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Effects of a Career Education Program at the Upper Elementary Level

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EFFECTS OF A CAREER EDUCATION PROGRAM AT THE UPPER ELEMENTARY LEVEL

by

Christine Lowe

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For their love and understanding....

To my husband, Jim, and my children
Marti, Cheri, Dan, Julie and Mike

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CHAPTER I

INTRODUCTION

The Problem for Study

American Educators and the legislative branches of our government have been committed to the concept of career education since the beginning of the 20th century. Educational organizations such as the American Personnel and Guidance Association and the National Education Association have professed vocationally oriented goals since the early nineteen hundreds (Goldhammer, 1972). Federal legislation supporting vocational education and career development began with the Smith-Hughes Act of 1917 and has been sustained to the present through the Occupational and Adult Education Act of 1972. In spite of continued support by educators and lawmakers, vocational and career development programs have not adequately prepared the majority of youth in America for entrance into the labor market (U.S. Secretary of Education, Marland, 1972; Rhodes, 1969; Goldhammer, 1972).

For example, during 1970-71, 3.7 million young people abandoned formal education. Of these, 2.5 million lacked adequate skill to enter the labor force at a level commensurate with their abilities; many left with no marketable skills whatsoever. Some 850,000 dropped out of elementary and secondary school while 750,000 graduated from a high school general curricula which was neither vocationally oriented nor college preparatory. Another group of 850,000 left college without a degree or completion of an organized occupation program. These

persons represented an educational outlay of 23 billion dollars - about one-third of the amount spent on education in the country last year (Marland, 1972).

It was suggested that this failure can be attributed to the response of vocational education to the industrial revolution rather than to human needs. This trend was recognized by the 1968 Amendment to the Vocational Education Act of 1963.

Another factor was the persistence of elementary and junior high schools in teaching predominantly to only one curriculum - the college preparatory curriculum. This emphasis on the college preparatory curriculum resulted in 50 per cent of high school youth enrolling in college preparatory courses when only 17 per cent would actually achieve a bachelor's degree (Hoyt, 1972). The remaining 50 per cent of high school youth were trained by vocational programs or the general curriculum.

Comprehensive Career Education offered solutions to the problems of educating youth for the world of work. Career education differed from existing programs because it was directed toward the total school experience encompassing kindergarten through grade twelve. It was designed as a systematic, comprehensive program, according to the United States Office of Education. The Federal government had made available more than 86 million dollars through varied programs for research, development, and implementation.

The Center of Vocational and Technical Education, located at the Ohio State University, received a grant in 1971 from the National Center for Educational Research and Development to develop a school

based comprehensive career education model. The objective of the model was to develop and test a career education system (K-12) which would help students develop:

1) A comprehensive awareness of career options;

2) A concept of self which is in keeping with a work oriented society and a sense of satisfaction resulting from successful experience in these areas;

3) Personal characteristics, such as self-respect, initiative, and resourcefulness;

4) A realistic understanding of the relationships between the world of work and education which assist individuals in becoming contributing members of society; and

5) The ability to enter employment in a selected occupational area and/or to go on for further education (Goldhammer, 1972, p. 7).

The concept of the Ohio Career Education Model was designed to pervade the school setting making subject matter relevant to career development. The comprehensive programs, kindergarten through grade twelve, responded to the postulate that career development was a longitudinal process.

Theories of Super (1953) and Ginzberg (1951), among others, stress the developmental nature of career choice. In order to facilitate the vocational developmental process, a well formulated program of broad and general occupational information is mandatory in the formative years. Super, Hoppock and Ginzberg support the importance of occupational information in the developmental years. A career education program offers a foundation for later career choice that is essential.

Michigan's State Board of Education has established two specific objectives dealing with career development for the State. They are:

"1) To provide an introduction to the world of work to every student in the State of Michigan; and

2) To guarantee that no student entering high school in Michigan leaves without having the opportunity to gain an entry level salable skill regardless of his ultimate career objective (Michigan Department of Education, 1972, p. 2)."

To assist in developing a curriculum model for meeting the above objectives, the Calhoun Intermediate School District implemented a pilot program entitled: A Demonstration K-12 Career-Oriented Curriculum Model. The Calhoun Project was one of many comprehensive career education models being implemented throughout the country.

A significant feature of the Calhoun Career Education program was that it began at the Kindergarten level and encouraged children to explore their attitudes, aptitudes, and interests in relation to the wide range of occupational areas available. In accordance with the State Board of Education's goals, the Calhoun program provided an activity oriented curriculum relevant to the world of work as a developmental, sequential, and instructional, program.

Since career education was being enacted throughout the country and in Michigan, it became necessary to test the outcomes of the pilot programs in process. To date, this has not been reported in the literature. There are several questions that need to be answered:

1) Does a program of career education make a difference in occupational awareness and knowledge at the upper elementary level?

2) Does a program of career education diversify aspirations in upper elementary students?

3) Do male and female awarenesses and aspirations differ?

4) Are females learning a wide spectrum of occupational choices?

5) Does a career education program expand a child's aspiration level beyond parental occupational levels?

6) What are the differences between the factors of occupational aspiration, knowledge, and awareness among children in classrooms which have high implementation of a career education program and those classrooms which have low career education implementation?

A review of the professional literature led to the conclusion that the above questions were largely unanswered. Theoretical studies reported in the literature deal with many factors and variables of career choice and development. Research centered around self-concept (Super, 1963), socio-economic status (Ginzberg, 1951), parental influence (Roe, 1956; Hansen and Caulfield, 1967), intelligence, reading ability, and other variables.

Of the studies dealing with the implementation of career education programs and their impact on the children involved, few were directed at the upper elementary level. One study which dealt with aspiration levels of elementary students was the Detroit Developmental Career Guidance Project. Children in grades K-6 enrolled in the program, increased their aspiration levels above a comparable control group; however, the study focused only on lower socio-economic black children in an urban setting.

Although at a higher grade level, sexual differences were examined by Sherman (1967). Sherman selected junior high students for a short term career course, and concluded that females were less likely to seek career information than males. In contrast, on a first-choice occupational preference, females were more willing to predict goal achievement than their male counterparts. She also noted that girls in the study appeared to choose from a narrower range of career possibilities.

The studies cited above partially answered the questions posed for investigation, but dealt with varying portions of the population rather than focusing on upper elementary children or a broad sampling of that group.

Purpose of the study

The purpose of this investigation was to examine the effects of a career education program upon upper elementary students. The study directed itself to answer the following specific questions:

1) Does involvement in a career education program increase occupational knowledge, occupational awareness, and occupational aspirations at the upper elementary level?

2) Do males and females at the upper elementary level differ in occupational knowledge, occupational awareness, and occupational aspirations?

3) Are the differences in occupational knowledge, occupational awareness, and occupational aspirations of upper elementary students a result of high career education program implementation or low career education program implementation?

4) Does parental occupation affect career aspiration of male and female students enrolled in a career education program?

   a. Do children of parents in low prestige positions aspire to careers in higher prestige positions?

   b. Do children of parents in high prestige positions aspire to careers in high, middle, or low prestige rankings?

   c. Do children of parents in middle prestige positions aspire to careers in high, middle, or low prestige rankings?

Tersely, the variables of sex, parental occupational prestige level, and the degree of career education program implementation were investigated to determine their impact on occupational knowledge, occupational

awareness, and occupational aspirations of upper elementary students in the Calhoun County Career Education program.

Definition of terms

To facilitate understanding of the terms used throughout this study, the following definitions were accepted for purposes of the research.

Career education - A comprehensive educational program integrated into the curriculum of grades four through six to provide for occupational awareness and knowledge. It's methods were: introduction of careers through field trips, on-site investigation, resource visitors in the classroom, student role-playing, class discussion, and a consistent refocusing of academic subject matter and its relevance to the world of work. The main responsibility for program implementation was the teaching staff.

Occupational knowledge - The ability to make distinctions between skilled, non-skilled, and professional occupational classifications, educational requirements for varying positions, general skill for varying occupations, and general occupational information. Measurement of Occupational Knowledge was the score obtained on a twenty item questionnaire of the Career Development Battery, Occupational Knowledge Survey, Part III (Ploughman, 1972).

Occupational awareness - The ability to list a number of varying occupations in the form of job titles or occupational groups. Measurement of Occupational Awareness was the ten item response total on the

Career Development Battery, Occupational Awareness, Part II (Ploughman, 1972).

Occupational Aspiration - The differential level of desire or ambition to pursue a given occupational range. The level of aspiration was determined by the Occupational Aspiration Scale (Haller, 1963).

High Program Implementation - The degree (integrated - all day basis) to which the teacher followed the career education guidelines developed by the Calhoun Career-Oriented Curriculum Project. Measurement of implementation was a self-report questionnaire for teachers and a consultant judgment of teacher performance.

Low Program Implementation - The degree (partial or minimal) to which the teacher followed the career education quidelines developed by the Calhoun Career-Oriented Curriculum Project. Measurement of implementation was a self-report questionnaire for teachers and a consultant judgment of teacher performance.

Limitations of the study

There were inherent difficulties in conducting a field study in a public school setting. These difficulties were characterized by lack of control in teacher and classroom selection, and an inability to control teacher behavior. In part, personality and commitment of teachers was controlled by structuring the outcomes of the career education program into groups of high and low program implementation. The measure used for this delineation was limited by the honesty of responses on the self-report instrument and the personal bias of the consultant's judgment.

The in-service training received by teacher participants allowed for some structuring of classroom activities, but geographic limitations reduced options for career exploration experiences, within the county-wide program. This created some quantitative differences in implementation of the program.

In addition, the experimental nature of the Career Development Battery necessitated validity and reliability ratings for the instrument used to establish two of the dependent variables in the study.

