel between school and other agencies, institutions, or organizations participating in activities to achieve the purposes of this part, including manpower agencies and industry;
> (F) programs or projects for young workers released from their jobs on a part-time basis for the purpose of increasing their educational attainment; and
> (G) programs or projects at the secondary level to motivate and provide preprofessional preparation for potential teachers for vocational education.[18]

The possible implications of Public Law 90-576 are yet to be fully explored. These possibilities have, however, initiated a great deal of activity in professional organizations at the state and national levels. It has also stimulated numerous articles in professional magazines and recent journals.

Professional Discussion of the National Scene

Feirer in his monthly Industrial Arts and Vocational Education (IAVE) editorial, May, 1969, speaks of a "New Era in Industrial Education" as he reports on a Washington conference held for the purpose of discussing the 1968 amendments. This conference was attended by numerous leaders, editors, and publishers from the combined areas of "industrial education." "The unique aspect of this conference," says Feirer, "is that it represents the first coordinated effort by people

from all areas of industrial education to discuss common goals and objectives." Feirer goes on to state

> Occupational orientation is and always has been one of the major objectives of industrial arts, but unfortunately, far too little attention has been given to it. The basic need is for a cooperative effort in an attempt to make the common objectives of both industrial arts and vocational education more realistic.[19]

An IAVE special report entitled "Occupational Orientation-Roundtable: Who Teaches What? -- What Effect on Industrial Arts?" reviews a panel discussion held by six nationally recognized leaders from several states plus a representative from the U. S. Office of Education. It is important to note that these distinguished leaders were representative of a broad spectrum of the various areas of industrial education. This panel discussed federally funded programs of occupational orientation which are in the offing, the concern about how these programs at the elementary and junior high school levels would affect present industrial arts programs, and where industrial arts fits in. It was brought out by the panel that

> previously the term "exploratory" was the word for industrial arts while vocational education prepared the trainee for gainful employment. Part D allows the use of Federal dollars to encourage education agencies to develop "new ways to create a bridge between school and earning a living." In other words, develop a broad occupational orientation program to "inform" young people about the industries and enterprises in which they will one day work. Panel responses indicated a general agreement that the act is calling for a broadly based program to inform students about the world of work.
>
> All students in elementary or secondary schools, their parents, and other interested adults, should be provided with the opportunity to obtain pertinent information pertaining to occupations and the educational resources on which to base their developing career choices and decisions.[20]

It was also the basic opinion of this panel that

> the present elementary industrial arts programs are ideally suited to such a program of occupational orientation. This is especially true if the existing programs include construction activities, basic tool skills, understanding common materials, development of acceptable work habits and attitudes, occupational orientation, introduction to the world of work, development of muscular coordination, safety, and problem solving. Teaching methods should be lifelike and realistic, involving field trips, visuals, and other modern functional methods and materials. The student at the elementary level should be provided an opportunity to talk to and observe individuals on the job.[21]

The topic of teacher qualification and preparation prompted more varied responses from the panel. Minear, Director, Division of Vocational and Technical Education, U. S. Office of Education, believes that the present school staff should teach this occupational orientation if they are prepared to do so. If not - - specially trained personnel may be required.[22]

Nord, Director of Vocational, Technical, and Industrial Education for the Minneapolis, Minnesota, Public Schools, thinks the program should be interdisciplinary and will require staff development programs for all cooperating teachers.[23]

Vasek, Industrial and Occupational Education Department of Mississippi State University, wants the best qualified persons to teach the program whether they be vocational education instructors, guidance counselors, industrial arts teachers, or other basic studies teachers.[24] In some events, a team teaching effort may be the best approach utilizing a combination of these resources.

Steeb, Florida State Consultant for Industrial Arts, favors interdisciplinary activities and thinks industrial arts teachers would be the best prepared to teach them.[25]

Earl, in his article, "Elementary School Industrial Technology Program," apparently agrees with Cochran's statement that industrial education in the United States is still in a fluid state, and also with Feirer's editorial concerning the exploratory activities in the elementary schools. Earl writes that

> Industrial arts in the elementary school has been a recognized part of the school curriculum since the turn of the 19th century. In most instances the activities have tended to provide the pupils with a wide variety of creative and exploratory educational experiences and from the pupil's point of view, the elementary school program has been very successful. The difficulties encountered by the programs are not found in the theory or philosophy, or quality of the program, but because of the numerous administrative and teaching complexities involved.[26]

These difficulties outlined by Earl are as follows:

> 1. Elementary school industrial arts is not a required course. Therefore, millions of elementary school children never are provided the opportunity to be exposed to its educational benefits.
> 2. Few elementary schools provide the necessary physical facilities for an adequate program.
> 3. The administrative support required to inaugurate an outstanding elementary program and make it a continuing and worthwhile educational endeavor is often lacking.
> 4. The elementary school classroom teacher, unless she possesses a special interest and talent toward the applied and practical applications of education, avoids including elementary school industrial arts education in her classroom program. Perhaps she is excused in this apparent lack of enthusiasm and interest because only a small percentage of elementary school classroom teachers are ever exposed to elementary industrial arts courses during their teacher training.
> 5. Industrial arts teachers are partially responsible for the obvious shortage of elementary school industrial arts teachers. During their college training, most show greater preference for more advanced technical courses and tend to move in the direction of specialization. Many who start their teaching career at the elementary school level soon leave to move up into the junior high school and senior school levels.
> 6. The academic subjects in the elementary classroom are structured at each level. There is a recognized content to be taught, and the content continuum follows successively throughout the elementary school years.[27]

To overcome these problems a new direction is proposed with its basic support in the technological explosion presently taking place in America. This elementary school industrial technology program would attempt new direction at the elementary level with the addition of "industrial-technical activities in which the program would take a sophisticated approach" to understanding the modern world of work. Dr. Earl emphasizes the introduction of industrial concepts represented through transportation, power, construction, research, experimentation, communication, manufacturing, development, mass production, and automation. These concepts should be taught through the use of mock-ups, models, visual aids, and simulated technical experiments in all areas. A "technology corner" is also proposed for the self-contained classroom as a place for the compilation of educational material suitable for reference. Finally, as an answer to the previously mentioned difficulties, Dr. Earl proposes these solutions:

> 1. Elaborate physical facilities are not needed in the classroom.
> 2. Only the most common tools, if any, are needed in the classroom.
> 3. The technology corner provides the classroom teacher with ample professional material requiring no outside preparation on her part.
> 4. The simplified applied experiments require no special practical ability of the classroom teacher.
> 5. The pupil should encounter no difficulty in studying the professionally prepared instructional material.
> 6. The pupil will have selected applied experiments within his physical capabilities.
> 7. The industrial arts teacher or the consultant is not absolutely necessary for the success of the industrial technology program.
> 8. A short workshop is all that might be needed to enable the elementary classroom teacher to become acquainted with the selected instructional materials and applied experiments.[28]

Paulter, author of several articles concerning occupational education, proposes a conceptual curriculum for industrial arts and occupational education (see figure 2). The purpose is not to suggest a merger of industrial arts and vocational education into occupational education, but to establish a closer relationship which achieves the best program possible. Both programs should be flexible enough to meet the individual needs of each student. Youngsters in the elementary grades need a basic understanding and appreciation of the industrial technology and culture in America. If at all possible, some form of industrial arts education should be available at this level.

The foundation of a basic industrial arts program should be of value in later occupational decision making. The program organization, staff, and curriculum can vary depending upon the local school district administration. Both boys and girls find a definite interest in learning about industry. Figure 2 conceptualizes an industrial arts career orientation program for grades K through 6 leading to an exploratory and basic skills curriculum for the junior high school which then allows the student to select one of three options. Paulter indicates by the uni-directional arrows at the base of the figure that the student should be allowed to alter his decision if he so desires rather than being locked in by his original choice.[29]

Di Minico, author of "You and Work," American Vocational Journal, December, 1969, proposes an instructional system for children in the elementary school. The purpose is to provide occupational information to children in grades four through six with information about the world of work. He agrees that children at this age are not ready to make a vocational choice but should be provided with some orientation to the

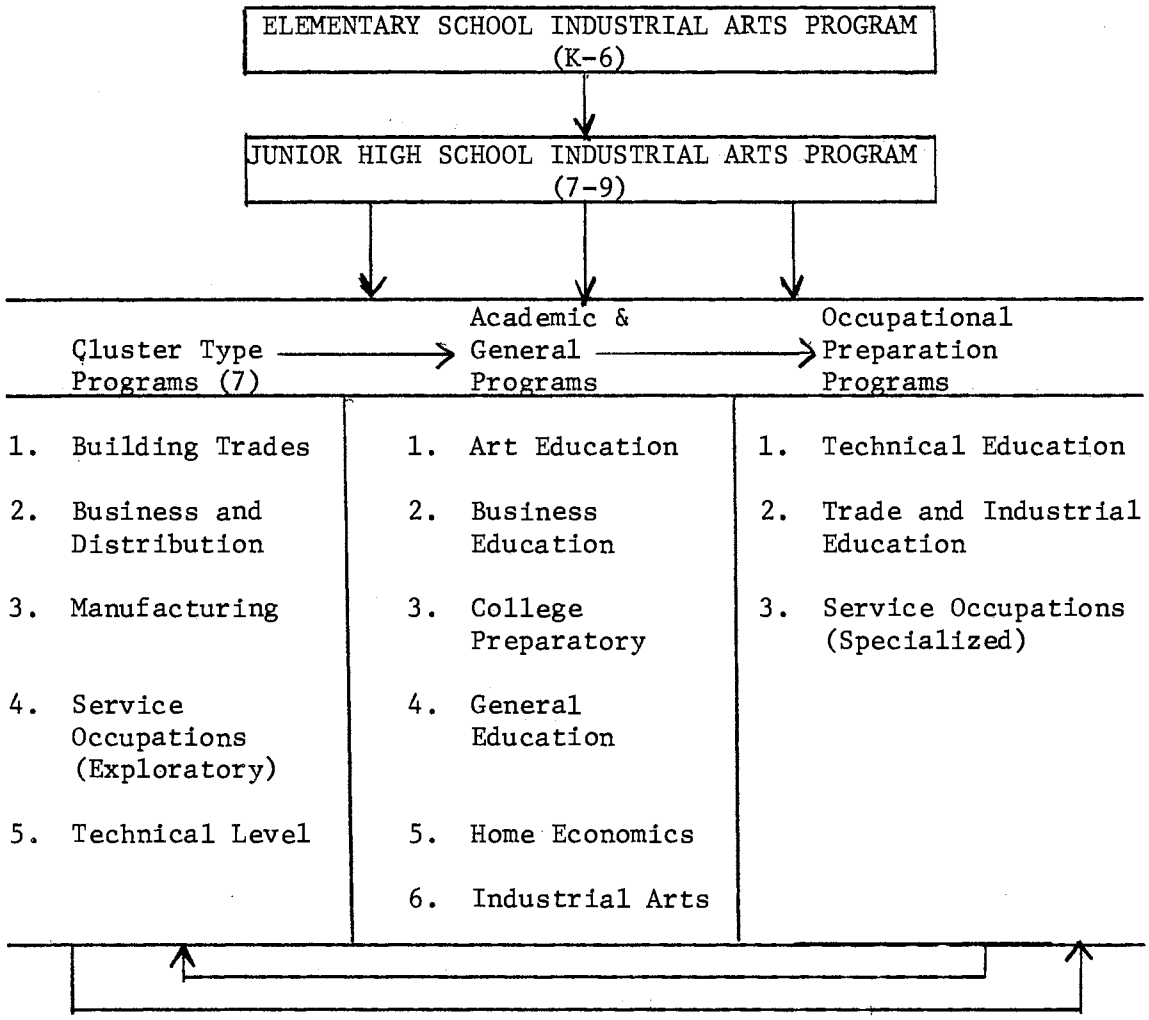


Figure 2. A Conceptual Curriculum in Occupational Education

Source: Albert J. Paulter, "A Conceptual Curriculum for Industrial Arts and Occupational Education," IAVE Journal (1968), LVII, No. 6, p. 36.

