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ABSTRACT

Initiated in Lincoln County, West Virginia, in 1971, the study is the result of the collection and analysis of data from 1233 students in grades 1-10, 794 parents of students in grades 1-12, 78 teachers of students in grades 1-12, and 30 business and industrial personnel. In Part One of the report, the emphasis is on the career education treatment variable and its effect on: (1) language and mathematics achievement, (2) occupational awareness, (3) career maturity, and (4) attitudes of parents, students, teachers, and business/industrial personnel. Findings are discussed and tabulated. Part Two describes career education as an approach which is used to assist children, youth, and adults understand nebulous concepts by providing concrete experiences in all school subjects which relate to self, education, and careers. Included are a rationale, sample performance objectives, suggested approaches, and sample occupations. Part Three is concerned with the in-service component utilized in implementing career education. Included are 16 modules of instruction which are comprised of in-service goals, participant objectives, instructor and/or participant activities, participant evaluation, and resources. Additional information is included about validation methods and procedures, curriculum development procedures, and goals for students in grades K-12.

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A STUDY OF ELEMENTARY AND SECONDARY CAREER EDUCATION IN LINCOLN COUNTY

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January, 1974

DISCRIMINATION PROHIBITED Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or an activity receiving Federal financial assistance."

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PREFACE

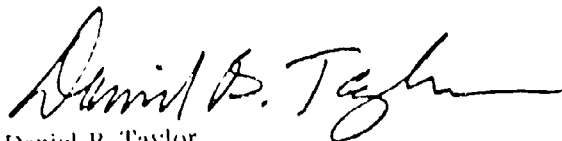
This document presents the evaluative results of the Lincoln County Exemplary Project in career education. The project was funded under the provisions of Part D of the Vocational Education Amendments of 1968. It was initiated in Lincoln County in the fall of 1971. This study is the result of the collection and analyses of data from twelve hundred, thirty-three (1233) students in grades one through ten, seven hundred, ninety-four (794) parents of students in grades one through twelve, seventy-eight (78) teachers of students in grades one through twelve, and thirty (30) business and industrial personnel.

The study comes at a very opportune time. Across the State and Nation, career education is being refined in light of experiences with various career education approaches coupled with evaluative results of these approaches. Educators who are currently in the process of refining career education or planning new career education efforts will find the evaluative results and supporting information to be beneficial in their efforts to provide relevance to children and youth.

The study supports the contention that providing career education experiences to elementary students increases their academic achievement. It also provides evidence that career education experiences increase the career maturity of high school students. Also of major importance are the results which indicate that career education is supported overwhelmingly by parents, teachers, and business and industrial personnel.

For career education to meet with success, it is necessary that teachers recognize the need for such an approach, that counselors be receptive to working not only with students but also with teachers, that school supervisors and administrators be willing to provide vigorous leadership, that preservice and in-service efforts be refocused to include the concept of career education, and that State Department personnel be committed to providing guidance and leadership to local education agency personnel.

Fortunately for many children and youth in West Virginia, educators have been receptive to the career education approach. However, various approaches to career education must continue to be researched if educators are to determine the most effective methods in which education can achieve its broadened goals while providing relevance to children and youth.



Daniel B. Taylor
State Superintendent of Schools

Abstract

The study concerns itself with the statistical and informational results of the Lincoln County Exemplary Project in Career Education. The project was funded under the provisions of Part D of the Vocational Education Amendments of 1968. Career awareness was implemented in grades one through six during the first year, 1971-72. Career orientation, exploration, preparation, and intensive guidance and job placement were initiated during the second year, 1972-73. During the 1973-74 school year, changes were initiated and additional in-service provided to professional educators.

This publication is divided into three parts. Each part is designed as a separate entity so that an individual may proceed directly to that Part which is of interest to him. Yet for a complete and thorough understanding of the comprehensive nature of the career education approach implemented in Lincoln County, individuals may wish to peruse the entire document.

In Part One, the emphasis is on the career education treatment variable and its effect on language achievement, mathematics achievement, occupational awareness, career maturity, attitudes of parents, student reaction, teacher attitudes, and the attitudes of business and industrial personnel.