Overview

The area of study, purpose, definition of terms, and study limitations were included in Chapter I. In Chapter II, pertinent professional literature was reviewed. In Chapter III, the design, sample, and analyses are detailed. Contained in Chapter IV are restatement of hypotheses, interpretation of results, and statements of significance. In Chapter V, summary, conclusion, discussion, and implications for future research are included.

CHAPTER II

Review of Selected Related Literature

Career education, as presented in the professional literature, is the topic of Chapter II. Definition, theoretical and historical antecedents, and studies dealing with occupational aspiration, sex differences, and parental influence on career development are included.

Definition

Little national consensus existed among leaders in career education about the definition of the term. The definition which had received the greatest national publicity was used in the United States Office of Education publication, Career Education: A Handbook for Implementation.

> Career Education is the total effort of public education and the community aimed at helping all individuals become familiar with the values of a work oriented society, to integrate those values in their personal value structure, and to implement those values in their lives in such a way that work becomes possible, meaningful, and satisfying to each individual (Hoyt, 1973, p. 23).

Theory and history

Career education, as conceived by the United States Office of Education, was a new concept on the American Educational Scene. However, it had historical antecedents in career development theory and vocational education.

Theory

Vocational development theorists like Super and Ginzberg, articulated a number of assumptions upon which career education is based:

Theory	Implications for Career Education
1. Career development is an ongoing process which extends from infancy through young adulthood.	1. Thus, programs in career development, should begin in the early elementary grades.
2. Career development can be described in terms of learning tasks, frequently culturally defined, which are important to each stage of development.	2. Because readiness differs for each individual, differential experiences should be available at any given education level.
3. Career development is tied to physical and personality development.	3. Consequently, the attitudes, knowledge and skills which make up career development should be available throughout the child's school life.

Super speaks directly to the schools in his propositions seven and nine concerning problems of vocational development. He stated that career education programs can assist youth in career development by providing situations and information for reality testing.

Super, included the following in that discussion:

Proposition 6: The nature of the career pattern (that is, the occupational level attained and the sequence, frequency, and duration of trial and stable jobs) is determined by the individual's parental socio-economic level, mental ability, and personality characteristics, and by the opportunities to which he is exposed.

Proposition 7: Development through the life stages can be guided, partly by facilitating the process of maturation of abilities and maturation of abilities and interests

and partly by aiding in reality testing and in the development of the self-concept.

Proposition 9: The process of compromise between individual and social factors, between self-concept and reality, is one of role-playing, whether the role is played in the fantasy, in the counseling interview, or in real life activities such as school classes, clubs, part-time work, and entry jobs (Super, 1953; p. 128).

Ginzberg and associates included the following basic elements in their theory of vocational development: 1) Occupational choice is a developmental process: it is not a single decision, but a series of decisions made over a period of years. 2) The developmental process is largely irreversible. Each decision made during the process is dependent on the chronological age and development of the individual. Time cannot be relived; basic education and other exposures can only be experienced once. 3) The primary finding that occupational choice is a process leads to a further generalization: the process ends in a compromise. Throughout the years of his development the individual has been trying to learn enough about his interests, capacities, and values and about the opportunities and limitations in the real world, to make an occupational choice which will yield maximum satisfaction (Ginzberg, et. al, 1951).

A systematic exposure to career education would enhance career development throughout the three points raised by Ginzberg. Occupational choice is developmental, so should career information be developmental. If the process is irreversible, the maximum amount of information should be available at all levels to enhance decision-making and satisfactory compromise.

Other theorists did not speak directly to a developmental theory

of occupational choice which can be influenced by a school program. Roe (1956) based her theoretical assumptions on: 1) early childhood experiences, 2) genetic influence, and 3) Maslow's needs hierarchy. Holland's theory of vocational selection represented extensions of personality into a career choice which can implement that behavior typified by the personality (Osipow, 1968). Therefore, they were not included in the theoretical delineation of career education since their theories are not as relevant to a school based model.

Although Hoppock (1957) has formulated a theory based on personality needs, he emphasized the importance of the use of occupational information. The more occupational information available, the greater the facilitation of needs satisfaction in occupational choice.

History

The history of vocational education parallels the documented history of the industrial revolution. The priority for vocational education was principally based on manpower needs. The Morrill Act of 1862 laid the foundation for federal support of vocational education, when America was primarily an agricultural community. As industrialization began and progressed, so did federal legislation supporting trades and industrial occupations, distributive education, health occupations, home economics, office education, and technical education. Growing industrialization seemed to demand formal provision and enhancement of at least a few specialized skills.

World War II had an impact on vocational education. With an increased need for military and civilian manpower, the nation

scrutinized the vocational education programs in the schools. Following World War II, the George-Borden Act of 1946 added funding support for vocational guidance, the concepts of apprenticeship programs, and training and work experience as part of the vocational education at the high school level (Herr, 1972).

In the 1960's, vocational education came under attack. The Advisory Council on Vocational Education was appointed by President Kennedy. The report of this advisory expressed these concerns: "1) vocational education lacked sensitivity to changes in the labor market; and 2) it lacked sensitivity to the needs of various segments of the population (U.S. Department of Health, Education, and Welfare, 1963, pp. 206-214)." Most of the Advisory Council on Vocational Education's specific recommendations for change were incorporated into the Vocational Education Act of 1963 (U.S. Congress, 1963).

In 1967, a second panel of consultants was created to examine the impact of the Act. The report of the 1967 Advisory Council included a series of recommendations directed toward creating what was described as "a unified system of vocational education". The substance of these recommendations was reflected in both the Vocational Education Act of 1968 (U.S. Congress, 1969) and in much of the current discussion of the substance of career education (Herr, 1972, p. 25).

Current leadership for the career education movement came from Sidney Marland, Assistant Secretary for Education. In 1971, as Commissioner of Education, Dr. Marland assigned top priority to the career education concept. As a result, the Occupational and Adult Education Act of 1972 was passed, emphasizing the principles of career

education. Approximately 42.1 million dollars in federal funds were allocated to research and development in fiscal 1972; all 50 states and the District of Columbia were funded for career education (Marland, 1972).

Although the concept of career education enjoyed federal leadership and support, other forces both outside and within education have combined to create the demand for career education. Within the broader society, several conditions created a demand for career education: high unemployment rates, increasing welfare roles, the failure of manpower programs to reduce unskilled job seekers, and a demand to find and reward new kinds of work values and work motivations in a post-industrial society. Within education, those urging a career education emphasis pointed to such facts as: high dropout rates, the inability of college graduates to find employment, the continuing presence of literally millions of students with no clear-cut vocational or career choice, the high degree of student unrest and disenchantment at both the secondary and post-secondary school levels, and the relative slowness with which occupational education programs are being initiated and accepted (Hoyt, 1973).

Michigan history

Historically, the State of Michigan has responded accordingly to federal legislation and financing for vocational education. In compliance with the Vocational Education Amendment of 1968, the State Department of Education prepared a State Plan for Vocational Education (Michigan Department of Education, 1972).

The State Board of Education approved three primary objectives for Vocational and Career Education. They were: 1) to provide an introduction to the world of work for every student; 2) to guarantee that no student entering high school in Michigan leaves school without the opportunity to obtain a salable skill regardless of his ultimate career objectives; and 3) to provide programs of adult continuing vocational-technical education for all individuals.

To assist in accomplishing these objectives, Career Planning Districts were formulated. In addition, five pilot programs were funded in 1971 to demonstrate the implementation of career education. The Calhoun County project was one of these five pilot projects. In the Calhoun Career-Oriented Curriculum Project, a sequential horizontal and vertical program of career education was developed.

Selected Related Professional Literature

Career education had been mandated. As a result, there were many pilot projects underway which were designed to implement and evaluate career education models. However, at present, there are no data based studies in the literature which deal specifically with career education models.

Vocational career development programs

Several data based studies were available from vocational development programs. One such study was the Pontiac, Michigan, Vocational Career Development Program.

Unpublished data from the Pontiac Vocational Career Development Program was available but, the evaluation report of the first year's operation left much to be desired (Ploughman, 1972). Because of forced integration, and several factors resulting from the court order, the career education model was not implemented until the second semester of the 1971-72 school year. For the four months of implementation, the following results were obtained for sixth graders: As a measure of occupational awareness, pupils were asked to list (in ten minutes) all the jobs they could recall. The mean numbers of jobs listed were: Pre: 43.45, Post: 33.01. This significant drop in number was not anticipated. The researcher spoke of two possible intervening variables; time, and the difficulty of maintaining pupil attention towards the task on a day near the end of the term. On the second portion of the instrument, Occupational Knowledge, which was a twenty item multiple choice questionnaire on general occupational information, the mean test scores were: Pre: 11.07, Post: 10.69. Although not a severe drop occurred, higher scores were anticipated following exposure to related career-oriented activities (Ploughman, 1972).

The results of the Pontiac Career Development Program countered the directional hypotheses in the present research. It was believed that many negative factors were operating in the Pontiac Schools. Stability within the school systems and extended implementation within the Calhoun Intermediate Career-Oriented Curriculum Project should provide an interesting contrast to the Pontiac data.

The Detroit, Michigan Career Guidance Model (Leonard, 1968) partially paralleled a career education model. The activities of this

program involved individual and group counseling, dissemination of information through classes and other school activities, field trips to business and industry, role-model speakers in the school, informing and advising parents, coordination of school and community activities, and consultation services for students, school staff, parents, community, and industry. Results of the Developmental Career Guidance in Action program indicated that the level of aspiration of the experimental group increased significantly more than the control group, as did the experimental groups' growth in occupational knowledge and planning.