meaning of work and its importance to them and to society (see Figure 3). Di Minico's system primarily involves self-instructional devices with emphasis on single concept films, programmed materials, and individual techniques. The instructional system consists of the identification of the categories of jobs and the manner in which they relate to "academic" subjects. Figure 3 is a graphic representation of the curriculum content of the proposed instructional system. Each area of the line chart identifies an occupational job family which can be viewed by the student.[31]

Matheny, who has done extensive work in the rehabilitation of special needs students, reviews the role of the middle school (usually grades five or six through eight) in career development. His concern for career development at this level is translated into four major functions:

(1) to provide opportunities for the development and implementation of an accurate self-concept.
(2) to teach decision-making skills.
(3) to provide vocational information and exploratory experiences.
(4) to help students choose and locate appropriate curricula or jobs.[32]

Matheny's major functions are based on Super's theory that middle-school students are in the exploratory stage of vocational development. At this stage, the student is exploring self-attributes and dimensions of the world of work which will later prove useful in preparing for, entering, and adjusting for an occupation. While college-bound youth continue this upward progress during their college years, high school terminal students must accomplish this growth in a much shorter time otherwise they will not be ready for employment.[33]

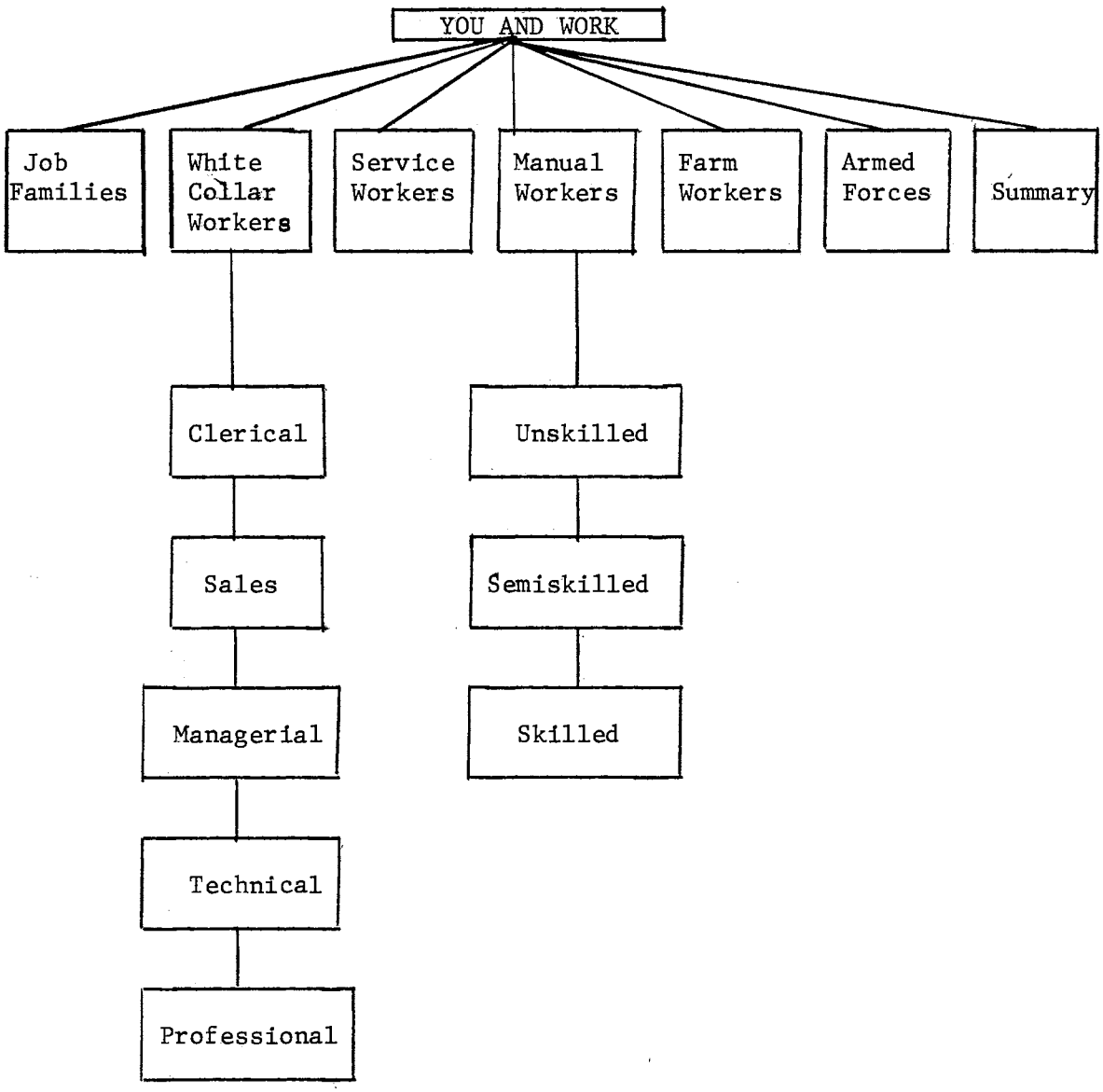


Figure 3. Content of Instructional System

Source: Kenneth B. Matheny, "The Role of the Middle School in Career Development," American Vocational Journal (Washington, D. C.: American Vocational, Inc., 1969), XXXXIV, No. 9, pp. 18-21.

Bottom, in a speech prepared for the 1968 American Vocational Association (AVA) Convention, discusses three elements pertaining to the use of industrial arts in career development. The initial element identifies activities which enable students to gain basic experiences in a variety of simulated work roles. It is reasonable to believe that once students have actively experienced a particular work role in a simulated work environment, they have acquired a base of experience that, with sufficient follow up and reflection, will enable them to understand themselves more effectively in terms of the world of work. The simulated experiences provided in industrial arts could assist the student in developing a process of thinking about himself with reference to evaluation and understanding his values, interests, abilities, motives, and other self-characteristics in relation to the work under examination and to future work roles.

The second major element of industrial arts is its study of industry. Such a knowledge is essential to future decision-making by students. Many school counselors have failed to recognize the potential of this type training in the total educational experiences of the child. The third element focuses primarily on the curriculum of industrial arts and its emphasis on the work roles and occupations located in the manufacturing sector of our economy.[35]

Kane, speaking to the industrial arts section of the AVA Convention of 1969, emphasizes the value of industrial arts activities in the elementary schools. Industrial arts provides occupational orientation for the world of work which the student will ultimately face. This is achieved by providing tangible first-hand experiences concerning tools, materials, processes, and occupations of industry directly related to

units of study in the elementary school curriculum. In many cases the opportunities for success and satisfaction derived from industrial arts activities also make a significant contribution toward the development of a positive self-image in the child. Among the essential educational concerns are the physical plant, the teacher, the program, articulation, planning, and funds.[36]

Current Developments in Oklahoma

In the state of Oklahoma, industrial arts and vocational-technical educational leaders are also showing concern for more effective and relevant curricula. The attempts to establish supervision for industrial arts at the state level have been numerous. Many industrial arts teachers and teacher educators alike have campaigned vigorously for the establishment of state supervision. At their annual meeting held in October of 1970, the State Advisory Council for Industrial Arts Education voted unanimously to support the appointment of a state supervisor for industrial arts.[37] The purpose of this supervisor would be to work jointly with the State Department of Education in Oklahoma City and the State Department of Vocational and Technical Education in Stillwater in coordinating the programs. The developments described above represent the first formal opportunity for state supervision in industrial arts and, as such, is the first attempt to coordinate industrial arts and vocational education at the state level. Among the many advantages of state coordination discussed by this council, was the opportunity to develop an effective program of occupational education beginning in the elementary schools and continuing throughout all educational levels with emphasis on the needs.

As far as the elementary schools are concerned, organized basic skills and construction activities have not been channeled into any specific curricular direction. This is not to say that there have been no such activities; some elementary schools have implemented practical arts programs, and many individual teachers have developed integrated programs on their own. These programs, however, appear to be purely happenstance and perhaps, at times, could be correctly referred to as nonexistent. Upon examination of the curriculum guide for industrial arts in Oklahoma (State Department of Education), it was discovered that generally, industrial arts is not a formal activity in the elementary schools of Oklahoma, although student participation in projects requiring tools and the use of materials is quite common.[38] These activities grow out of the common core of subjects and are an integrated function of the respective courses being taught by the regularly assigned teacher. It has generally been accepted that industrial arts at the elementary level is uncommon and has therefore been omitted from the curriculum guide in past editions.

With the optimism of supervision at all levels of industrial arts and the hope for a coordinated effort with vocational and technical education, it is possible that Oklahoma (just as many other states) can put together a uniform and relevant curriculum that will serve all the children of this state regardless of the individual abilities and goals. This program must consider the rapidly growing need for career orientation and its value to the young citizen in our modern technological society.

Summary

In brief, the review of literature indicates that while there are several methods of data collecting, the most practical for this type of study is the mail questionnaire which has a number of benefits with regard to the investigation of attitudes. In addition, several commonly accepted definitions of attitude and interest have been identified.

At Oklahoma State University, The School of Occupational and Adult Education functions, in general, in the same manner as does a department of industrial education at many other institutions. When either term is used we are referring to an overall program containing as its subdivisions: industrial arts, vocational education, and technical education.

The Smith-Hughes Act of 1917 separated industrial education into industrial arts and vocational education at the secondary level. This situation remained in existence through subsequent legislation until the enactment of the Vocational Education Amendments of 1968. These amendments, being people oriented rather than program oriented, make it possible to combine the two divisions under one overall comprehensive approach.

Accepted authorities in the area of industrial arts and vocational education in a conference concerning the 1968 amendments, and in numerous articles, have indicated that the career orientation of elementary school children is properly the concern of the public schools. This mission can effectively be carried out by the present school staff provided they are properly prepared to do so; if not, plans for such preparation should be initiated. Paulter and others have shown type curriculums for carrying out some of these tasks.

Recently as a result of efforts on the part of many industrial arts educators, members of the State Departments of Education, and Vocational and Technical Education as well, state supervision for industrial arts has been established. This position will allow the coordination of industrial arts and vocational education at the state level. An important condition of the development of this office was a recognition of the need for career orientation activities at all levels in the public schools.

Upon review and analysis of the materials presented in this chapter, the following research questions were formulated for this study:

1. How do elementary teachers, secondary vocational-technical and practical arts teachers, and public administrators perceive the institutional mission and basic curricular approach of the elementary school?

2. To what extent are career orientation and basic skills activities included within the present curricula of the elementary schools of Oklahoma?

3. How do elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators perceive career orientation, basic skills, and construction activities in the elementary curricula?

4. Would elementary teachers expand career orientation, basic skills, and construction activities if a group of consultants was available to assist in an advisory capacity?

5. Would secondary vocational-technical and practical arts teachers cooperate with the elementary staff in developing more effective career orientation and basic skills activities?

6. Would public school administrators cooperate in providing a common time and location for elementary teachers and advisory groups to better plan career orientation and basic skills activities?