The results of the study are as follows:

Source of Data	Number in Sample	Kind of Data	Method of Analysis	Results of Analysis
Students in grades 1-6	419	Language Achievement Mathematics Achievement Occupational Awareness	Analysis Covariance	All F ratios significant at the 0.01 level
Students in grades 7-8	159	Career Maturity Attitudes Career Maturity Competence	Analysis of Covariance	Both F ratios were non-significant
Students in grades 9-10	133	Career Maturity Attitudes Career Maturity Competence	Analysis of Covariance	Both F ratios significant at the 0.05 level
Students in grades 4-8	522	Career Education Activities in the classroom	Percentage Favorable	Positive
Parents of students in grades 1-12	794	Reaction to Career Education	Percentage Favorable	Positive
Teachers of students in grades 1-12	78	Reaction to Career Education	Percentage Favorable	Positive
Business and Industrial Personnel	30	Reaction to Career Education	Percentage Favorable	Positive

v / v

Part Two describes career education as an approach which is used to assist children, youth, and adults understand nebulous concepts by providing concrete experiences in all school subjects which relate to self, education, and careers. Career education is based on a long range career development process which begins long before the child enters school and continues long after the youth leaves school.

The means of implementing the career education approach is through relating life goals to subject goals. Career education goals emerge from the relationship of life goals to subject goals. These goals reflect concerns about attitudes, knowledge, and skills of children, youth, and adults as they venture into social, educational, and career encounters. The emphasis in career education is on reducing the difficulties which occur in these encounters with reality.

Included in this Part are a rationale, sample performance objectives for each grade, suggested career focus for grades kindergarten through six, sample career areas for the fifteen clusters, sample occupations related to academic and general education courses, and an approach to intensive guidance and job placement experiences.

Part Three concerns itself with the in-service component utilized in implementing career education. The in-service approach is based on the following assumptions:

1. Educators are self directing,
2. Educators are professionally competent,
3. Educators are intellectually curious, and
4. Educators are interested in professional growth.

The assumptions dictate that in-service be conducted in a climate which supports professional growth through personal involvement, ego support, social mobility, introspective articulation, feedback, and professional dialogue. To accomplish its objectives, in-service focuses on both process (human relations) and task (planning, development, and implementation) functions and activities.

Included are sixteen modules of instruction which are comprised of in-service goals, participant objectives, instructor and or participant activities, participant evaluation, and resources. Additional information is included about validation methods and procedures, curriculum development procedures, and goals for students in grades kindergarten through twelve.

L.A.O.

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PART ONE

Statistical Results

INTRODUCTION

Students, parents, the business and industrial community, and educators have become painfully aware of the problems faced by many children, youth, adults. Many of the problems are caused by an absence of a clear self, educational, and career identity. For many educators, the means to resolving these problems is through a systematic approach to teaching which relates life goals to subject goals.

Career education goals¹ emerge from the relationship of life goals to subject goals. These goals reflect concerns about attitudes, knowledge, and skills of children, youth, and adults as they venture into social, educational, and career encounters. The emphasis in career education is on reducing the difficulties which occur in these encounters with reality.

Career education is a part of all academic, general, and vocational subjects from kindergarten through adulthood. Yet, all of education is not career education. The long range goal of career education is to produce responsible individuals who are capable of making and implementing accurate choices concerning the present and future. The purpose implies that individuals possess positive attitudes, appropriate knowledge, and adequate skills to make and implement wise decisions.

The course content for career education is found in the courses currently being taught in the elementary and secondary schools. The content of the subject is related to the student's world and the career world. The emphasis is definitely not on memorizing job descriptions or lists of occupations. Rather the approach relates student needs, fears, likes, dislikes, abilities, disabilities, aptitudes, and limitations to educational endeavors and career potential.

The teaching methods or process used to illustrate abstract concepts related to both life goals and subject goals are: field trips, interpersonal interaction, hands-on activities, multi-media, guest speakers, research activities, simulation, role playing, and work experience. The primary focus of the process is the use of "real" experiences to illustrate abstract symbols and concepts related to self, education, and careers.