Although some of the activities of the Leonard study paralleled career education models, the implementation differed. The Developmental Career Guidance program was guidance based. It was designed for urban, disadvantaged youth, and consequently the generalizability of the results are limited to that portion of the population. One of the main goals of the Leonard program was affecting self-concept. Occupational knowledge and awareness were secondary goals and male-female differences were not investigated.

The similarities in program activities between the Leonard study and the career education program being investigated gave direction to the hypotheses of this study. Sex distinctions, use of rural and urban youth, and teacher implementation of the program were areas of investigation in this study which extend beyond Leonard's work.

Sexual differences

Short term career guidance programs were reported in three studies (Marusic, 1969; Sherman, 1967; and Hamilton, 1969). Marusic and

Hamilton investigated guidance methods for occupational information on select teaching methodologies. Sherman implemented a career exploration course in three Ohio junior high schools. Students learned about; the world of economics, the nature of work, decision-making and planning, the manpower market, occupations and employment trends, skills and economic value of education, and technology change. The program was designed for "C-lane" vocationally oriented students. Teachers implemented the career exploration program and sex differences were noted, but study limitations prevent conclusions concerning the curriculum materials used. In the discussion of sexual differences, Sherman's data indicated that boys tended to have less positive attitudes than girls toward future work (as measured by evaluative scores on the semantic differential). During the first eight weeks of the school year, boys decreased slightly more than girls in their intentions to put forth effort toward realizing their current major career goal (measured by multiple choice item on written interview). Girls tended to choose from a narrow range of career possibilities.

In the present study the career education model was tested on a different age group (4, 5, 6) grades than in the Sherman study. This study occurred after current awarenesses of the effects of sexism within the curriculum. Sherman's study took place before these phenomenon.

Parental influence on career choice

The question of parental occupational levels and their impact on the child's aspiration level is well researched. Ginzberg, in

formulating his theory, emphasized the socio-economic factors relating to occupational choice.

Gribbons and Lohnes (1968) in a longitudinal study, sought to find the answer to what effects the fathers' occupations had in shaping occupational aspiration. Gribbons and Lohnes concluded that there was a definite downward trend in occupational aspiration for the total group over the seven years, with a sharper decrease noted for girls (50 per cent) than for boys (26 per cent). Initially, at the eighth grade level, the aspiration levels were high for both males and females regardless of the father's occupational level.

In a sample of 121 sixth graders, Creason and Schilson (1970) investigated the nature of vocational preference of this age group and what correlation existed between parental occupation and the child's vocational preference. A comparison of the father's occupational levels with the preferences of their children revealed that the occupational levels chosen by the children were higher than their father's occupational levels. Seventy-four of the 121 pupils chose occupations higher on the Roe Scale Classification than their father's occupational level. The correlation between the occupational level of fathers and the preference level of their children was .013 which is not significant. There was no intervening treatment effect in the Creason-Schilson Study.

The present research investigated the impact of a career education program on the aspiration level of students at the upper elementary level. It was assumed that a career education program would temper aspiration levels.

Summary

Career education is a concept with historical antecedents in career development theory and vocational education. Super and Ginzberg, among others, maintained that career choice was a developmental process, hence the services of career education should exist throughout schooling. Pragmatically, vocational education has evolved from a response to the industrial revolution and has become part of a unified system of career education.

No outcomes of career education programs were reported in the literature. At the present time, guidance-based career development programs serve principally to formulate hypotheses. While support for the contention that occupational aspiration is effected by a career guidance program was gained from Leonard's research, limitations remain regarding interpretations of the variables studies.

Sexual differences resulting from a career exploration curriculum were discussed by Sherman who concluded that males, at the junior high level, were not as motivated toward career commitment as their female counterpart. Gribbons and Lohnes, in a longitudinal study, indicate that this trend changes. They, also, discuss the effects of parental occupation or socio-economic level as it effects occupational aspirations and concluded that aspiration levels were not fixed at the eighth grade level but socio-economic class was influential in later years.

From a review of the literature, it is evident that relevant research had not been conducted at the upper elementary level. Many

questions remain concerning the occupational development of fourth, fifth, and sixth graders.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

The study was designed to evaluate differences in occupational awareness, occupational knowledge, and occupational aspirations of upper elementary students who had experienced a career education program. In Chapter Three, the sample, instrumentation, design, research hypotheses, procedure, and problems of methodology are presented.

The Sample

The sample was part of a population of 1,605 second through ninth grade students in the Calhoun Intermediate School District of Michigan who had been involved in a career education program during the school year 1972-73.

From a population of 553 upper elementary students enrolled in the fourth, fifth, and sixth grades, a sample of 200 was selected for the study. The original population was distributed in 21 fourth through sixth grades in 11 schools within the Calhoun Intermediate School District service area. Four of the 21 available classrooms were eliminated from the sample. Three had incomplete testing data and one was a special education class and thus was atypical of the sample.

Of the 17 remaining classrooms, ten were selected on the basis of teacher implementation of the prescribed career education program. Selection of the five classes high in program implementation and five classes low in program implementation were based on rankings from two

sources: 1) a quantified self-report teacher questionnaire; and 2) a rank ordering of teacher implementation by the project coordinator for elementary grades. Both high and low categories had one fourth grade class, two fifth grade classes and two sixth grade classes. The classrooms utilized in the study (see Appendix A) were from urban (2), suburban (4), and rural (4) settings (Michigan Education Directory, 1971-72).

The sample is considered representative of students in the Calhoun Intermediate School District. There is no reason to believe the dimensions described above are not representative of similar Intermediate School Districts with similar geographic configurations.

Instrumentation

Two instruments were used to obtain data for analysis. The Career Development Battery (CDB), Upper Elementary, Form 2 was administered to the subjects for pre and post-test purposes. In addition, the Occupational Aspiration Scale (OAS) was administered at the post-testing period.

As indicated previously, two instruments were used to determine the high and low career education implementation groups; a self-report teacher questionnaire, and a rank ordering of teacher implementation by the project coordinator for elementary grades.

Career Development Battery

The Career Development Battery (CDB), an experimental instrument developed by Theodore Ploughman, Ph.D. (1972), was designed for

evaluating career education programs. It was selected as the instrument for program evaluation by the Calhoun Intermediate Career Program evaluation consultant.

The CDB had two sections. Section one, An Occupational Knowledge Survey, included the subject's choice of an occupation and his/her awareness of and knowledge of occupations. Section two, the Occupational Interest Survey, included a measured interest response to 15 occupational areas and a measure of perceived ability to perform the work required in each of the 15 occupational areas.

There were forms available for lower elementary (grades 2, 3), upper elementary (grades 4, 5, 6), and junior-senior high school. The instrument was hand scored and yielded scores for each area.

For purposes of this research, two portions of the CDB were used: the occupational awareness and occupational knowledge components of the occupational knowledge survey for upper elementary students (grades 4, 5, and 6). Each of these sections yielded a single score. The occupational awareness section required a list of ten occupations studied as part of the curriculum. The range of responses to this portion was 0-10. The score was tabulated and recorded for each students and was an indication of the students' occupational awareness. The occupational knowledge section was a twenty-question multiple-choice measure which tested general occupational information. This section contained items related to job levels (from unskilled to professional), required education for the jobs, and future opportunities for employment. The range of scores was 0-20. Each subject's test for occupational knowledge was hand-scored and yielded an indication of their occupational knowledge.

The Career Development Battery has content validity based on the Michigan World of Work Handbook (1972). On site evaluation by teachers supported the content validity contention. Reliability had not been established for the CDB because of the experimental status of the instrument. A test-retest reliability co-efficient was established for purposes of this study. Test-retest on a fifth grade classroom with an n=27 yielded a reliability co-efficient of .89.

The Occupational Aspiration Scale

The Occupational Aspiration Scale (OAS) measured one aspect of the occupational selection process, the level of occupational aspiration. The OAS was developed by Haller and Miller (1963), and was an eight item multiple-choice instrument. It included items permitting realistic and idealistic expressions of the level of aspiration. The alternatives for each item consisted of ten occupational titles drawn from among the ninety occupations ranked by the National Opinion Research Center (NORC) study of the prestige of occupations. Each question had a possible score of 0 (lowest prestige position) to 9 (highest prestige position). The split-half reliability is .80, and the test-retest reliability was .77. The concurrent validity co-efficient was .62 (Haller and Miller, 1963).

The instrument had most often been used at the high school level, but Haller (1963) reports it had been used as low as the fifth grade level. To determine the reading level of the OAS, the Dale and Chall formula for predicting readability was applied to the instrument (Dale and Chall, 1949). The formula yielded a reading level of third grade

and above, and, thus, was deemed appropriate for use at the fourth through sixth grade levels.

Procedures

The Calhoun Intermediate Career Education Program was selected by the investigator as the site for testing assumptions concerning a career education program. Calhoun County is located in Southwestern Michigan. Within the county, the largest city is Battle Creek, Michigan, with it's primary industry of cereal manufacturing. There are several residential communities around Battle Creek; e.g., Pennfield, Lakeview, and Springfield, the remainder of the County is primarily rural. The Calhoun Intermediate School District serves 16 school systems with a total enrollment of 37,001. Battle Creek Public Schools have the largest enrollment of 9,970, and Ellis Corners, the smallest enrollment of 14 (Calhoun Intermediate School District, 1972-73).

Of the 16 school systems in the Calhoun Intermediate School District, 11 systems were represented in the career education program. Funding for the program was secured in 1971. Selection of teacher participants was made by the school system and the Career-Oriented Curriculum Project staff in June of 1972.