FOOTNOTES

[1]Deobold B. Van Dalen, Understanding Educational Research (New York: McGraw-Hill Book Company, 1966), pp. 206-07.

[2]Frederick Nichols Kerlinger, Foundation of Behavioral Research (New York: Holt, Rinehart, and Winston, Inc., 1964), pp. 396-97.

[3]Charles E. Campbell, "Oklahoma's County Commissioner's Attitudes Toward the Use of Area Specialized Agricultural Extension Agents." (unpub. Ed.D. dissertation, Oklahoma State University, 1968), pp. 17-18.

[4]Talcott Parsons and Edward Shils, eds., Toward A General Theory of Action (Cambridge, Massachusetts: Howard University Press, 1951), p. 423.

5. W. T. Taylor, "A Cross Sectional Study of the Modification of Attitudes of Selected Prospective Elementary School Teachers Toward Mathematics." (unpub. Ed.D. dissertation, Oklahoma State University, 1969), pp. 1-90.

[6]Webster's New Collegiate Dictionary (Springfield, Massachusetts: G. & C. Merriam Co., Publishers, 1956), p. 439.

[7]Victor H. Noll, Introduction to Educational Measurement (Boston: Houghton-Mifflin Company, 1965), pp. 351-52.

[8]Ibid., p. 353.

[9]Ibid., p. 354.

[10]Melvin V. Neil and John W. Neubauer, "What Is Industrial Education?" Phi Delta Kappan (Dayton, Ohio: The United Color Press, 1965), XLVI, No. 8, pp. 402-03.

[11]Ibid.

[12]"Industrial Arts Education on the Denver Public Schools," An Instructional Guide (Denver, Colorado: School District Number One in the City and County of Denver and State of Colorado, 1952), pp. 17-18.

[13]Harold Silvius and Estell H. Curry, Teaching Multiple Activities in Industrial Education (Bloomington, Illinois: McKnight & McKnight Publishing Company, 1965), pp. 8-9.

[14]Melvin V. Neil and John W. Neubauer, "What is Industrial Education?" Phi Delta Kappan (Dayton, Ohio: The United Color Press, 1965), XLVI, No. 8, pp. 402-03.

[15]Leslie H. Cochran, Innovative Programs in Industrial Education (Bloomington, Illinois: McKnight & McKnight Publishing Company, 1970), pp. 1-21.

[16]Grant Venn, Man, Education, and Work (Washington, D. C.: American Council on Education, 1964), pp. 38-56.

[17]"Part D - Exemplary Programs and Projects, Findings, and Purposes," Public Law 90-576 (Washington, D. C., 1968), p. 17.

[18]Ibid., p. 18.

[19]John L. Feirer, "New Era in Industrial Education," IAVE Journal (1969), LVIII, No. 5, p. 27.

[20]"Roundtable: Who Teaches What? - - What Effect on Industrial Arts?" (Special Report) IAVE Journal (1969), LVIII, No. 8, pp. 20-60.

[21]Ibid.

[22]Ibid.

[23]Ibid.

[24]Ibid.

[25]Ibid.

[26]Arthur W. Earl, "Elementary School Industrial Technology Program," IAVE Journal (1967), LVI, No. 9, pp. 32-34.

[27]Ibid.

[28]Ibid.

[29]Albert J. Paulter, "A Conceptual Curriculum for Industrial Arts and Occupational Education," IAVE Journal (1968), LVII, No. 7, p. 36.

[30]Ibid.

[31]Gerald Di Minico, "An Instructional System for Children in Elementary School," American Vocational Journal (Washington, D. C.: American Vocational Association, Inc., 1969), XXXXIV, No. 9, pp. 22-23.

[32]Kenneth B. Matheny, "The Role of the Middle School in Career Development, " American Vocational Journal (Washington, D. C.: American Vocational Association, Inc., 1969), XXXXIV, No. 9, pp. 18-21.

[33]Ibid.

[34]Ibid.

[35]Gene Bottom, "The Use of Industrial Arts in Career Development," American Vocational Association Convention (Dallas, Texas, 1968).

[36]Harry Krane, "Industrial Arts in the Elementary Schools of New York City," AVA Convention Proceedings Digest (Washington, D. C.: American Vocational Association, 1969), p. 174.

[37]"OIATE Meeting," OEA Convention, October 21, 1970.

[38]A Guide to Improvement of Industrial Arts in Oklahoma Schools, p. 2.

CHAPTER III

METHODOLOGY

The major purpose of this study was to survey the attitudes, interests, and current practices of elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators concerning career development activities at the elementary school level. This chapter will be devoted to the methodology used for accomplishing the objectives of this study, and will be divided into the following sections: (1) Population, (2) Sample, (3) Instrumentation, (4) Data Collection, and (5) Statistical Treatment.

Population

All data utilized in this study were responses from elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators from selected school systems in Oklahoma having no more than one high school in their organization. These school systems could, however, include several junior high and elementary units. Those systems having no high school, such as the dependent elementary school sometimes found in rural areas, were not included in the population for this study. The rational for this selection is based on the following factors:

1. Larger systems usually employ personnel who specialize as curriculum coordinators, thereby reducing the probability that the problem under study would be present, and

2. Very small grade schools, such as the dependent schools identified in Chapter I, transport their students to other systems having complete secondary programs.

By utilizing the above factors for population identification, it was possible to include 79 percent of the independent school systems employing three or more teachers.

Sample

Van Dalen, author of Understanding Education Research, has this to say regarding sampling:

> No specific rules on how to obtain an adequate sample have been formulated, for each situation presents its own problems. If the phenomena under study are homogeneous, a small sample is sufficient.

He goes on to state that

> increasing the size of the sample is of little value if units are not chosen in a way that ensures representativeness of the sample. In general, three factors determine the size of an adequate sample: the nature of the population, the type of sampling design, and the degree of precision desired. The researcher gives careful consideration to these factors and then selects the sampling design that will provide the desired precision at minimum cost.[1]

The sample for this study consisted of three groups. Group I included the elementary teaching staff from each of the 25 selected schools. If a single system had more than one elementary school within that system, one was chosen through random selection. Group II included any secondary teacher responsible for one or more classes in any area of vocational-technical or practical arts education. Group III was made up

of the administrative staff of each of the 25 schools, including the superintendent, assistant superintendent, high school principal, junior high school principal, and the elementary principal. All of these positions did not exist in every case. In the smaller schools one administrator often has responsibility for the entire secondary school program.

With the above criteria as a guideline, a review was made of the 1970-71 Educational Directory. There are 564 independent elementary and secondary schools in the 77 counties of Oklahoma.[2] The sample for this study includes 25 of these schools or slightly more than 5 percent of the total population. A 5 percent sample was considered statistically valid and within the time and cost constraints of the investigator. These 25 schools were determined by the table of random numbers from Runyon and Haber.[3] In order to maintain a broad geographic representation of subjects, no more than one school was selected within a single county (see Appendix A).

Instrumentation

Since the subjects in sample groups I, II, and III were identified on a statewide basis, it appeared feasible to use a mail questionnaire for obtaining the related data in order to stay within the constraints of the study.

According to Mouley, one of the major advantages of the questionnaire is that it permits a wide coverage with the least expense of money or effort. Another advantage is that the replies received may be more objective and accurate. If the respondent is permitted to remain anonymous, many times he will answer more candidly and objectively. A third advantage is that the questionnaire permits the respondent to

consider the responses longer and gives him a chance to check the information he gives. It provides a greater uniformity to the manner in which the questions are presented to the respondent and should insure a more comparable answer. These advantages will increase the validity of the data gathered.[4]

As a result of the investigator's experience in the field of industrial arts education and conversations with other educators it was ascertained that the stated attitudes of many elementary school teachers and administrators varied markedly depending upon whether or not the terms vocational, job, or skills were used in discussing the aims and objectives of elementary education. Therefore, cognizant of this possible variable, the investigator developed a series of positively stated items, being careful to avoid the use of these terms. The purpose of the items used was to discover how the attitudes of teachers in regard to career orientation activities were affected by their perception of the role of the elementary school and the terms used to describe that role.

The questionnaires for each of three groups were constructed by the investigator according to guidelines established at Research Pre-Session A, held in conjunction with the American Vocational Association Convention, December, 1970. Lewis and Shaffer, institute directors, developed the concept that the number of possible responses, as well as the number of items contained in a mail questionnaire, greatly affect the rate and percentage of return. In addition, subjects often will not select responses at the extreme positive or negative end of the response scale. This is especially true if a name or identification number is requested.[5]

Considering these technique concepts and the general nature of the information desired for this study, only three response choices were presented for each item: "GA" (Generally Agree); "U" (Undecided); and "GD" (Generally Disagree).

Forms A and C, for elementary teachers and school administrators, consisted of 26 items for each form. Each of the 26 items was common in nature. Form B, for secondary vocational-technical and practical arts teachers, included 24 items, 19 of which were common with items in forms A and C. Each form included a minimum of demographic items necessary in compiling the data (see Appendix B). These items were presented to a jury of professionals for approval and then pre-tested in a nearby school similar in organization to those schools to be used in the actual study.

Data Collection

Prior to the administration of the questionnaires, a letter endorsing this study and identifying the investigator was sent to the superintendent of each school system by Dr. Francis Tuttle, State Director for Vocational and Technical Education (see Appendix C).

As a follow-up to or supplement of this letter, each school superintendent was telephoned by the investigator to further explain the study and solicit the cooperation of those to be involved. In all cases the school officials expressed an interest and agreed to participate.

Five hundred twenty-seven questionnaires were mailed simultaneously to the 25 superintendents for local distribution to all subjects within the three groups. Group I, numbering 317 elementary school teachers, returned 262 or 82.6 percent of the total. Group II, consisting of 130

secondary vocational-technical and practical arts teachers, returned 100 or 77.8 percent of the total. Group III, made up of 80 school administrators, returned 76 or 95 percent of the total. All or 100 percent of the schools in the sample were represented with some response. The total return was 441 of the 527 or an overall return rate of 84.8 percent. Only three follow-up telephone contacts were made and a second mailing was necessary for only one school out of the 25. The following table presents a percentage breakdown of returned responses for each group.

TABLE I

SAMPLING AND QUESTIONNAIRE RESPONSE

Sample Groups	Sample Size	Number Responding	Percentage Responding
Group I	317	262	82.6
Group II	130	100	77.8
Group III	80	76	95.0
TOTAL	527	439	81.4

Statistical Treatment

The questionnaires used in collecting the data from the three sample groups included 26 items common for groups I and III, with 19 items common to all groups. In all cases, these common items relate directly or indirectly to the research questions stated in chapter one.

Due to the nature of this study, the chi-square test was selected because the data consisted of frequencies falling into distinct categories. The chi-square method of statistical analysis is a

nonparametric test which makes less stringent assumptions about the sample and results in conclusions which require fewer qualifications. However, because this study was concerned with the analysis of rather positive and straightforward items, this method seemd to be appropriate.