Career education provides meaning to the subjects currently taught in the schools. Individuals who are encouraging school systems to adopt the career education approach are sincerely committed to the development of academic skills. Research indicates that students achieve a higher level of academic skill² when learning experiences relate to things outside the school rather than being confined solely within the four walls of the classroom. The student does not exist solely to attend school. Nor should the school attempt to exist separate and apart from the society in which it finds itself.

The burden to assist students in achieving career education goals falls on the shoulders of all educators. In the past, specific courses which allowed students to gain a better understanding of themselves while investigating the career world have been offered to only a limited number of students and then only at the upper high school level. For most students, this has been too little, too late.

The educators in Lincoln County, West Virginia accepted the burden of responsibility to assist students in achieving career education goals in 1971. A proposal³ was developed which provided for a systematic approach to career development in the form of a comprehensive school based career education model (Figure 1). School system personnel submitted the proposal and received

funding for an exemplary project under the provisions of Part D of the Vocational Education Amendments of 1968.

This document concerns itself with the results of the three phases of the career education project. It parallels the development and implementation of the project in the Lincoln County School System (Appendix A-II, Goals and Objectives). Career education was implemented in grades one through six during the first year, 1971-72 (Part Two: Program Description). The program was implemented in grades seven through twelve during the second year, 1972-73. During the 1973-74 school year, changes were initiated and additional personnel were provided with in-service education (Part Three: In-Service Design). Project personnel consisted of Director: Herbert B. Holstein, Human Resource Coordinator: Daryle G. Elkins, Curriculum Coordinator: Billy J. Burton, and Guidance Coordinator: Thomas E. Woodall, first year and Thomas M. Miller, second year (Appendix B-II, Personnel).

THE PROBLEM

The problem in this study concerns itself with the degree to which career education impinges upon its environment. The specific research questions are as follows:

1. Will students in grades one through six who have been involved in the career awareness process achieve greater language arts skills than students who have not been exposed to the career awareness process?
2. Will students in grades one through six who have been involved in the career awareness process achieve greater mathematics skills than students who have not been exposed to the career awareness process?
3. Will students in grades one through six who have been involved in the career awareness process acquire a higher level of knowledge about occupations than students who have not been exposed to the career awareness process?
4. Will students in grades seven and eight who have been involved in the career orientation process acquire a higher level of career maturity (attitudes) than students who have not been exposed to the career orientation process?
5. Will students in grades seven and eight who have been involved in the career orientation process acquire a higher level of career maturity (competence) than students who have not been exposed to the career orientation process?
6. Will students in grades nine and ten who have been involved in the career exploration process acquire a higher level of career maturity (attitudes) than students who have not been exposed to the career exploration process?
7. Will students in grades nine and ten who have been involved in the career exploration process acquire a higher level of career maturity (competence) than students who have not been exposed to the career exploration process?
8. Will parents of students in grades one through twelve perceive career education in a positive manner?
9. Will students in grades four through eight indicate that career education activities have been a part of their curricula?
10. Will teachers of students in grades one through twelve perceive career education in a positive manner?
11. Will business and industrial personnel in Lincoln County perceive career education in a positive manner?

HYPOTHESES

The research hypotheses are as follows:

1. There is a significant difference between the adjusted posttest means of the experimental group and the adjusted posttest means of the control group on language achievement.

2. There is a significant difference between the adjusted posttest means of the experimental group and the adjusted posttest means of the control group on mathematics achievement.

3. There is a significant difference between the adjusted posttest means of the experimental group and the adjusted posttest means of the control group on occupational awareness.

1. There is a significant difference in attitudes between the adjusted posttest means of the level seven and eight Experimental Treatment students and