During the summer of 1972, 79 teachers attended a pre-service workshop. The primary objective of the pre-service workshop was to prepare a corps of teachers equipped with the knowledge and skill necessary to implement the selected career education model. An additional objective of the summer pre-service workshop was the development of instructional units which could be implemented through the

school year. A range of 170 instructional units were prepared for use in the classrooms. The units varied in length from one week's duration to an entire marking period. The units tended to encompass skills of most or all of the content of the traditional curriculum as well as an infusion of career-oriented materials. The teachers continued to develop units of study throughout the school year.

In-service meetings continued on a bi-monthly basis throughout the school year for teacher participants. The project staff visited classrooms in a supportive-advisory capacity to help teachers implement the career education concept.

Even though the experiences of the teachers were structured, it was recognized that all teachers cannot equally implement career education in the classrooms. Therefore, it was necessary to distinguish between high and low implementing teachers. Distinctions between high concept-implementing teachers and low concept-implementing teachers were assessed through a self-report teacher questionnaire and a rank ordering of the teacher participants by the project co-ordinator for elementary grades. In April, 1973, the teachers responded to a self-report questionnaire (Appendix B). The questionnaire was weighted and hand-scored with resulting lower limits of 44 and upper limits of 81.

The project co-ordinator for elementary grades was consulted for judgment on teacher implementation. These judgments resulted in a rank ordering of the seventeen teachers at the upper elementary grades. Judgment was based on the degree to which teachers followed all the project objectives.

With a modification for grade level representativeness, the top five were high implementors and the lower five were low implementors. The teacher's scores on the self-report questionnaire were then ranked. A correlation of the two indices of implementation were correlated with a Spearman-Rho co-efficient of .71. Consequently, the designation of high and low categorization was deemed appropriate.

The independent variables of sex and parental occupation were illicited on the Career Development Battery form. Parental occupations were then compared to the National Opinion Research Center (NORC) study listing of occupations to yield high, medium, and low prestige rankings for the parental occupations. In cases where judgment was not clear, no comparisons were made. Unclear designation occurred in 22 cases because of insufficiency in the NORC occupations list or the lack of clarity in the subject's listing of parental occupation. The testing data in those 22 cases was discarded.

The Career Development Battery was administered in September and May of the 1972-73 school year yielding pre and post-test scores. The Occupational Aspiration Scale was administered in May, 1973; the project teachers administered all instruments. A procedures sheet was developed for teachers to assure that testing procedures were the same in all classrooms.

Pre-test, post-test data attrition and unspecified parental occupation resulted in unequal subclasses. These omissions necessitated a special application of the three-way analysis of variance program for data analysis. Assistance for this problem came from Dr. Michael Stoline, Western Michigan University, computer center, and a computer

program designed for a three-way analysis of variance with unbalanced cells.

Design and Statistical Analysis

The design used in this study was a one-group pre-test, post-test design which was used for descriptive purposes as well as for experimental purposes. Campbell and Stanley (1966) termed this design a pre-experimental design.

A control group was considered for comparative reasons and to strengthen the experimental design. However the Career Education Program had had exposure throughout the Calhoun Intermediate School District. A control group outside of that County would introduce confounding variables rather than enhance the study.

A three-way analysis of variance for unbalanced cases was used to check for interaction among the three independent variables of sex, program implementation, and parental occupational prestige. The interaction test was a test for all three kinds of double interaction; implementation by sex, implementation by parental prestige factors, and sex by parental prestige factors. There was one test for triple interaction; implementation by sex by parental prestige level, yielding a total of seven degrees of freedom for the total interaction. Statistical analysis included t-tests (Edwards, 1969) for the total group comparisons.

The statistical intent was to determine whether the mean responses of each group and sub-group differed along the dependent variables of occupational knowledge, occupational awareness, and occupational

aspirations. Pre-test and post-test differences were compared for career education program effect on occupational awareness and knowledge. The occupational aspiration of the subjects were compared along the factors of implementation, sex, and parental occupational prestige.

For the testable hypotheses, the traditional probability of .05 was selected as the level of confidence.

Research Hypotheses

To evaluate the effects of an upper elementary career education experimental program implemented in the Calhoun Intermediate School District, the following research hypotheses were developed:

Male and female differences

Ha:1: Upper elementary males differ from upper elementary females in changes of occupational awareness as a result of involvement in a career education program.

Ha:2: Upper elementary males differ from upper elementary females in changes of occupational knowledge as a result of involvement in a career education program.

Ha:3: Upper elementary males differ from upper elementary females in occupational aspiration following a career education program.

High and low program implementation

Ha:4: Upper elementary students attending classes in high career education program implementation differ in changes

of occupational awareness from upper elementary students attending classes in low career education program implementation.

Ha:5: Upper elementary students attending classes in high career education program implementation differ in changes of occupational knowledge from upper elementary students attending classes low in career education program implementation.

Ha:6: Upper elementary students attending classes in high career education program implementation differ in occupational aspiration from upper elementary students attending classes low in career education program implementation.

Parental occupational prestige

Ha:7: Pre-test to post-test changes differ on occupational awareness among upper elementary children whose parents have high prestige positions, children whose parents have medium prestige positions, and children whose parents have low prestige positions as a result of a career education program.

Ha:8: Pre-test to post-test changes differ on occupational knowledge among upper elementary children whose parents have high prestige positions, children whose parents have medium prestige positions, and children whose parents

have low prestige positions as a result of a career education program.

Ha:9: Following a career education program there is a difference in occupational aspirations among upper elementary children whose parents have high prestige positions, children whose parents have medium prestige positions, and children whose parents have low prestige positions.

Occupational knowledge and awareness

Ha:10: Career education program involvement increases occupational awareness at the upper elementary level.

Ha:11: Career education program involvement increases occupational knowledge at the upper elementary level.

Problems

One area presented a problem in the execution of the study. The original proposal included the independent variable of race; however, selection procedures and data attrition reduced the number of minority students in the sample group to a non-proportionate amount of the sample. Few assumptions could be validated by the small sample; consequently this variable was excluded from the study.

Summary

A sample of 200 upper elementary students was selected from a population of 1,605 students in the Calhoun Intermediate School District's career education program. The ten classrooms used in the

study were selected on the basis of teacher implementation of the career education program. Subject's occupational knowledge, and occupational awareness were measured on the Career Development Battery in September, and May, of the 1972-73 school year. Occupational aspiration was measured in May, 1973, using the Occupational Aspiration Scale.

Three independent variables were examined for their effects on student outcome in a career education program: 1) sexual differences; 2) teacher implementation of concept differences; and 3) parental occupation prestige differences.

A three-way analysis of variance was used to analyze the data. With no interaction, a one-way analysis of variance was used to report the data. A total group comparison of gain in occupational awareness and knowledge was computed using a t-test.

CHAPTER IV

RESULTS AND ANALYSIS OF RESEARCH FINDINGS

Introduction

In this chapter, the results of data collection and data analysis, are presented. The format is: hypothesis statement, data, and interpretation.

The Problem

The purpose of this investigation was to examine the effects of a career education program on upper elementary students. The variable of sex, parental occupational prestige level, and the degree of career education program implementation were investigated as to their impact on the occupational awareness, occupational knowledge, and occupational aspirations of upper elementary students in the Calhoun County career education program.

Research Findings

The research findings were reported in the following manner: the research hypotheses were stated, the data was presented in table form for each hypothesis, and findings were interpreted.

Hypotheses statements were grouped for relevance to the independent variables of sex, implementation, and parental occupational prestige. A total group comparison of overall gain in occupational awareness and knowledge was included.

Tests for interaction of the three dependent variables yielded no significant interaction factor. Bancroft (1968) in his analysis of variance for unbalanced cells states that when interaction is not present, the method of fitting constants may be used to determine main effects. Consequently, the data was reported as a one-way analysis of variance.

Male-female differences

The following three research hypotheses related to the independent variable of sex, one of the major variables under consideration.

The first hypotheses was: Upper elementary males differ from upper elementary females in changes of occupational awareness as a result of involvement in a career education program.

Table 1

Summary Data and Analysis of Variance for Male-Female Differences on Occupational Awareness

	Male	Female
n	111	89
pre-mean	5.01	5.53
post-mean	7.92	8.89
mean difference	2.91	3.36

Source	df	ss	ms	F	Prob.
Main Effect - Sex (Eliminating Implementation and Prestige)	1	1.34	1.34	.08	.77n.s.
Other Main Effects	3	299.17			
Within	188	2,969.26	15.79		
Interaction	7	89.81	12.83	.81	.58n.s.
Total	199	3,359.58			

n.s. = not significant

In Table 1, the F value for the main effect of sex was .08 and the interaction F value was .81; therefore, the null hypothesis was not rejected. Significant differences between males and females on occupational awareness were not present in the sample.

The second hypotheses was: Upper elementary males differ from upper elementary females in changes of occupational knowledge as a result of involvement in a career education program.

Table 2

Summary Data and Analysis of Variance Data for Male-Female Mean Differences on Occupational Knowledge

	Male	Female
n	111	89
pre-mean	9.32	9.12
post-mean	11.30	11.90
mean difference	1.98	2.78

Source	df	ss	ms	F	Prob.
Main Effect - Sex (Minus Implementation and Parental Occupational Prestige)	1	29.71	29.71	3.28	.07n.s.
Other Main Effects	3	123.72			
Within	188	1,700.28	9.04		
Interaction	7	54.51	7.79	.86	.54n.s.
Total	199	1,908.22			

n.s. = not significant

As evidenced in Table 2, the F value of 3.28 for main effects, sex and the interaction value of .54, was not within the predetermined level

of confidence; therefore, the null hypothesis was not rejected. There were no significant differences between males and females on the measure of occupational knowledge.

The third hypotheses was: Upper elementary males differ from upper elementary females in occupational aspiration following a career education program.