According to Popham

> the chi-square (χ^2) test is the most important member of the non-parametric family. This test can be used with data which are only nominal in strength. Chi-square is employed to test the difference between an actual sample and another hypothetical or previously established distribution.[6]

Runyon and Haber describe the chi-square test as follows:

> ...it permits us to determine whether or not a significant difference exists between the observed number of cases falling into each category, and the expected number of cases, based on the null hypothesis. In other words, it permits us to answer the question, how well does our observed distribution fit the theoretical distribution.[7]

The basic computation equation for chi-square is shown below:

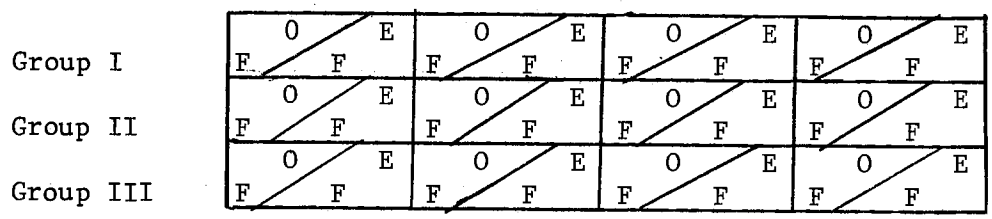
$$\chi^2 = \frac{(\text{Observed frequencies} - \text{Expected frequencies})^2}{\text{Expected frequencies}} \quad \text{or}$$

$$\chi^2 = \frac{(O-E)^2}{E}$$

The degrees of freedom for chi-square are computed as follows: Degrees of freedom = (rows - 1)(columns - 1) or df = (r-1)(c-1)

Figure 4 is an example of a 3 x 4 chi-square matrix as used for the 19 common items of the study and is shown below. Groups I, II, and III represent sub-groups within the sample. The column headings of "NR," "GA," "U," and "GD" indicate "no response," "general agreement," "undecided," and "general disagreement" which are the response choices of the mail questionnaire (see Appendix B). FO and FE within each category indicate the frequencies observed as compared with the

frequencies expected based on the null hypothesis. The degrees of freedom for a 3 x 4 matrix is also given.



df = (4-1)(3-1) = 6

Figure 4. 3 x 4 Chi-Square Matrix

For the seven items common only to groups I and II a 2 x 4 chi-square matrix with three degrees of freedom was used. The five items for Group II which were not common to Groups I and II are reported in percentage of response in each column of a 1 x 4 matrix (see Appendices B & D).

A general requirement of the chi-square test is that frequencies in each cell should not be too small. Walker and Lev suggest the following "practical rules of thumb for testing significance by use of the tables of areas under the Chi-Square":

> 1. If there are 2 or more degrees of freedom and the expectation in each cell is more than 5, the Chi-Square table assures a good approximation of the exact probabilities.
>
> 2. If there are 2 or more degrees of freedom and roughly approximate probabilities are acceptable for the test of significance, an expectation of only 2 in a cell is sufficient.
>
> 3. If there are 2 or more degrees of freedom and the expectation in all the cells but one is 5 or more, then an expectation of only one in the remaining cell is sufficient to provide a fair approximation to the exact probabilities.

> 4. If the logic of the problem permits, combine some of the classes to increase the expectations in the cells when several cells have very small expectations.[8]

For this study, cells were collapsed where appropriate to meet at least one of the criteria listed above. The major concern in the statistical analysis of data in this study was to determine if there was agreement among those persons surveyed and, if not, whether the differences were significant. The degree of relationship was not considered to be a major factor. For this reason, the contingency coefficient was not determined.

FOOTNOTES

[1]Deobold B. Van Dalen, Understanding Educational Research (New York: McGraw-Hill Book Company, 1966), p. 298.

[2]"Oklahoma Educational Directory, 1970-71," State Superintendent's Office, Department of Education (Oklahoma City, 1970), pp. 29-84.

[3]Richard P. Runyon and Audrey Haber, General Statistics (Reading, Massachusetts: Addison-Wesley Publishing Company, 1967), pp. 276-79.

[4]George J. Mouly, The Science of Educational Research (New York: American Book Co., 1963), pp. 239-42.

[5]American Vocational Association (AVA) Convention, Dr. Morgan Lewis of Penn State and Dr. Carl Shaffer of Ohio State, Research Center directors - held December, 1970, New Orleans, Jung Hotel.

[6]W. James Popham, Educational Statistics (New York: Harper and Row, Publishers, 1967), pp. 291-300.

[7]Richard P. Runyon and Audrey Haber, General Statistics (Reading, Massachusetts: Addison-Wesley Publishing Company, 1969), p. 242.

[8]Helen M. Walker and Joseph Lev, Statistical Inference (New York: Henry Hall and Company, 1953).

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The purpose of this chapter is to present and analyze the statistical data relating to the six research questions stated in chapter one. The .05 level was utilized in determining the significance of all statistical results obtained by the chi-square test.

A mail questionnaire was constructed in three forms for administration to the sample groups identified in chapter three. Forms A and C, for elementary teachers and school administrators respectively, contained 26 items - - all of which were identical and common. Nineteen of the 26 were also common to an equal number included in form B, for secondary vocational-technical and practical arts teachers. The remaining five items of form B, for a total of 24, were not common to any items in forms A and C.

The chapter is divided into separate analyses for each research question, and data directly relating to a particular research question was included so that each could be viewed in a straight-forward manner. Percentages, rounded to the nearest whole number, were utilized throughout in order to facilitate ease of interpretation. Further, Appendix D provides the actual frequencies of response to each item.

The first step in the initial instrument design was to identify the relationship between the research questions and the questionnaire items.

Table II in columns 1, 2, and 3 identifies the item number for each sample group and its corresponding questionnaire form. For example, column one contains the common items for form A administered to group I (elementary teachers); column two, the common items for group II (secondary vocational-technical and practical arts teachers); and, column three, the common items for group III (school administrators). Column four identifies the relating research question for each group of common items.

TABLE II

IDENTIFICATION OF COMMON ITEMS ON FORMS A, B, AND C AND THEIR RELATIONSHIP TO RESEARCH QUESTIONS

Elementary Teachers	Secondary Vo-Tech and Practical Arts Teachers	School Administrators Group	
Group I/Form A Common Item Number	Group II/Form B Common Item Number	Group III/Form C Common Item Number	Relating Research Question
1	1	1	1
2	2	2	1
3	3	3	1
4	-	4	1
5	-	5	1
6	4	6	3
7	5	7	3
8	6	8	3
9	7	9	3
10	8	10	3
11	-	11	2
12	9	12	3

TABLE II (Continued)

Elementary Teachers	Secondary Vo-Tech and Practical Arts Teachers	School Administrators Group	
Group I/Form A Common Item Number	Group II/Form B Common Item Number	Group III/Form C Common Item Number	Relating Research Question
13	-	13	2
14	10	14	3
15	-	15	2
16	12	16	3
17	-	17	3
18	13	18	3
19	14	19	3
20	15	20	3
21	18	21	3
22	17	22	2
23	21	23	4
24	-	24	4
25	23	25	6
26	24	26	6

Table III identifies the remaining items of form B which were not common to any items on the alternate forms. This table also identifies possible response categories and the relationship between these items and selected research questions. The percentages were added in order to develop some of the analysis format throughout the remainder of this chapter.

TABLE III

IDENTIFICATION OF UNCOMMON ITEMS ON FORM B, PERCENTAGE OF RESPONSES AND THEIR RELATIONSHIP TO RESEARCH QUESTIONS

Item Number	Response Level - Form B Total Percentage					Relating Research Question Number
	1	2	3	4		
11	4	19	9	68	100	2
16	5	8	10	77	100	2
19	3	82	8	7	100	3
20	3	84	7	6	100	5
22	4	90	3	3	100	5

1 = no response - 2 = generally agree - 3 = undecided - 4 = generally disagree

All forms of the questionnaire contained positively stated items allowing the subject to respond to one of three options - "generally agree," "undecided," or "generally disagree." In collating data for the chi-square test, a fourth category was established for items yielding no response, which is a requirement when utilizing chi-square analysis techniques. Chi-square values were then computed for nineteen contingency tables with six degrees of freedom and seven contingency tables with three degrees of freedom. The remaining five items of form B were computed on a percentage basis as shown in Table III. In all cases (with the exception of common items 4, 15, and 17 of forms A and C which had to be collapsed to meet the assumptions stated in the methodology), the frequencies of each cell met the assumptions for the chi-square statistic outlined in chapter three.

The format employed for further presentation and analysis of the data consists of a restatement of each research question followed by a brief discussion of those items which relate directly or indirectly to that question; a tabulated presentation identifying group responses in percentage frequencies; computed chi-square values; and, finally, the determination of significant differences among the participating groups.

In Tables IV through IX, the data collected are presented as follows: Column one, which is headed Form A, gives the item numbers for which the response levels are listed under the heading Group I, elementary teachers. Column two, headed Form B, gives the common item numbers for which the response levels are listed under the heading Group II, secondary vocational-technical and practical arts teachers. Column three, headed Form C, gives the common item numbers for which the response levels are listed under the heading Group III, school administrators. Under the general heading, Response Level, the numbers 1 through 4 under each of the three sub-headings are explained as: 1. "no response," 2. "generally agree," 3. "undecided," 4. "generally disagree."

The column chi-square shows the value derived as a result of placing the data collected into the chi-square formula. The column headed "df" shows the degrees of freedom for each portion of the problem. The last column, headed Statistically Significant, indicates whether or not the results of the chi-square computation were statistically significant at the .05 level.

Research Question One: How do elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators perceive the institutional mission and basic curricular approach of the elementary school?

Items 1, 2, and 3 on all forms of the questionnaire relate either directly or indirectly to research question one, as well as items 4 and 5 on forms A and C. These items relate to the responsibility and basic objectives of both the elementary and secondary school, recent changes in accepted goals and practices for public education, and the advantages derived from the self-contained classroom organization at the elementary school level. Although the chi-square values for items 1, 2, 3, and 5 revealed no significant differences at the .05 level of confidence, over half the respondents in the three groups reacted positively to statements one, "The primary responsibility of the elementary school is to prepare students for the secondary school," and five, "The elementary curriculum should be interdisciplinary in nature." Negative reactions were found for statements two, "The primary responsibility of the secondary school is to prepare students for college," and three, "Educational goals and practices have changed little in the past five years."

The only significant difference found in responses relating to research question one was found in item number 4 which was worded as follows: The self-contained classroom has numerous advantages over the departmentalized approach for grades K-6.

Research Question Two: To what extent are career orientation and basic skills activities included within the present curricula of the elementary schools of Oklahoma?

TABLE IV

CHI-SQUARE AND PERCENTAGE ANALYSIS OF RESPONSES RELATED TO RESEARCH QUESTION NUMBER ONE

Item Number			Group I Elementary Teachers				Group II Secondary Vocational-Technical and Practical Arts Teachers				Group III School Administrators				χ^2	df	Statistically Significant
			Response Level				Response Level				Response Level						
Form A	Form B	Form C	1	2	3	4	1	2	3	4	1	2	3	4			
1	1	1	0	66	2	32	1	78	2	19	1	63	0	36	9.69	6	No
2	2	2	0	27	8	65	1	19	9	71	0	16	1	83	11.91	6	No
3	3	3	2	27	7	64	0	30	5	65	1	29	3	67	3.82	6	No
4*	-	4	0	62	18	20	-	-	-	-	4	41	20	35	8.97	3	Yes
5*	-	5	9	70	19	2	-	-	-	-	7	70	17	6	4.67	3	No

1 = no response - 2 = generally agree - 3 = undecided - 4 = generally disagree

significance at .05 level: for df = 6, $\chi^2 = 12.59$; for df = 3, $\chi^2 = 7.82$

*items common to Groups I and III only.

An analysis of the data related to research question two reveals six items which are relevant. Items 11 and 12 of form B and item 22 of forms A, B, and C, related directly to question two while items 11, 13, and 15 of forms A and C are indirectly related. The direct items are concerned with the evaluation of related career information and basic skills acquired by students matriculating from the elementary school, as viewed by secondary vocational-technical and practical arts teachers. Item 22, also directly related, concerns the readiness of elementary pupils to receive instruction in the area of career orientation.