Table 3

Summary Data and Analysis of Variance Data for Male-Female Differences on Occupational Aspiration

		Male		Female	
n		111		89	
mean		34.43		31.64	
Source	df	ss	ms	F	Prob.
Main Effect - Sex (Eliminating Implementing and Parental Occupational Prestige)	1	161.75	161.75	1.21	.27n.s.
Other Main Effects	3	1,292.51			
Within	188	25,141,71	133.73		
Interaction	7	1,278.81	182.69	1.37	.22n.s.
Total	199	27,874.78			

n.s. = not significant

In Table 3, the F value for main effects, sex, was 1.21 and did not meet the predetermined level of confidence; consequently, the null hypothesis was not rejected. No significant difference was evident between males and females on occupational aspirations.

High and low implementation differences

The following three hypotheses and data analysis evaluate the independent variable of high and low implementation of the career education program.

The fourth hypotheses was: Upper elementary students attending classes in high career education implementation differ in changes in occupational awareness from upper elementary students attending classes in low career education implementation.

Table 4

Summary Data and Analysis of Variance Data for Implementation Differences on Occupational Awareness

	High Implementation	Low Implementation
n	92	108
pre-mean	6.09	4.52
post-mean	7.96	8.69
mean difference	1.87	4.17

Source	df	ss	ms	F	Prob.
Main Effect - Implementation (Eliminating Sex and Parental Occupational Prestige)	1	260.29	260.29	16.48	.000*
Other Main Effects	3	40.23			
Within	188	2,969.26	15.79		
Interaction	7	89.81	12.81	.81	.58n.s.
Total	199	3,359.58			

*significant at the .001 level of confidence
n.s. = not significant

As evidenced in Table 4, the F value of 16.48 exceeds the predetermined level of confidence; therefore, the null hypothesis is rejected. Statistically significant differences existed between high and low implementation groups on occupational awareness. Low implementation groups gained greater occupational awareness.

The fifth hypotheses was: Upper elementary students attending classes in high career education implementation differ in changes of occupational knowledge from upper elementary students attending classes in low career education program implementation.

Table 5

Summary Data and Analysis of Variance Data for Implementation Differences on Occupational Knowledge

		High Implementation			Low Implementation
n		92			108
pre-mean		9.28			9.19
post-mean		11.08			11.97
mean difference		1.80			2.78
Source	df	ss	ms	F	Prob.
Main Effect - Implementation (Eliminating Sex and Parental Occupational Prestige)	1	32.67	32.67	3.61	.05*
Other Main Effects	3	120.76			
Within	188	1,700.28	9.04		
Interaction	7	54.51	7.74	.86	.54n.s.
Total	199	1,908.22			

*significant at the .05 level of confidence
n.s. = not significant

In Table 5, the F value of 3.61 is within the predetermined level of confidence; consequently, the null hypothesis is rejected. There were statistically significant differences between the high and low implementation groups on occupational knowledge, with the low implementing group making greater gains than the high implementing group.

The sixth hypotheses was: Upper elementary students attending classes in high career education program implementation differ in occupational aspirations from upper elementary students attending classes low in career education program implementation.

Table 6

Summary Data and Analysis of Variance Data for Implementation Differences on Occupational Aspirations

		High Implementation			Low Implementation
n		92			108
mean		34.32			32.23
Source	df	ss	ms	F	Prob.
Main Effect - Implementation (Eliminating Sex and Parental Occupational Prestige)	1	298.93	209.93	2.24	.13n.s.
Other Main Effects	3	1,155.33			
Within	188	25,141.71	133.73		
Interaction	7	1,278.81	182.69	1.37	.22n.s.
Total	199	27,874.78			

n.s. = not significant

As evidenced in Table 6, the F value of 2.24 is not within the

predetermined level of confidence; therefore, the null hypothesis is not rejected. There were no differences between high and low implementation groups on occupational aspirations.

Parental occupational prestige differences

The last three hypotheses and data analyses dealt with the independent variable of parental occupational prestige.

The seventh hypotheses was: Pre-test to post-test changes differ on occupational awareness among upper elementary children whose parents have high prestige positions, children whose parents have medium prestige positions, and children whose parents have low prestige positions as a result of a career education program.

Table 7

Summary Data and Analysis of Variance Data for Parental Occupational Prestige on Occupational Awareness

	High Prestige	Medium Prestige	Low Prestige
n	31	78	91
pre-mean	4.68	5.90	4.87
post-mean	8.42	8.53	8.18
mean difference	3.74	2.63	3.31

Source	df	ss	ms	F	Prob.
Parental Occupational Prestige (Eliminating Sex and Implementation)	2	33.51	16.76	1.06	.35n.s.
Other Main Effects	2	267.00			
Within	188	2,969.26	15.79		
Interaction	7	89.81	12.83	.81	.58n.s.
Total	199	3,359.58			

n.s. = not significant

In Table 7, the F value for main effects was .06 and did not meet the predetermined level of confidence; therefore, the null hypothesis was not rejected. No differences were found between the three prestige groupings on occupational awareness.

The eighth hypotheses was: Pre-test to post-test changes differ on occupational knowledge among upper elementary children whose parents have high prestige positions, children whose parents have medium prestige positions, and children whose parents have low prestige positions as a result of a career education program.

Table 8

Summary Data and Analysis of Variance Data for Parental Occupational Prestige on Occupational Knowledge

	High Prestige	Medium Prestige	Low Prestige
n	31	78	91
pre-mean	9.61	9.86	8.57
post-mean	13.45	11.79	10.73
mean difference	3.84	1.93	2.16

Source	df	ss	ms	F	Prob.
Parental Occupational Prestige (Eliminating Sex and Implementation)	2	78.89	39.44	4.36	.01*
Other Main Effects	2	74.54			
Within	188	1,700.28	9.04		
Interaction	7	54.51	7.79	.86	.54n.s.
Total	199	1,908.22			

*significant at the .01 level of confidence
n.s. = not significant

As evidenced in Table 8, the F value for main effect was 4.36 which exceeds the predetermined level of confidence of .05; therefore, the

null hypothesis was rejected. Statistically significant differences existed between the three prestige levels on occupational knowledge, with the high prestige group making the greatest gains, followed by the low prestige group. The medium prestige group made the least amount of gain in occupational knowledge.

The ninth hypothesis was: Following a career education program there is a difference in occupational aspiration among children whose parents have high prestige positions, children whose parents have medium prestige positions, and children whose parents have low prestige positions.

Table 9

Summary Data and Analysis of Variance Data for Parental Occupational Prestige on Occupational Aspirations

	High Prestige	Medium Prestige	Low Prestige
n	31	78	91
mean	36.68	34.42	30.96

Source	df	ss	ms	F	Prob.
Main Effect - Parental Occupational Prestige (Eliminating Sex and Implementation)	2	885.71	442.86	3.31	.03*
Other Main Effects	2	568.55			
Within	188	25,141.71	133.73		
Interaction	7	1,278.81	182.69	1.37	.22*
Total	199	27,874.78			

*significant at .05 level of confidence

In Table 9, the 3.31 F value for main effect exceeds the predetermined level of confidence; therefore, the null hypothesis is rejected. There were statistically significant differences between children whose parents have varying occupational prestige levels in occupational aspirations. The highest mean was obtained by the high prestige group followed by the medium prestige group, with the low prestige group producing the lowest mean.

Occupational knowledge and awareness - total group

The following two-directional hypotheses related to the total group differences of occupational knowledge and awareness.

The tenth hypotheses was: Career education program involvement increases occupational awareness at the upper elementary level.

The eleventh hypotheses was: Career education program involvement increases occupational knowledge at the upper elementary level.

Table 10

T-tests of Occupational Knowledge and Awareness of Upper Elementary Students
n = 200

	Pre-Mean	Post-Mean	df	t-value	Prob.
Occupational Awareness	5.24	8.35	199	10.70	.000*
Occupational Knowledge	9.24	11.57	199	10.63	.000*

*significant at the .001 level for one-tail test.

As Table 10 indicates, the pre-post-means differed in excess of the predetermined level of confidence. The *t*-value for occupational awareness was 10.70; and for occupational knowledge the *t*-value was 10.63. In both hypotheses ten and eleven the null hypotheses were rejected. Pre to post gains existed on both occupational knowledge and occupational awareness.

Summary

The first nine hypotheses were analyzed by a three-way analysis of variance. The interaction was not significant along the three independent variables of sex, career education program implementation, and parental occupational prestige level; consequently, the three factors were treated only as main effects.

In the analysis of the variable of sex, the null hypotheses were not rejected. There were no differences between males and females on occupational knowledge, awareness, and aspirations. Differences between students in high implementing classrooms and students in low implementing classrooms existed on occupational awareness and occupational knowledge. The low implementing teaching techniques resulted in greater gains. No differences between high and low implementing groups were found on occupational aspirations. Differences on parental occupational prestige levels were found on occupational knowledge and occupational aspirations. There were no differences on occupational awareness among students based on parental occupational prestige levels.

To test total sample occupational knowledge and awareness, directional *t*-tests were computed and the null hypotheses were rejected.

There were pre to post gains on occupational awareness and occupational knowledge significant beyond the .001 level of confidence, for the sample studied.

CHAPTER V

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Summary

The United States Office of Education under the direction of the Assistant Secretary of Education, Sidney Marland, selected career education in 1971 as its major priority. Marland's concept of career education differed from existing vocational education programs. It included vocational education but went beyond this narrow concept to include comprehensive, educational programs throughout school life. Because career education as it was conceived by the United States Office of Education was a relatively new model, the professional literature did not include data based studies evaluating results of the concept, in practice.

Career education has roots in vocational development theory, vocational education, and guidance based career development programs. Each of these three areas was treated in the review of the literature section. It was discovered that the research most closely aligned to career education consisted of guidance programs of vocational development. Few, studies in vocational development have been conducted at the upper elementary level. One exception was Leonard, who in a guidance program paralleling the process of career education, found that the aspiration level of minority students could be increased through education. In contrast, the present study incorporates the general school population.

With the inception of career education programs a need for testing the outcomes of these programs becomes evident. The purpose of the present investigation was to examine the effects of a career education program on upper elementary students.

Because the literature did not adequately answer basic questions concerning variables critical to the vocational developmental process, hypotheses were focused on four areas: 1) sex differences in occupational knowledge, awareness, and aspirations; 2) impact of teacher implementation of the career education program on students; 3) the impact of parental occupational prestige levels on student performance; and 4) effects of career education programs on measures of occupational awareness and knowledge.

The hypotheses were tested using three-way analysis of variance on measures of occupational awareness, occupational knowledge, and occupational aspirations. The interaction of the three independent variables was not significant allowing for treatment of only main effects. In the analysis of the variable of sex, the null hypotheses were not rejected. There were no differences between males and females on occupational knowledge, awareness, and aspirations. Differences between students in high implementing classrooms and students in low implementing classrooms existed on occupational awareness and occupational knowledge. The low implementing group made the greatest gains on both measures. No differences between high and low implementing groups were found on occupational aspirations. Differences on parental occupational prestige levels were found on occupational knowledge and occupational aspirations. The high prestige group made the greatest

gains with the medium prestige group making the lowest gains in occupational knowledge. The three groups followed the ordering of high, medium and low on mean scores of occupational aspiration. There were no differences on occupational awareness among students based on parental occupational prestige levels.

To test total sample occupational knowledge and awareness, directional t-tests were computed. The null hypotheses were rejected.

There were pre to post gains on occupational awareness and occupational knowledge at the .001 level of significance.

Discussion

The three hypotheses regarding sex differences were not significant at the .05 level, and the finding was consistent with the Gribbons' and Lohnes' data. Upper elementary children do not quantitatively differ by sex when they respond to instruments designed to test their occupational knowledge, aspirations, and awareness. When subsequent occupational choice becomes a factor, generally the males in our culture express more qualitative awareness and knowledge than females. These results suggest that involvement in a career education program does not significantly alter sexual differences at the upper elementary level. However, since career education exists as a facilitative process for career development, there is some concern for the females in the sample group.

The Career Development Battery asks for a tentative occupational choice, and the females in this sample consistently chose traditionally female positions. Of the 89 females in the sample, 65 per cent chose

tentative occupations of: teacher, nurse, or waitress. In quantifying the data for the teacher's self-report questionnaire, it was noted that there was only one respondent who developed a unit on career information for females. It is hypothesized that the lack of information specifically designed for females reinforced the cultural biases in female respondents. If equal opportunities are to be realized in later career choice development, it is necessary to encourage exploration at the upper elementary level. In essence the program did not accomplish this desired outcome.

Hypotheses six through nine were concerned with differences of high career education program implementation and low career education program implementation. The differences between high and low implementation on the measure of occupational awareness were significant at the .001 level of confidence. The difference on the occupational knowledge measure was significant at the .05 level of confidence. The significant mean difference indicated that on both measures students in the low implementing classrooms achieved a greater gain in both occupational awareness and occupational knowledge. The low implementing teachers spent less class time on career education and taught the subject of career education as a separate part of the curriculum, as opposed to the high implementing teachers who taught career education all, or most, of the day and integrated the material into the curriculum. The results indicated that the more traditional teaching methods achieved higher scores on cognitive measures. The high implementing teachers were more directed toward individualization and child self-direction in their career exploration activities. A direct, controlled, environment in a career education program yields greater awareness and knowledge of

occupations, at least for the sample studied. A problematic bias on defining high and low implementing teachers may have existed. Low implementing teachers used a standard teaching methodology of limited class time, treatment of careers as a separate area of the curriculum and teaching for and testing of factual materials. High implementing teachers used integration of career materials into the curriculum on an all-day basis with emphasis on child perception and awareness of self. The high implementing techniques were encouraged in the Calhoun Project by the project staff. The designation of the term "low implementing" does not connate "poor teaching" but rather a differing methodology.

The hypothesis relating high and low implementation to occupational aspirations was not significant at the predetermined level of confidence. Although aspiration is not statistically related to either high implementing classrooms or low implementing classrooms, the directionality of the means slightly suggest that children in high implementing classrooms have a higher level of aspiration.

Parental occupational prestige of sample students was compared to the effects of a career education program in hypotheses nine through eleven.

The null hypothesis of no statistically significant differences between high parental prestige, medium parental prestige, and low parental prestige on occupational awareness was not rejected. A career education program did not effect the occupational awareness of enrollees when parental occupational prestige was considered as an independent variable. It was assumed that parental discussion of specific occupational titles was not prevalent in interaction with children of

this age group. General areas may have been discussed in the home, but apparently not specific job titles.

The initial differences on the pre-test can be attributed to class differences. Children whose parents have high prestige positions generally defer concern about occupations to a later stage of life than do children of parents in medium or low prestige positions.

The occupational knowledge differences were significant at the .01 level of confidence. A directional pattern emerged on occupational knowledge with the greatest mean gains made by children of parents who hold high prestige positions. Occupations may not be discussed in the home, at this age level, leaving children unaware of varying job levels, the required education for differing occupations, and the future opportunities in each field. Mean differences indicate that these children began thinking about the world of work through their involvement in the career education program. Consequent discussions may have ensued at home strengthening the school program and causing this group to achieve a greater gain.

The children of parents in medium prestige positions had the greatest occupational knowledge on the pre-test, with the lowest mean gain of the three groups. It is speculated that children in this group, initially, have a familiarity with the world of work and its requirements.

The children of parents in the low prestige groups increased their occupational knowledge through involvement in the career education program. Perhaps the increased knowledge of varying occupations and their required education and the future opportunities in job areas

will be beneficial to these children in their occupational development.

The differences in occupational aspirations were significant at the .03 level of confidence. The directionality of these differences were predictable. The highest mean, indicating a higher level of aspiration, was achieved by children whose parents have high prestige positions. The lowest mean was achieved by children whose parents have low prestige positions. It would have been helpful, in discussing this section, to have had pre-test measures on aspiration levels. The impact of a career education program can not be assessed with the present data. The mean differences may have been much greater than the data indicates. It appears that exposure to career education programs does not negate parental influence in the level of aspirations that children seek.

In summary, for upper elementary students there was no significant interaction effect between sex, parental prestige level, and the method of program implementation. Lack of a significant interaction effect permitted discussion of the main effects of these variables. For this sample, male-female differences in occupational knowledge, awareness and aspiration did not materialize. The effects of high and low program implementation differed significantly on the measures of occupational awareness and occupational knowledge with low implementing teachers achieving greater results. And, if greater awareness and knowledge were the prescribed outcomes, a teaching methodology using direct teaching of occupations, in designated time periods and using traditional teaching techniques would best meet this goal.

Parental occupational prestige effected both occupational knowledge and the aspirations of the upper elementary students in this sample. Social class or prestige groupings interact with the results of a career education program. Increased occupational knowledge and aspiration for children whose parents have high prestige positions and children whose parents have low prestige positions was evident. The impact of the career education program on children of parents in medium prestige positions did not reveal great differences. The results in the areas of occupational knowledge, occupational aspirations, and occupational awareness indicate that the proponents of career education have support for program inclusion at the upper elementary level.

The hypotheses predicting increased occupational awareness and occupational knowledge for the total group of 200 fourth through sixth graders were supported. A career education program did make a significant difference in knowledge and awareness of occupations. Because of the lack of a control group, these findings must be qualified to some extent. However, the magnitude of the statistical significance, i.e., .001, and it's probability of occurence by chance alone, gave credence to the fact that significant learning did occur for the total sample. History, maturation, and the interaction of testing and the independent variable may have had some effect on the differences between pre and post means and the design of the study did not preclude these alternative explanations. A well formulated program of broad, general occupational information that may serve as a foundation of later career choice made a difference for these fourth through sixth graders in occupational awareness and knowledge.

Recommendations for Further Study

It is suggested that additional research be conducted on career education programs. Other measures could be employed in outcome studies using a control group to assess the change that this type of program can effect. In addition, the process of career education could be researched. The results of the high teacher implementation and low teacher implementation of the program warrant closer scrutiny. In this study, one method (low implementation) yielded cognitive results and in the other method (high implementation) an affective measure produced tentative directional change. A closer look at teacher methodology in implementing a career program and the effects it has on student process and outcome are needed before clear recommendation could be made on the value of a career education program at the fourth through sixth grade levels. Follow-up studies into the junior high, senior high and beyond would be valuable in assessing long range effects of career education at the upper elementary level.

BIBLIOGRAPHY

Bancroft, T. A. Topics in Intermediate Statistical Methods. Ames, Iowa: The Iowa University Press, 1968. (pp. 1-68).

Calhoun Intermediate School District "Annual Statistical Information 1972-73" Educational Service Center. Marshall, Michigan, 1972-73. (mimeographed)

Campbell, Donald T. and Stanley, Julian C. Experimental and Quasi-experimental Designs for Research. Chicago: Rand McNally and Company, 1966.

Career Development Program Kindergarten through Grade 12. Michigan Department of Education, Vocational Education and Career Service, World of Work Unit. (Lansing, Michigan, March 1972) (mimeographed)

Creason, Frank and Schilson, Donald L. "Occupational Concerns of Sixth-grade Children." Vocational Guidance Quarterly, March, 1970, pp. 219-224.