Common items 11, 13, and 15 of forms A and C are indirectly related to research question two and are concerned with the physical constraints which might prevent career orientation, basic skills, and construction activities from being included in the elementary classroom, and the capabilities of elementary teachers as a group to organize and direct activities of this nature.

An examination of the directly related items reveals that a majority of secondary vocational-technical and practical arts teachers did not perceive students coming from the elementary school as possessing an adequate knowledge of occupations or basic manipulative skills. Item 22, however, shows no significant difference in the attitude of all groups concerning the readiness of the student to recognize different kinds of jobs with 84 percent (see Appendix C) of the cases agreeing that elementary students are not too young to be involved in career orientation and basic skills activities.

Items 11, 13, and 15, relating indirectly to research question two, revealed a significant difference in expected responses concerning the attitudes of elementary teachers and school administrators with

reference to the feasibility of career orientation, basic skills, and construction activities in the elementary classroom. Although these significant differences were detected, a majority of both groups generally agreed with the following propositions: (1) "Most construction activities, experiments, projects, etc., can be conducted in the self-contained classroom," (2) "The cost and difficulty of acquiring materials often limits construction activities in the elementary classroom," and (3) "Most elementary teachers are capable of conducting practical and basic skills activities."

Research Question Three: How do elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators perceive career orientation, basic skills, and construction activities in the elementary curricula?

Research question three along with the items relating to the concept stated therein, was the area of heaviest emphasis in this study. Table VI contains an analysis of 14 items relating directly or indirectly to the attitudes of the sample groups concerning the importance of career orientation at the elementary level.

An examination of Table VI reveals no statistically significant differences for items 7, 8, 9, 10, 12, 17, 18, and 19, all of which relate to instructional activities concerned with career orientation, basic skills, and construction activities. At least 88 percent of all cases generally agreed that these activities should be included in the elementary curriculum. There was a statistically significant difference, however, for items 6, 14, 16, 20, and 21 which were straight-forward and positive statements as to whether each of the three groups felt these activities to be important, and if they should be increased as in several

TABLE V

CHI-SQUARE AND PERCENTAGE ANALYSIS OF RESPONSES RELATED TO RESEARCH QUESTION NUMBER TWO

Item Number			Group I Elementary Teachers				Group II Secondary Vocational-Technical and Practical Arts Teachers				Group III School Administrators				χ^2	df	Statistically Significant
			Response Level				Response Level				Response Level						
Form A	Form B	Form C	1	2	3	4	1	2	3	4	1	2	3	4			
22	17	22	1	9	7	83	1	8	4	87	1	9	6	84	1.53	6	No
11*	-	11	1	87	8	4	-	-	-	-	5	72	7	16	17.74	3	Yes
13*	-	13	2	68	13	17	-	-	-	-	8	58	9	25	8.63	3	Yes
15*	-	15	2	85	3	10	-	-	-	-	7	74	0	20	10.22	3	Yes
-	11**	-	-	-	-	-	4	19	9	68	-	-	-	-	-	-	-
-	16**	-	-	-	-	-	5	8	10	77	-	-	-	-	-	-	-

1 = no response - 2 = generally agree - 3 = undecided - 4 = generally disagree

significance at .05 level: for df = 6, $\chi^2 = 12.59$; for df = 3, $\chi^2 = 7.82$

*items common to Groups I and III only. **items included in Group II exclusively.

previously recognized instances. A majority of all groups generally agreed with the following statements: (1) "As the percentage of families in which both the father and mother are employed increases, the responsibility for the school to teach practical skills and career information also increases," (2) "Most elementary principals consider construction activities to be an important part of the curriculum," (3) "At least a portion of the school curriculum should be devoted to identifying different jobs (career orientation)," and (4) "There is a need for more career orientation activities at the elementary level." It was unique, however, to find that this trend did not continue in the percentage of positive agreement responses for this item: "Most elementary teachers consider job identification or career orientation to be an important part of the curriculum," (see Table VI).

Item 19, exclusive for Group II (secondary vocational-technical and practical arts teachers), revealed that 82 percent of this group believe that career orientation, basic skills, and construction activities would strengthen programs at the secondary level.

Research Question Four: Would elementary teachers expand career orientation, basic skills, and construction activities if a group of consultants was available to assist in an advisory capacity?

Items 23 and 24 were directly related to research question four. Item 23, which was posed to all groups, and item 24, which was posed to Groups I and II, relate to attitudes concerning the advantages of a secondary vocational-technical and practical arts teacher consultant group which would assist elementary teachers in expanding career orientation, basic skills, and construction activities.

TABLE VI

CHI-SQUARE AND PERCENTAGE ANALYSIS OF RESPONSES RELATED TO RESEARCH QUESTION NUMBER THREE

Item Number			Group I Elementary Teachers				Group II Secondary Vocational-Technical and Practical Arts Teachers				Group III School Administrators				χ^2	df	Statistically Significant
			Response Level				Response Level				Response Level						
Form A	Form B	Form C	1	2	3	4	1	2	3	4	1	2	3	4			
6	4	6	0	90	8	2	0	95	1	4	0	92	1	7	13.12	6	Yes
7	5	7	0	99	1	0	0	99	1	0	0	99	1	0	.88	6	No
8	6	8	0	92	4	4	0	95	2	3	0	93	0	7	5.75	6	No
9	7	9	0	88	7	5	0	88	7	5	0	88	5	7	1.24	6	No
10	8	10	0	98	1	1	0	100	0	0	1	99	0	0	5.14	6	No
12	9	12	1	90	7	2	1	86	12	1	1	91	4	4	6.27	6	No
16	12	16	0	82	11	7	0	96	2	2	0	91	3	6	16.85	6	Yes
14	10	14	2	65	29	4	1	57	27	15	0	71	14	15	23.70	6	Yes

TABLE VI (Continued)

Item Number			Group I Elementary Teachers				Group II Secondary Vocational-Technical and Practical Arts Teachers				Group III School Administrators				χ^2	df	Statistically Significant
			Response Level				Response Level				Response Level						
Form A	Form B	Form C	1	2	3	4	1	2	3	4	1	2	3	4			
18	13	18	0	96	2	2	0	97	1	2	0	98	1	1	1.66	6	No
19	14	19	0	88	85	3	0	90	5	5	0	91	2	7	7.00	6	No
20	15	20	2	46	30	22	4	91	3	2	3	34	22	41	89.88	6	Yes
21	18	21	3	57	25	15	0	69	18	13	1	75	11	13	13.51	6	Yes
17*	-	17	0	95	3	2	-	-	-	-	3	95	1	1	7.53	3	No
-	19**	-	-	-	-	-	3	82	8	7	-	-	-	-	-	-	-

1 = no response - 2 = generally agree - 3 = undecided - 4 = generally disagree

significance at .05 level: for df = 6, χ^2 = 12.59%; for df = 3, χ^2 = 7.82

*items common to Groups I and III only. **items included in Group II exclusively.

The chi-square values for both items 23 and 24 were significant at the .05 level, showing a difference from the expected attitudes of Groups I, II, and III with reference to the value of an advisory group to assist in expanding elementary activities.

An examination of Table VII reveals that 93 percent of the secondary vocational-technical and practical arts teachers and 88 percent of the school administrators believed that an advisory group of secondary teachers would be helpful. In Group I, 69 percent of the elementary teachers believed that an advisory group would be beneficial; however, a notable 20 percent were undecided and 7 percent did not feel that such a group would be necessary.

Item 24, asking whether elementary teachers would strive to become more knowledgeable about career orientation if the opportunity was available, was also found to be significantly different. Although 76 percent of the elementary teachers and 75 percent of the administrators believed that elementary teachers would attempt to become better informed, 12 percent of the administrators believed that no attempt would be made as opposed to a 5 percent response by Group I. Eighteen percent of Group I and 9 percent of Group III were undecided.

Research Question Five: Would secondary vocational-technical and practical arts teachers cooperate with the elementary staff in developing more effective career orientation and basic skills activities?

Two items, 20 and 22, relate to research question five. These items were directly related to Group II which was made up of secondary vocational-technical and practical arts teachers. Ninety percent of the Group II respondents believed that an advisory group of secondary teachers would be of value to the elementary staff. Eighty-four percent

TABLE VII

CHI-SQUARE AND PERCENTAGE ANALYSIS OF RESPONSES RELATED TO RESEARCH QUESTION NUMBER FOUR

Item Number			Group I Elementary Teachers				Group II Secondary Vocational-Technical and Practical Arts Teachers				Group III School Administrators				χ^2	df	Statistically Significant
			Response Level				Response Level				Response Level						
Form A	Form B	Form C	1	2	3	4	1	2	3	4	1	2	3	4			
23	21	23	4	69	20	7	0	93	4	3	0	88	5	7	34.00	6	Yes
24*	-	24	1	76	18	5	-	-	-	-	4	75	9	12	10.15	3	Yes

1 = no response - 2 = generally agree - 3 = undecided - 4 = generally disagree

significance at .05 level; for df = 6, χ^2 = 12.5%, for df = 3, χ^2 = 7.82

*items common to Groups I and III only.

of the group indicated that secondary vocational-technical and practical arts teachers would be willing to assist if called upon. Appendix D contains the response frequencies for each category.

Research Question Six: Would public school administrators cooperate in providing a common time and location for elementary teachers and advisory groups to better plan career orientation and basic skills activities?

Items 25 and 26 relate directly to research question six. All three groups were asked to respond to common items concerning the willingness of the average public school administrator to cooperate with teachers and other administrators in curriculum planning activities.

The computer chi-square value for items 25 and 26 revealed a significant difference beyond the .05 level. A percentage analysis shows that 93 percent of Group III (school administrators) generally agreed that administrators would be willing to cooperate as compared to 73 percent of Group I and 76 percent of Group II. The greatest difference in expected responses was in the undecided response where 20 percent of the secondary vocational-technical and practical arts teachers and 19 percent of the elementary teachers were not sure of administrative cooperation. Seven percent of Group III (school administrators) were undecided. Also, 93 percent of Group III believed that most administrators are willing to make changes even though an adjustment in routine might be necessary. Fourteen percent of Group I (elementary teachers) and an equal percentage of Group II (secondary vocational-technical and practical arts teachers) were undecided as compared to 4 percent of Group III.

TABLE VIII

CHI-SQUARE AND PERCENTAGE ANALYSIS OF RESPONSES RELATED TO RESEARCH QUESTION NUMBER FIVE

Item Number			Group I Elementary Teachers				Group II Secondary Vocational-Technical and Practical Arts Teachers				Group III School Administrators				χ^2	df	Statistically Significant
			Response Level				Response Level				Response Level						
Form A	Form B	Form C	1	2	3	4	1	2	3	4	1	2	3	4			
-	20*	-	-	-	-	-	3	84	7	6	-	-	-	-	-	-	-
-	22*	-	-	-	-	-	4	90	3	3	-	-	-	-	-	-	-

1 = no response - 2 = generally agree - 3 = undecided - 4 = generally disagree

*items included in Group II exclusively.