Dale, Edgar and Chall, Jeane S. "A Formula for Predicting Readability", Bureau of Educational Research, Ohio State University (pamphlet). Reprinted from the Educational Research Bulletin, Vol. XXVIII, pp. 11-20 and 37-54. (1949)

Deiulo, Anthony M. and Young, James M. "Career Education in the Elementary Schools," Phi Delta Kappan, Vol. LIV, No. 6 (February, 1973) pp. 378-381.

Edwards, Allen L. Statistical Analysis. New York: Holt, Rinehart and Winston, 1969.

Festinger, Leon and Kutz, Daniel, Research Methods in the Behavioral Sciences. (New York: The Dryden Press, Inc., 1953) pp. 98-135.

Goldhammer, Keith and Taylor, Robert, Career Education: Perspective and Promise. (Columbus, Ohio: Charles E. Merrill Publishing Co., 1972).

Ginzberg, Eli, et.al., Occupational Choice An Approach to a General Theory, (New York: Columbia University Press, 1951) pp. 181-182.

Gribbons, Warren D. and Lohnes, Paul R. Emerging Careers. New York: Teachers College Press, Columbia University, 1968.

BIBLIOGRAPHY - Continued

Haller, Archibald O., and Miller, Irwin M. The Occupational Aspiration Scale: Theory, Structure and Correlates. Technical Bulletin #288, Michigan State University, Lansing, Michigan, 1963.

Hamilton, Jack A. and Jones, Brian G., Integrating and Evaluating Career Information in a Developmental Guidance Program. Report at American Personnel and Guidance Association Convention, New Orleans. March 1970, ED 039-587.

Hansen, James C., and Caulfield, Thomas J., "Parent-Child Occupational Concepts," Elementary School Guidance and Counselling. December, 1969. (pp. 269-275)

Herr, Edwin L. Review and Synthesis of Foundations for Career Education. Eric Center for Vocational and Technical Education. March, 1972.

Hoppock, R. Occupational Information. New York: McGraw-Hill, 1957.

Hoyt, Kenneth B., et. al. Career Education: What It Is and How To Do It. (Salt Lake City, Utah: Olympus Publishing Company, 1972)

Hoyt, Kenneth B., "Career Education: Myth or Magic," NASSP Bulletin, March, 1973. pp. 22-29.

Kerlinger, Fred N., Foundations of Behavioral Research, (New York: Holt, Rinehart and Winston, Inc., 1964).

Leonard, George E. Developmental Career Guidance in Action. Report (Detroit, Michigan: Wayne State University, 1968) ERIC ED 013 456.

Marland, Sidney P., Jr. Career Education---More than a Name. (Speech presented to the Meeting of State Directors of Vocational Education), Washington, D.C., Department of Health, Education, and Welfare, Office of the Commissioner of Education, ERIC ED 050 295, 1971.

Marland, Sidney P., Jr. The Need for Career Education. (Speech presented before Career Education Workshop, Barbizan Hotel; New York City, April 5, 1972.)

Marusic, S. S., "Use of Occupational Drawings to Enhance Vocational Development," Personnel and Guidance Journal, Vol. 47. 1969.

McLure, Larry (Ed.). Essays on Career Education. (Portland, Oregon: Northwest Regional Education Library, 1973.)

BIBLIOGRAPHY - Continued

Michigan Department of Education. The Michigan State Plan for Vocational Education. Lansing, Michigan, June, 1972.

Michigan Education Directory (1971-72) Lansing, Michigan: 701 Davenport Bldg.

"New Perspectives on Youth Unemployment" Chronicle Guidance Professional Service. Reprint from American Vocational Journal, 1972. Maravia, New York: Chronicle Guidance Publications, Inc., 1973.

Osipow, Samuel H. Theories of Career Development. (New York: Appleton-Century-Crofts, 1968).

Ploughman, Theodore L. "Final Evaluation Report. Project: Pontiac Vocational Career Development Program." July, 1973. (mimeographed)

Ploughman, Theodore L. "Final Evaluation Report. Project: Pontiac Vocational Career Development Program." Exemplary Project in Vocational Education. Conducted under Part D of Public Law 90-576, 1972. (mimeographed)

Pucinski, Roman C., (Ed.). The Courage to Change: New Directions for Career Education. New Jersey: Prentice Hall, Inc., 1971.

Reinhart, Bruce; Slach, Neill; and Buettner, David. "Building a Comprehensive Career Education System," School Shop. April, 1973.

Rhodes, James A., Vocational Education and Guidance: A System for the Seventies. (Columbus, Ohio: Charles E. Merrill Publishing Co., 1970.)

Rhodes, James A., Alternative to a Decadent Society. (Indianapolis, Indiana: Howard W. Soms and Co., 1969.)

Roe, Anne, "Early Determinants of Vocational Choice," Journal of Counseling Psychology, Vol. 4, No. 3, (Fall, 1957) pp. 212-17.

Sherman, Vivian S., Trial and Testing of An Experimental Guidance Curriculum. (Palo Alto, California: American Institute for Research, 1967.)

Super, Donald E., "A Theory of Vocational Development," Vocational Behavior: Readings in Theory and Research. Donald G. Zytowski, (Ed.), (New York: Holt, Rinehart, and Winston; 1968) pp. 121-129.

BIBLIOGRAPHY - Continued

Super, Donald E. "Self-Concepts in Vocational Development," Career Development: Self-Concept Theory, 1963, reprinted in Vocational Behavior Readings in Theory and Research. Editor: Donald G. Zytowski. (New York: Holt, Rinehart, and Winston, 1968.)

U. S. Congress. Vocational Education Amendments of 1968. Pub. L 90-576, 90th. Congress, H.R. 18366. Washington, D.C.: U. S. Government Printing Office, 1969. 13pp. (ED 039 352 MF)

U. S. Congress. Vocational Education Act of 1963. Pub. L 88-210, 88th. Congress, H.R. 4955. Washington, D.C.: U. S. Government Printing Office, December, 1963. 18pp. (ED 018 611 MF)

Zytowski, Donald G. (Ed.). Vocational Behavior: Readings in Theory and Research. New York: Holt, Rinehart, 1968.

APPENDIX A

List of Participant Schools

Athens Area School	- East Leroy Elementary Athens Middle School
Battle Creek Public Schools	- Franklin Elementary
Lakeview School District	- Riverside Elementary
Marshall Public Schools	- Marshall Middle School
Mar Lee School	- Mar Lee Elementary
Pennfield School District	- Pennfield Central Elementary School
Union City Community Schools	- Union City Elementary

APPENDIX B

CAREER EDUCATION PROGRAM CALHOUN INTERMEDIATE SCHOOL DISTRICT

TEACHER QUESTIONNAIRE

NAME _____ SCHOOL _____

1. Please indicate the career education in-service meetings you have attended.
   Summer in-service meetings: Yes _____ No _____
   In-service meetings through the school year: (Please circle number attended):
   1, 2, 3, 4, 5, 6, 7, over 7.

2. How much time did you typically spend on career education in your classroom?
   Hours _____ Minutes _____ Per Week.
   Hours _____ Minutes _____ Per Semester.

3. Did you integrate career education into the curriculum or treat it as a separate curriculum area? (Indicate Percentage of treatment)
   Integrated _____ Separate Area of the Curriculum _____

4. Did you evaluate your classroom career education program as it progressed? If so, please check those applicable.
   Standardized test (Not the Project test battery) _____
   Teacher-made test _____.
   Class Discussion _____.
   Unit test _____.
   Other (Please specify) _____

5. What percentage of the career education materials used by you were: Estimate the percent dealing specifically with race or sex.

	Percentage	Race	Sex
Commercially prepared			
In-service and Pre-service constructed			
Self-constructed (outside of project meetings)			
Child constructed			

6. Do you feel that career education is important? Please check. Do you feel that career education is important to expand career choices for females and minorities?

	General Population		Females		Minorities	
Elementary level:	Yes	No	Yes	No	Yes	No
Middle School:	Yes	No	Yes	No	Yes	No
High School Level:	Yes	No	Yes	No	Yes	No

TEACHER QUESTIONNAIRE - continued

7. Please list the instructional units specifically designed for female career awareness: (Indicate the percentage of career materials designed for females _____).

_____

_____

_____

8. How did the children respond to career education?

	High	Medium	Low
Acceptance			
Enthusiasm			
Involvement			
Content Learning			

9. During the school year, how many people visited your classroom to talk about their jobs and the kind of work they do? For example, a businessman, mechanic, dietician, or lawyer.

Race: Black, White, American Indian, Mexican-American, Other (please specify). Please list the occupation and indicate the sex and race of the speaker:

Occupation	Sex	Race
_____	M____ F____	_____
_____	M____ F____	_____
_____	M____ F____	_____

(If more space is needed, please use the back of the sheet.)

10. During the school year, how many trips did your class make to observe work being performed? For example, places where goods were sold, products were made, and services were provided, such as a department store, a manufacturing plant, or a bank. Please list and indicate the work function.

Place	Occupations Observed
_____	_____
_____	_____
_____	_____

(If more space is needed, please use the back of the sheet.)

11. Did your students explore family occupations in their household?

Percentage: Yes_____ No_____

TEACHER QUESTIONNAIRE - continued

12. Please describe, briefly, how you assisted the girls in your class to expand their career horizons.

_____

_____

_____

13. Also, please describe how you assisted minority students (if present) to expand their career horizons.

_____

_____

_____

APPENDIX C

Your Name _____ Grade _____

Date: Month_____ Day_____ Year_____ School _____

Check: Male _____ Female _____ Teacher _____

C A R E E R D E V E L O P M E N T B A T T E R Y: Form 2

OCCUPATIONAL INTEREST SURVEY

This Survey concerns your Interest in the many Occupations or Jobs that presently exist in the World of Work.

This is a survey. There are no right or wrong answers.

* * * * * * * * * * * * *

Definitions:

1. An Occupational Area represents a group of jobs in which one engages fulltime or regularly for wages or salary. Each Occupational Area listed is for both Men and Women.

2. Your Job Interest may relate to:

   Work expected on the job
   Money job pays
   Working hours and vacations
   Working conditions
   Education and Training required
   Job importance--prestige
   Future of job
   How to get the job
   Freedom on the job
   Competition to hold the job

3. Your Ability to Perform may relate to:

   Intelligence--How smart you are
   Motivation--How much you want to perform
   Attitude--How you feel about yourself
   Physical ability--How well you can perform
   Aptitude--Your ability to learn
   Personality--How you behave with others

* * * * * * * * * * * * *

OCCUPATIONAL INTEREST SURVEY - continued

Definitions:

MY INTEREST		MY ABILITY	
	Would not like this job		Would not do a good job
	This job is okay		Would be able to do job
	Would like this job		Would do a very good job
___✓___	I don't know	___✓___	I don't know

CAREER DEVELOPMENT BATTERY: OCCUPATIONAL INTEREST SURVEY

Part I

Twenty different Occupational Areas are listed below under the heading OCCUPATIONAL AREA. Many jobs exist within each Area.

1. Put an X through one face for your job INTEREST in each area.

MY INTEREST				OCCUPATIONAL AREA	
Low	Medium	High	Don't Know Interest ✓		Don't Know Interest ✓
			____	HAIRSTYLING-CLOTHES DESIGN	____
			____	RECREATION	____
			____	AGRICULTURE	____
			____	MILITARY SERVICE	____
			____	SCIENTIFIC EXPLORATION	____
			____	ENTERTAINMENT	____
			____	SALES	____
			____	CONSTRUCTION	____
			____	COMPUTERS	____
			____	FAMILY SOCIAL SERVICE	____
			____	MANUFACTURING	____
			____	GOVERNMENT	____
			____	SECRETARIAL	____
			____	EDUCATION	____
			____	BUSINESS MANAGEMENT	____
			____	FOOD SERVICE	____
			____	ART--MUSIC	____
			____	TRANSPORTATION	____
			____	INSTALLATION--REPAIRING	____
			____	MEDICAL SERVICE	____

CAREER DEVELOPMENT BATTERY: OCCUPATIONAL INTEREST SURVEY

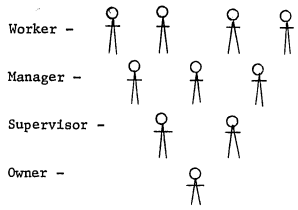
2. Put an X through a face for your ABILITY to do each job listed.

MY ABILITY				OCCUPATIONAL AREA	
Low	Medium	High	Don't Know Interest ✓		Don't Know Interest ✓
			____	HAIRSTYLING-CLOTHES DESIGN	____
			____	RECREATION	____
			____	AGRICULTURE	____
			____	MILITARY SERVICE	____
			____	SCIENTIFIC EXPLORATION	____
			____	ENTERTAINMENT	____
			____	SALES	____
			____	CONSTRUCTION	____
			____	COMPUTERS	____
			____	FAMILY SOCIAL SERVICE	____
			____	MANUFACTURING	____
			____	GOVERNMENT	____
			____	SECRETARIAL	____
			____	EDUCATION	____
			____	BUSINESS MANAGEMENT	____
			____	FOOD SERVICE	____
			____	ART--MUSIC	____
			____	TRANSPORTATION	____
			____	INSTALLATION--REPAIRING	____
			____	MEDICAL SERVICE	____

CAREER DEVELOPMENT BATTERY: OCCUPATIONAL INTEREST SURVEY

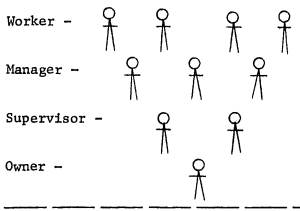
3. Circle the figure  below which best answers each question.

Definitions: Owner - The top boss
Supervisor-The department head
Manager - The group leader
Worker - The person who works for someone else



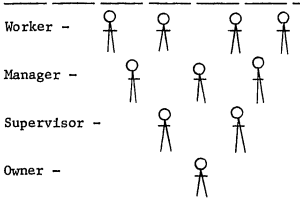
The person -

I would like to be when I go to work.



The person -

I will really be when I go to work.



The person -

Others see me like when I work

Your Name _____ Grade _____

Date: Month ____ Day____ Year _____ School _____

Check: Male _____ Female _____ Teacher _____

CAREER DEVELOPMENT BATTERY

Upper Elementary
Form 2

Components

OCCUPATIONAL KNOWLEDGE SURVEY

My Choice of an Occupation
Occupational Awareness
Occupational Knowledge

OCCUPATIONAL INTEREST SURVEY

Students: "This Battery concerns your knowledge of the many occupations or jobs that presently exist in the World of Work."

"Listen carefully to all directions. Provide honest answers."

CAREER DEVELOPMENT BATTERY: OCCUPATIONAL KNOWLEDGE SURVEY

Part I. MY CHOICE OF AN OCCUPATION

1. The first full-time job that I plan to enter following school is:

_____
(Specify job name)

Check one -
( ) I feel sure that my mind is made up.
( ) I'm not sure that my mind is made up.
( ) My mind is not made up.

2. For your job choice, mark your KNOWLEDGE about what that job is like.

KNOWLEDGE OF:	LEVEL OF KNOWLEDGE None 1	Some 2	Much 3
Work expected on the job	____	____	____
Money job pays	____	____	____
Working hours and vacations	____	____	____
Working conditions	____	____	____
Education and training required	____	____	____
Job importance--prestige	____	____	____
Future of job	____	____	____
How to get the job	____	____	____
Freedom on the job	____	____	____
Competition to hold the job	____	____	____

3. The training and education I expect to get for my job is:

Check one - or all that apply
( ) On-the-job training
( ) High school education
( ) Apprenticeship
( ) Vocational school
( ) College education
( ) Other, specify _____

4. In ten years I expect to have the following job:

_____
(Specify job name)

5. The jobs held by members of my family are:

Father _____ Brothers and _____
Mother _____ Sisters _____
Guardian _____ _____

CAREER DEVELOPMENT BATTERY: OCCUPATIONAL KNOWLEDGE SURVEY

Part II. OCCUPATIONAL AWARENESS

Directions:

1. List under OCCUPATIONS the (10) jobs that you learned about IN SCHOOL.

   For example: --Teacher--

2. Check-mark the TRAINING AND EDUCATION REQUIRED TO ENTER for each job you listed.

   For example: Check-mark ✓ under College for the job Teacher.

OCCUPATIONS You learned about In School -	TRAINING AND EDUCATION REQUIRED TO ENTER					
	On-the-Job Training	High School	Apprenticeship	Vocational School	College	Other
Teacher					✓	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

3. On your list CIRCLE three jobs that you would most like to enter.

CAREER DEVELOPMENT BATTERY: OCCUPATIONAL KNOWLEDGE SURVEY

Part III. OCCUPATIONAL KNOWLEDGE

Directions: This is a review to find out how much you know about jobs. Circle the letter which you think answers the question best.

Circle one letter for each question answer.

1. Most jobs require at least how much school?

   a. no high school
   b. two years of high school
   c. completed high school
   d. some college

2. Of the following occupations, which one is called "professional"?

   a. machinist
   b. doctor
   c. truck driver
   d. waitress

3. Of the following occupations, which one could we call skilled?

   a. actor
   b. tool and die maker
   c. salesman
   d. farmer

4. Of the following, which one could we call professional?

   a. teacher
   b. shipping clerk
   c. custodian
   d. barber

5. Which one of the following occupations requires the greatest amount of ability to work with the hands?

   a. salesman
   b. lawyer
   c. carpenter
   d. policeman

6. A poor speller would probably not be very successful as a:

   a. artist
   b. sailor
   c. preacher
   d. secretary

7. Which occupation requires the most education or training?

   a. fireman
   b. doctor
   c. mayor
   d. nurse

8. Pick the skilled occupation:

   a. mechanic
   b. principal
   c. stewardess
   d. jockey

OCCUPATIONAL KNOWLEDGE SURVEY - continued

9. Of the following classes of jobs, which one requires more formal education?

a. skilled
b. semi-skilled
c. professional
d. unskilled

10. The ability to speak before groups is probably needed most by a:

a. pilot
b. lawyer
c. secretary
d. mechanic

11. The technical worker is usually classified as:

a. skilled
b. semi-skilled
c. professional
d. managerial

12. A social worker is a:

a. hostess for banquets
b. person who helps families
c. person in politics
d. private secretary

13. A foreman would probably be classified as:

a. professional
b. skilled
c. managerial
d. semi-skilled

14. Of the following jobs which requires the most education?

a. clerk
b. butcher
c. guidance counselor
d. newspaper reporter

15. Whether or not to go to college should probably be decided by:

a. the student
b. the parents
c. the teacher
d. the student, with help as needed

16. Twenty-five years from now the number of occupations will probably be:

a. the same as today
b. less
c. more
d. unpredictable

17. The number of new occupations in the last twenty-five years is:

a. very few
b. some
c. very many
d. there is no way of knowing

OCCUPATIONAL KNOWLEDGE SURVEY - continued

18. There are jobs for women:

a. in almost all fields
b. in teaching, nursing only
c. only in jobs where men don't work
d. only in jobs in which you 'help people'

19. The number of occupations in which a person could be happy is probably:

a. one
b. few
c. many
d. depends upon abilities and interests

20. Apprentice training is conducted:

a. under a skilled craftsman
b. in all factories
c. in colleges and universities
d. by the U.S. Government