TABLE IX

CHI-SQUARE AND PERCENTAGE ANALYSIS OF RESPONSES RELATED TO RESEARCH QUESTION NUMBER SIX

Item Number			Group I Elementary Teachers				Group II Secondary Vocational-Technical and Practical Arts Teachers				Group III School Administrators				χ^2	df	Statistically Significant
			Response Level				Response Level				Response Level						
Form A	Form B	Form C	1	2	3	4	1	2	3	4	1	2	3	4			
25	23	25	2	82	14	2	0	81	14	5	0	93	3	4	13.66	6	Yes
26	24	26	4	73	20	3	0	76	19	5	0	93	7	0	19.94	6	Yes

1 = no response - 2 = generally agree - 3 = undecided - 4 = generally disagree

significance at .05 level: for df = 6, χ^2 = 12.5%; for df = 3, χ^2 = 7.82

In summary, Table X contains an overview of the stated research questions one through six and the related items found to be significant at the .05 level or beyond. Column one identifies the research question; column two, three, and four the items common to forms A (elementary teachers), B (vocational-technical and practical arts teachers), and C (school administrators); and finally, column five which indicates whether or not the items were significantly different when tested by the chi-square method.

TABLE X

SUMMARY OF SIGNIFICANT ITEMS AND RELATED RESEARCH QUESTIONS

Research Question	Identification of Common Items			Significance at .05 level
	Form A	Form B	Form C	
1	1	1	1	no
	2	2	2	no
	3	3	3	no
	4	-	4	*yes
	5	-	5	no
2	11	-	11	yes
	13	-	13	*yes
	15	-	15	*yes
	22	17	22	no
	-	11	-	**%
	-	16	-	**%
3	6	4	6	*yes
	7	5	7	no

TABLE X (Continued)

Research Question	Identification of Common Items			Significance at .05 level
	Form A	Form B	Form C	
3 (continued)	8	6	8	no
	9	7	9	no
	12	9	12	no
	14	10	14	*yes
	16	12	16	*yes
	17	-	17	no
	18	13	18	no
	19	14	19	no
	20	15	20	*yes
	21	18	21	*yes
	-	19	-	**%
	23	21	23	*yes
	24	-	24	*yes
4	23	21	23	*yes
	24	-	24	*yes
5	-	20	-	**%
	-	22	-	**%
6	25	23	25	*yes
	26	24	26	*yes

*indicates significance at .05 level or beyond
**item responses presented in percentages only

CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The problem with which this study is concerned is the lack of descriptive information relative to career orientation activities in the elementary schools of Oklahoma. Regardless of any implicit or explicit need for career orientation activities at the elementary school level, no effort can have a high probability of success until information is gathered in an attempt to assess the attitudes and interests of practitioners related to this matter. The major purpose, therefore, was to identify the attitudes of persons presently involved in public school education concerning career orientation activities for the elementary schools. Specifically, the study was an attempt to answer the following research questions:

1. How do elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators perceive the institutional mission and basic curricular approach of the elementary school?

2. To what extent are career orientation and basic skills activities included within the present curricula of the elementary schools of Oklahoma?

3. How do elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators perceive

career orientation, basic skills, and construction activities in the elementary curricula?

4. Would elementary teachers expand career orientation, basic skills, and construction activities if a group of consultants was available to assist in an advisory capacity?

5. Would secondary vocational-technical and practical arts teachers cooperate with the elementary staff in developing more effective career orientation and basic skills activities?

6. Would public school administrators cooperate in providing a common time and location for elementary teachers and advisory groups to better plan career orientation and basic skills activities?

This study was limited to school systems within the independent districts of Oklahoma. Parochial schools and schools not meeting the criteria for an independent district were not utilized in the study. The sample included 25 randomly selected school systems having no more than one high school. In instances where more than one elementary and/or one junior high school was present, one of each was randomly selected from that system (see Chapter III).

The sample was divided into three groups, specifically, Group I, which includes all elementary teachers K-6 within the 25 schools; Group II, including any secondary teacher responsible for one or more classes in any area of vocational-technical and/or practical arts education; and Group III, including the school administrators of each selected school system. The groups responded to a written questionnaire containing 24 to 26 items concerning the general curricula of the elementary school, as well as items relating to the activities of career orientation planning and instruction, basic skills, and construction. A majority of the

questionnaire items were common to all sample groups; however, in some cases, the items were posed to a single group or to two of the three sample groups (see Appendix B).

Findings

Research Question One: How do elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators perceive the institutional mission and basic curricular approach of the elementary school?

1. Statistical analyses of data from the returned questionnaires indicate no statistical differences for items 1, 2, and 3 (common to all sample groups) concerning the primary responsibilities of the elementary and secondary schools and the recent changes related to educational goals and practices.

2. A statistical difference was detected in the attitudes of Groups I and III concerning the advantages of the self-contained classroom over the departmentalized approach at the elementary school level. Sixty-two percent of Group I (elementary teachers) generally favored the self-contained classroom approach with 18 percent undecided and 20 percent opposing. Forty-one percent of Group III (school administrators) also generally agreed with this item with 20 percent undecided and 35 percent opposed. (Four percent did not respond.)

3. No statistical differences were detected in the attitudes of Groups I and III (elementary teachers and school administrators), concerning the interdisciplinary nature of the elementary curriculum.

Research Question Two: To what extent are career orientation and basic skills activities included within the present curricula of the elementary schools of Oklahoma?

4. A significant difference was detected in the responses of Groups I and III for items 11, 13, and 15. These items were concerned with various physical constraints which might limit the instruction of basic skills and construction activities in the self-contained classroom, and the capabilities of most elementary teachers to direct career orientation activities.

5. No statistical differences were found in responses for item 22 concerning the readiness of elementary students to learn about jobs. Eighty-three percent or more of each group believed elementary students to be mature enough to learn about different jobs.

6. Items 11 and 16 were asked exclusively of Group II. A majority of the responses of Group II indicated that most secondary vocational-technical and practical arts teachers do not perceive students enrolling from the elementary schools as possessing an adequate knowledge of occupations or a command of basic practical skills.

Research Question Three: How do elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators perceive career orientation, basic skills, and construction activities in the elementary curricula?

7. Attempts to answer research question three involved the heaviest item emphasis of this study. All sample groups were asked to respond to items 7, 8, 9, 10, 12, 18, and 19 concerning the value of various curricular activities at the elementary level. Item 17 posed to Groups I and III (elementary teachers and school administrators) was

also of this nature. No significant differences were detected in the responses concerning these questions. In all cases, 86 percent or more generally agreed as to the importance of the activities identified by these items (see Appendix B and Table VI).

8. Significant differences were detected in the responses of items 6, 14, 16, 20, and 21. These items concerned attitudes toward the importance of career orientation and the need for more basic skills and construction activities in the elementary schools.

9. Eighty-two percent of Group II indicated that secondary vocational-technical and practical arts teachers believe the basic skills and career orientation activities conducted in the elementary schools would strengthen programs at the secondary level.

Research Question Four: Would elementary teachers expand career orientation, basic skills, and construction activities if a group of consultants was available to assist in an advisory capacity?

10. Significant differences were detected in the responses of all groups to item 23 concerning the value of an advisory group to assist elementary teachers in planning more effective career activities. A significant difference was also found in the attitudes of Groups I and III (elementary teachers and school administrators) concerning the willingness of elementary teachers to become better informed about career orientation as a part of the elementary school activities. Although significant differences were found, 69 percent or more generally agreed that an advisory group would be helpful and that most elementary teachers would be willing to seek more knowledge if the opportunity was available.

Research Question Five: Would secondary vocational-technical and practical arts teachers cooperate with the elementary staff in developing more effective career orientation and basic skills activities?

11. Items 20 and 22 involved the opinions of Group II only. Eighty-four percent of the vocational-technical and practical arts teachers indicated that an advisory group of secondary teachers could assist elementary teachers in planning and directing more effective career orientation and basic skills activities. Ninety percent indicated that most vocational-technical and practical arts teachers would be willing to assist elementary teachers if asked to do so.

Research Question Six: Would public school administrators cooperate in providing a common time and location for elementary teachers and advisory groups to better plan career orientation and basic skills activities?

12. Statistical differences were detected in the responses of all groups for items 25 and 26. These items allowed Groups I, II, and III to assess the willingness of most school administrators to cooperate with teachers in allowing planning groups to function and to initiate curriculum changes even though adjustments in traditional routine might be necessary. Although statistical differences were detected, at least 73 percent of each group believed that most administrators would cooperate.

Conclusions

1. In looking at findings 1, 3, 5, and 7, it may be concluded that there is general agreement among elementary teachers (Group I), secondary vocational-technical and practical arts teachers (Group II), and

public school administrators (Group III) concerning the institutional mission of the school, the mental readiness of elementary age students to learn about different jobs, and the basic curricular content at the elementary school level.

2. Findings 6, 9, and 11 pertaining to the responses of sample Group II indicate only that (a) Secondary vocational-technical and practical arts teachers do not perceive students who enroll from the elementary school as possessing a sufficient knowledge of occupations and command of basic practical skills, and (b) That basic skills and career orientation activities conducted in the elementary schools would strengthen vocational-technical and practical arts programs at the secondary level. Responses also indicate that secondary vocational-technical and practical arts teachers believe that they could be helpful to the elementary staff in planning career orientation and basic skills activities and that they would be willing to do so if given the opportunity.

It is therefore concluded that career orientation and basic skills instruction should be included in the activities of the elementary school and that consideration should be given to utilizing secondary vocational-technical and practical arts teachers in an advisory capacity.

3. Findings 2, 4, 8, 10, and 12, indicate a significant difference in the responses of elementary teachers, secondary vocational-technical and practical arts teachers, and public school administrators concerning (a) The advantages of the self-contained classroom approach over the departmentalized approach at the elementary school level, (b) The constraints which might limit basic skills and construction activities in the elementary classroom, (c) The capabilities of the elementary teachers to plan and direct career orientation and basic skills

activities, (d) The responsibility of the elementary school to include career activities, (e) The value of an advisory group to assist elementary teachers in planning more effective activities, and (f) The willingness of administrators to initiate changes for curriculum improvement. It is important to recognize that although significant differences were detected for findings 4, 10, and 12, a majority of each group generally agreed with the positively stated items; therefore, the following conclusions may be made: (a) Most career orientation, basic skills, and construction activities can be conducted in the self-contained elementary classroom; (b) Most elementary teachers are capable of directing career activities; (c) Most elementary teachers and school administrators would be willing to become better informed about career orientation if the opportunity was available; and (d) Most school administrators would be willing to cooperate with elementary and secondary teachers in planning more effective career orientation and basic skills activities for the elementary schools.

Recommendations

From the data examined, the recommendations will be divided into those directly related to this study and those related to the need for further study. The recommendations related to this study are:

1. That career orientation, basic skills, and construction activities should be included in the elementary school curricula.

2. That elementary teachers, secondary vocational-technical and practical arts teachers, and school administrators cooperate in an attempt to jointly plan activities which would better meet the needs of the student in the elementary classroom.

3. That whenever possible, an advisory group composed of secondary vocational-technical and practical arts teachers be formed to assist the elementary staff in the planning and instruction of more effective career orientation and basic skills activities and that school administrators make an honest effort to allow the elementary staff and the advisory group to function.

4. That provisions be made for inservice-training sessions which would provide more information for elementary teachers, vocational-technical and practical arts teachers, and public school administrators concerning the scope, content, and importance of career orientation and to increase their awareness of the provisions provided by Public Law 90-576 (see Chapter II).

Recommendations for Further Study

1. It is recommended that further study be conducted relating to the departmentalized and the self-contained classroom approaches with reference to the instruction of career orientation and basic skills activities at the elementary school level.

2. It is also recommended that further study of the need for expanding career orientation, basic skills, and construction activities in the elementary schools in Oklahoma be made.

3. It is also recommended that a study of the feasibility of the establishment of several exemplary programs at various locations in the state to provide a model for educators to observe be made.

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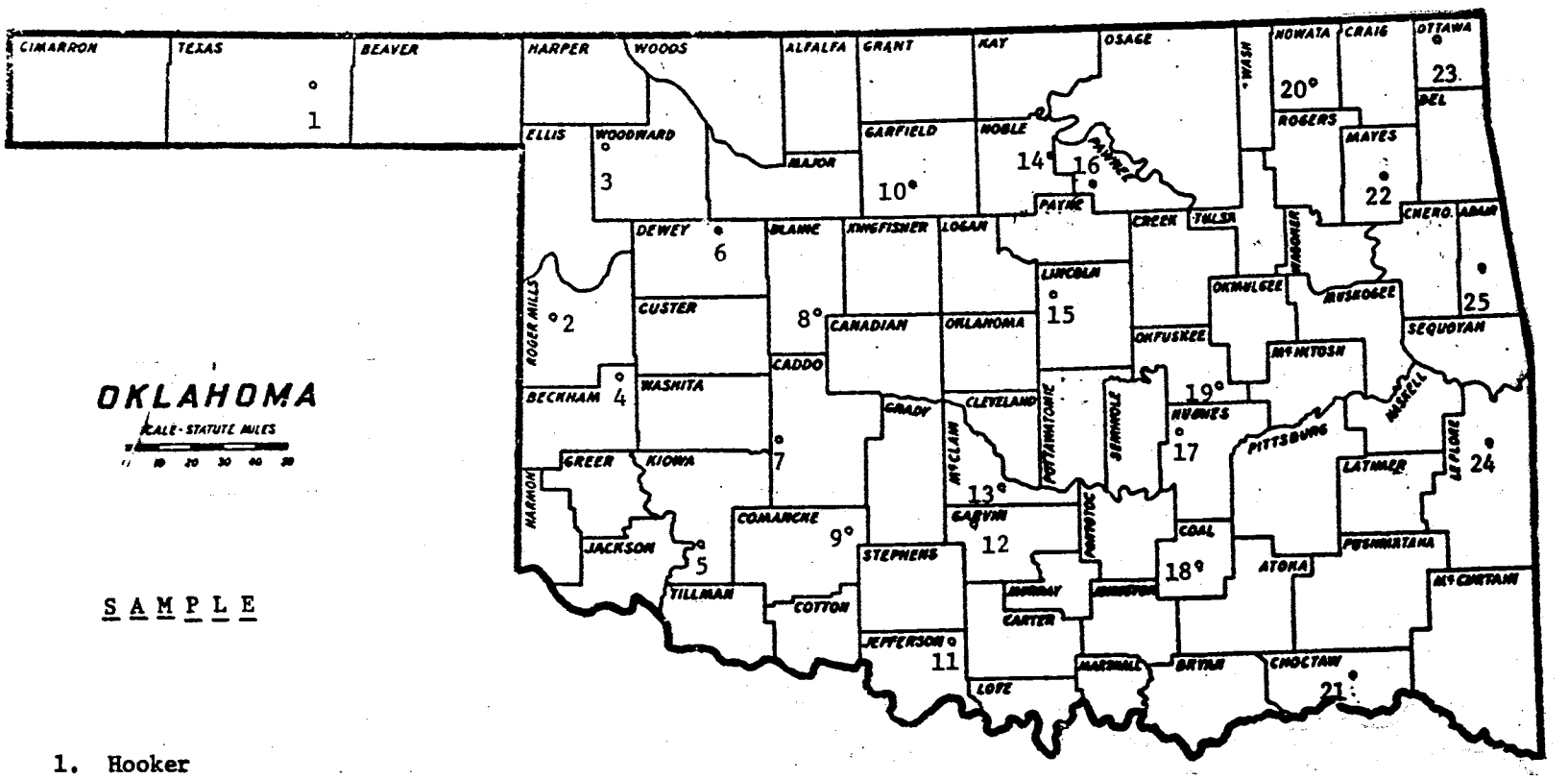
APPENDIX A

THE GEOGRAPHIC LOCATION OF THE SAMPLE



OKLAHOMA

SCALE - STATUTE MILES

S A M P L E

1. Hooker
2. Reydon
3. Ft. Supply
4. Elk City
5. Snyder
6. Seiling
7. Carnegie
8. Greenfield
9. Sterling
10. Waukomis
11. Ringling
12. Lindsay
13. Wayne
14. Redrock
15. Carney
16. Pawnee
17. Holdenville
18. Coalgate
19. Weleetka
20. Nowata
21. Hugo
22. Salina
23. Commerce
24. Wister
25. Stilwell

APPENDIX B

QUESTIONNAIRE FORMS A, B, AND C

FORM A
QUESTIONNAIRE
Elementary Teachers K-6

Name _____

Present Position _____

School and Location _____

Teaching Experience _____
(years in present position) (total years in teaching)

Highest Degree Held _____
(Bachelors, Masters, Specialist, Other)

Major _____ Minor(s) _____

Nonteaching Experiences _____

Do you teach in a self-contained classroom? _____

Instructions: Please indicate, by circling the appropriate response, how you feel toward each of the following items. The items are not necessarily related and some include all children rather than being limited to grades K-6. Note that the term "career orientation" simply means to look at what a person does in a job or occupation such as a carpenter, medical doctor, or grocer.

GA = Generally Agree U = Undecided GD = Generally Disagree

1. The primary responsibility of the elementary school is to prepare students for the secondary school . . . . GA U GD

2. The primary responsibility of the secondary school is to prepare students for college . . . . . GA U GD

3. Educational goals and practices have changed little in the past five years . . . . . GA U GD

4. The self-contained classroom has numerous advantages over the departmentalized approach for grades K-6 . . . . . GA U GD

5. The elementary curriculum should be interdisciplinary in nature . . . . . GA U GD

6. As the percentage of families in which both the father and mother are employed increases, the responsibility for the school to teach practical skills and career information also increases . . . . . GA U GD

7. The concept that work is honorable should be introduced in the elementary school . . . . . GA U GD

8. All children should receive some instruction in those skills such as sewing, cooking, typing, plant and pet care, etc., which prepare for everyday living . . . . . GA U GD

9. All children should have the opportunity to acquire some basic skills such as planning, designing, cutting, laminating, constructing, etc. . . . . GA U GD

10. All children should be involved in experiences which teach economic selection and purchase, group cooperation, safe work practices, and the worthwhile use of leisure time . . . . . GA U GD

11. Most elementary teachers are capable of conducting practical and basic skills activities . . . . . GA U GD

12. Construction activities involving three dimensional objects, and experiments are beneficial in teaching the elementary curricula areas such as arithmetic, social studies, language arts, science, art, etc. . . . . GA U GD

13. Most construction activities, experiments, projects, etc., can be conducted in the self-contained classroom . . . . . GA U GD

14. Most elementary principals consider construction activities to be an important part of the curriculum . . . . . GA U GD

15. The cost and difficulty of acquiring materials often limits construction activities in the elementary classroom . . . . . GA U GD

16. At least a portion of the school curriculum should be devoted to identifying different jobs (career orientation) . . . . . GA U GD

17. Films, slides, charts, posters, and models which show what different people do are important items for elementary teachers . . . . . GA U GD

18. Field trips to places such as a dairy, farm, airport, or fire station should be a part of the class activities for elementary grades . . . . . GA U GD

19. Classroom visits by persons who do different jobs such as a doctor, policeman, grocer, carpenter, or lawyer should be included in elementary school activities . . . . . GA U GD

20. Most elementary teachers consider job identification or career orientation to be an important part of the curriculum . . . . . GA U GD

21. There is a need for more career orientation activities at the elementary level . . . . . GA U GD

22. Elementary students are too young to begin to recognize different kinds of jobs . . . . . GA U GD

23. A small group of persons such as secondary teachers of industrial arts, home economics, etc., serving as consultants to help answer questions concerning tools, materials, processes, etc., would be helpful to the elementary teacher in planning career and skills activities . . . . . GA U GD

24. Most elementary teachers would strive to become more knowledgeable about career orientation if the opportunity was available . . . . . GA U GD

25. Most school administrators are willing to make changes which will improve the curriculum even though an adjustment in routine may be necessary . . . . . GA U GD

26. Most principals would cooperate in scheduling a reasonable amount of time for secondary vocational-technical and practical arts teachers to meet with elementary staff members concerning curriculum improvement . . . . . GA U GD

If you desire to comment on any of the items, please use the reverse side of this sheet.

FORM B
QUESTIONNAIRE
Secondary Vocational-Technical and
Practical Arts Teachers

Name _____

Present Position _____

School and Location _____

Teaching Experience _____
(years in present position) (total years in teaching)

Highest Degree Held _____
(Bachelors, Masters, Specialist, Other)

Major _____ Minor(s) _____

Nonteaching Experiences _____

Instructions: Please indicate, by circling the appropriate response, how you feel toward each of the following items. Although some statements refer to the elementary grades, you should indicate your feelings on all items. Please note that the term "career orientation" simply means to look at what a person does in a job or occupation such as carpenter, medical doctor, or grocer.

GA = Generally Agree U = Undecided GD = Generally Disagree

1. The primary responsibility of the elementary school is to prepare students for the secondary school . . . . GA U GD

2. The primary responsibility of the secondary school is to prepare students for college . . . . . GA U GD

3. Educational goals and practices have changed little in the past five years . . . . . GA U GD

4. As the percentage of families in which both the father and mother are employed increases, the responsibility for the school to teach practical skills and career information also increases . . . . . GA U GD

5. The concept that work is honorable should be introduced in the elementary school . . . . . GA U GD

6. All children should receive some instruction in skills such as sewing, cooking, typing, plant and pet care, etc., which prepare for everyday living . . . . . GA U GD

7. All children should have the opportunity to acquire some basic skills such as planning, designing, cutting, laminating, constructing, etc. . . . . GA U GD

8. All children should be involved in experiences which teach economic selection and purchase, group cooperation, safe work practices, and the worthwhile use of leisure time . . . . . GA U GD

9. Construction activities involving three dimensional objects, projects, and experiments are beneficial in teaching subject areas such as mathematics, social studies, language arts, science, art, etc. . . . . GA U GD

10. Most principals consider construction activities to be an important part of the curriculum . . . . GA U GD

11. Most students coming from the elementary school possess an adequate knowledge of basic practical skills . . . . . GA U GD

12. At least a portion of the school curriculum should be devoted to identifying different jobs (career orientation) . . . . . GA U GD

13. Field trips to places such as a dairy, farm, airport, or fire station should be a part of the class activities for elementary grades . . . . . GA U GD

14. Classroom visits by persons who do different jobs such as a doctor, policeman, grocer, carpenter, or lawyer should be included in elementary school activities . . . . . GA U GD

15. Most vocational-technical and practical arts teachers consider job identification or career orientation to be an important part of the elementary school curriculum . . . . . GA U GD

16. Most students coming from the elementary school demonstrate an adequate knowledge of jobs or occupations . . . . . GA U GD

17. Elementary students are too young to begin to recognize the different kinds of jobs or occupations in our society . . . . . GA U GD

18. There is a need for more career orientation activities at the elementary level . . . . . GA U GD

19. Basic skills and career orientation activities conducted in the elementary school would strengthen the secondary practical arts and vocational-technical programs . . . . . GA U GD

20. Most practical arts and vocational-technical teachers would be willing to assist the elementary teacher in organizing more skills and career activities . . . . . GA U GD

21. A small group of persons such as secondary teachers of industrial arts, home economics, etc., serving as consultants to help answer questions concerning tools, materials, processes, etc., would be helpful to the elementary teacher in planning career and skills activities . . . . . GA U GD

22. A board of consultants made up of teachers from agriculture, business, home economics, industrial arts, trade & industries, etc., could advise the elementary staff in relation to safe work practices, the purchase of equipment and supplies, etc. . . . . GA U GD

23. Most school administrators are willing to make changes which will improve the curriculum even though an adjustment in routine may be necessary . . . . . GA U GD

24. Most principals would cooperate in scheduling a reasonable amount of time for secondary vocational-technical and practical arts teachers to meet with elementary staff members concerning curriculum improvement . . . . . GA U GD

If you desire to comment on any of the items, please use the reverse side of this sheet.

FORM C
QUESTIONNAIRE
School Administrators

Name _____

Present Position _____

School and Location _____

Administrative Experience _____
(yrs. in present position) (total yrs. in admin.)

Teaching Experience _____ Highest Degree _____
(total years) B.S., M.S., Spec. etc.)

Major _____ Minor(s) _____

Nonteaching Experiences _____

Instructions: Please indicate, by circling the appropriate response, how you feel toward each of the following items. The items are not necessarily related and include both the elementary and secondary grade levels. Note that the term "career orientation" simply means to look at what a person does in a job or occupation such as a carpenter, medical doctor, or grocer.

GA = Generally Agree U = Undecided GD = Generally Disagree

1. The primary responsibility of the elementary school is to prepare students for the secondary school . . . . GA U GD

2. The primary responsibility of the secondary school is to prepare students for college . . . . . GA U GD

3. Educational goals and practices have changed little in the past five years . . . . . GA U GD

4. The self-contained classroom has numerous advantages over the departmentalized approach for grades K-6 . . . . . GA U GD

5. The elementary curriculum should be interdisciplinary in nature . . . . . GA U GD

6. As the percentage of families in which both the father and mother are employed increases, the responsibility for the school to teach practical skills and career orientation also increases . . . . . GA U GD

7. The concept that work is honorable should be introduced in the elementary school . . . . . GA U GD

8. All children should receive some instruction in those skills such as sewing, cooking, typing, plant and pet care, etc., which prepare for everyday living . . . . . GA U GD

9. All children should have the opportunity to acquire some basic skills such as planning, designing, cutting, laminating, constructing, etc. . . . . GA U GD

10. All children should be involved in experiences which teach economic selection and purchase, group cooperation, safe work practices, and the worthwhile use of leisure time . . . . . GA U GD

11. Most elementary teachers are capable of conducting practical and basic skills activities . . . . . GA U GD

12. Construction activities involving three dimensional objects, projects, and experiments are beneficial in teaching the elementary curricula areas such as arithmetic, social studies, language arts, science, art, etc. . . . . GA U GD

13. Most construction activities, experiments, projects, etc., can be conducted in the self-contained classroom . . . . . GA U GD

14. Most elementary principals consider construction activities to be an important part of the curriculum . . . . . GA U GD

15. The cost and difficulty of acquiring materials often limits construction activities in the elementary classroom . . . . . GA U GD

16. At least a portion of the school curriculum should be devoted to identifying different jobs (career orientation) . . . . . GA U GD

17. Films, slides, charts, posters, and models which show what different people do are important items for elementary teachers . . . . . GA U GD

18. Field trips to places such as a dairy, farm, airport, or fire station should be a part of the class activities for elementary grades . . . . . GA U GD

19. Classroom visits by persons who do different jobs such as a doctor, policeman, grocer, carpenter, or lawyer should be included in elementary school activities . . . . . GA U GD

20. Most elementary teachers consider job identification or career orientation to be an important part of the curriculum . . . . . GA U GD

21. There is a need for more career orientation activities at the elementary level . . . . . GA U GD

22. Elementary students are too young to begin to recognize different kinds of jobs . . . . . GA U GD

23. A small group of persons such as secondary teachers of industrial arts, home economics, etc., serving as consultants to help answer questions concerning tools, materials, processes, etc., would be helpful to the elementary teacher in planning career and skills activities . . . . . GA U GD

24. Most elementary teachers would strive to become more knowledgeable about career orientation if the opportunity was available . . . . . GA U GD

25. Most school administrators are willing to make changes which will improve the curriculum even though an adjustment in routine may be necessary . . . . . GA U GD

26. Most principals would cooperate in scheduling a reasonable amount of time for secondary vocational-technical and practical arts teachers to meet with elementary staff members concerning curriculum improvement . . . . . GA U GD

If you desire to comment on any of the items, please use the reverse side of this sheet.

APPENDIX C

LETTER OF INTRODUCTION AND ENDORSEMENT

Votech OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FRANCIS TUTTLE, DIRECTOR • 1515 WEST SIXTH AVE., • STILLWATER, OKLAHOMA 74074 • A.C. (405) 377-2000

February 10, 1971

Mr. Ralph D. Rich
Superintendent of Schools
Hooker, Oklahoma 74945

Dear Mr. Rich:

The Oklahoma Research Advisory Committee for Vocational and Technical Education has identified career orientation at the elementary level as a priority goal for the 1970's. Your school system is one of the twenty-five Oklahoma school systems chosen at random for the purpose of collecting data relevant to any future development of activities in this important area.

Mr. Don Mitchell is on leave from Southwestern State College to conduct research in the College of Education at Oklahoma State University related to career orientation activities. Mr. Mitchell is working in conjunction with our Division of Research, Planning, and Evaluation.

Mr. Mitchell will telephone you within two weeks to discuss the details of data collection. The time involvement would be minimal (less than 20 minutes each for a select group of your teaching staff and approximately 30 minutes for administrators) and should take no classroom time.

Mr. Mitchell will provide you with a summary of findings relating to your school in particular and the entire project in general at the conclusion of this phase of the project in August of 1971. I thank you on behalf of the Vocational Research Advisory Committee for your cooperation.

Sincerely,

Francis Tuttle

Francis T. Tuttle, State Director
State Department of Vocational and
Technical Education

FTT/dm

APPENDIX D

ITEM RESPONSE AND FREQUENCY DISTRIBUTION FOR FORMS A, B, AND C

TABLE XI

ITEM RESPONSE AND FREQUENCY DISTRIBUTION
FOR FORMS A, B, AND C

Item Number			Group I Elementary Teachers					Group II Secondary Vocational-Technical and Practical Arts Teachers					Group III School Administrators				
			Response Level					Response Level					Response Level				
Form A	Form B	Form C	1	2	3	4	Total	1	2	3	4	Total	1	2	3	4	Total
1	1	1	1	170	6	82	259	1	78	2	19	100	1	48	0	27	76
2	2	2	1	69	20	169	259	1	19	9	71	100	0	12	1	63	76
3	3	3	4	71	18	166	259	0	30	5	65	100	1	22	2	51	76
6	4	6	1	232	20	6	259	0	95	1	4	100	0	70	1	5	76
7	5	7	0	256	2	1	259	0	99	1	0	100	0	75	1	0	76
8	6	8	0	239	11	9	259	0	95	2	3	100	0	71	0	5	76
9	7	9	1	227	18	13	259	0	88	7	5	100	0	67	4	5	76
10	8	10	1	253	2	3	259	0	100	0	0	100	1	75	0	0	76

Table XI (Continued

Item Number			Group I Elementary Teachers					Group II Secondary Vocational-Technical and Practical Arts Teachers					Group III School Administrators				
			Response Level					Response Level					Response Level				
Form A	Form B	Form C	1	2	3	4	Total	1	2	3	4	Total	1	2	3	4	Total
12	9	12	2	234	18	5	259	1	86	12	1	100	1	69	3	3	76
14	10	14	6	167	76	10	259	1	57	27	15	100	0	54	11	11	76
16	12	16	1	211	29	18	259	0	96	2	2	100	0	69	2	5	76
18	13	18	1	248	6	4	259	0	97	1	2	100	0	74	1	1	76
19	14	19	1	229	22	7	259	0	90	5	5	100	0	69	2	5	76
20	15	20	5	119	77	58	259	4	91	3	2	100	2	26	17	31	76
21	18	21	7	148	65	39	259	0	69	18	13	100	1	57	8	10	76
22	17	22	2	23	18	216	259	1	8	4	87	100	1	7	4	64	76
23	21	23	10	179	53	17	259	0	93	4	3	100	0	67	4	5	76
25	23	25	5	213	36	5	259	0	81	14	5	100	0	71	2	3	76
26	24	26	10	189	52	8	259	0	76	19	5	100	0	71	5	0	76
4	-	4	1	159	47	52	259	-	-	-	-	-	3	31	15	27	76

Table XI (Continued)

Item Number			Group I Elementary Teachers					Group II Secondary Vocational-Technical and Practical Arts Teachers					Group III School Administrators				
			Response Level					Response Level					Response Level				
Form A	Form B	Form C	1	2	3	4	Total	1	2	3	4	Total	1	2	3	4	Total
5	-	5	22	182	50	5	259	-	-	-	-	-	5	53	13	5	76
11	-	11	3	226	19	11	259	-	-	-	-	-	4	55	5	12	76
13	-	13	6	176	33	44	259	-	-	-	-	-	6	44	7	19	76
15	-	15	6	219	7	27	259	-	-	-	-	-	5	57	0	15	76
17	-	17	0	247	8	4	259	-	-	-	-	-	2	72	1	1	76
24	-	24	3	198	46	12	259	-	-	-	-	-	3	57	7	9	76
-	11	-	-	-	-	-	-	4	19	9	68	100	-	-	-	-	-
-	16	-	-	-	-	-	-	5	8	10	77	100	-	-	-	-	-
-	19	-	-	-	-	-	-	3	82	8	7	100	-	-	-	-	-
-	20	-	-	-	-	-	-	3	84	7	6	100	-	-	-	-	-
-	22	-	-	-	-	-	-	4	90	3	3	100	-	-	-	-	-

VITA

Donald Leland Mitchell

Candidate for the Degree of

Doctor of Education

Thesis: A STUDY OF ATTITUDES, INTERESTS, AND CURRENT PRACTICES RELATED TO CAREER ORIENTATION ACTIVITIES IN THE ELEMENTARY SCHOOLS IN OKLAHOMA

Major Field: Vocational-Technical and Career Education

Biographical:

Personal Data: Born near Mountain View, Oklahoma, July 16, 1939, the son of Donald and Lela Mae Mitchell.

Education: Graduated from Mountain View High School in May, 1957; received the Bachelor of Science in Education degree from Southwestern State College, Weatherford, Oklahoma, with a major in Industrial Arts and a minor in Social Studies in May, 1961; received the Master of Teaching degree from Southwestern State College with an area of emphasis of Industrial Arts Education in May, 1966; completed requirements for the Doctor of Education degree in July, 1971.

Professional Experience: High school Industrial Arts teacher at Anadarko, Oklahoma, 1961-64; high school Industrial Arts teacher at the Riverside Indian School, Bureau of Indian Affairs, Anadarko, Oklahoma, 1964-67; employed as an instructor in the Department of Industrial Arts and as a consultant for the Concho School Project at Southwestern State College, 1967-70; employed as a graduate assistant and coordinator of the EPDA 553 program at Oklahoma State University, Stillwater, Oklahoma, 1970-71; employed as a curriculum specialist for Industrial Arts and consultant for the Institute for Teachers of Indian Students by the State Department of Vocational and Technical Education, Stillwater, Oklahoma, 1971.