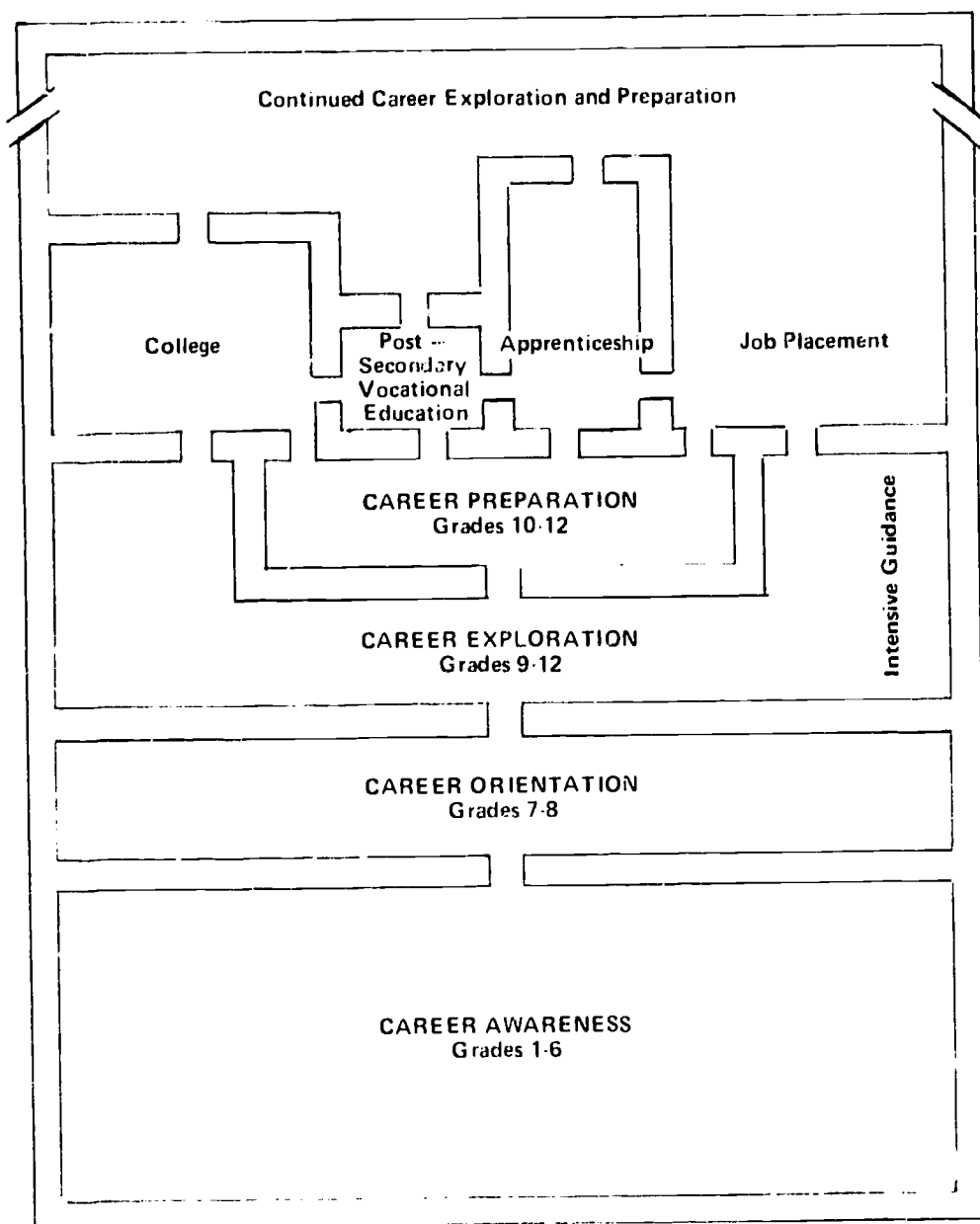


Figure 1. Comprehensive Career Education
For Grades 1-12 in Lincoln County, West Virginia

the adjusted posttest means of the level seven and eight Control Treatment students.

5. There is a significant difference in competence between the adjusted posttest means of the level seven and eight Experimental Treatment students and the adjusted posttest means of the level seven and eight Control treatment students.

6. There is a significant difference in attitudes between the adjusted posttest means of the level nine and ten Experimental Treatment students and the adjusted posttest means of the level nine and ten Control Treatment students.

7. There is a significant difference in competence between the adjusted posttest means of the level nine and ten Experimental Treatment students and the adjusted posttest means of the level nine and ten Control Treatment students.

8. There is a difference in a favorable direction between the positive and negative reactions of parents about career education on the Parent Opinion Survey.

9. There is a difference in a favorable direction between the positive and negative reactions of students concerning the degree of career education activities provided by teachers.

10. There is a difference in a favorable direction between the positive and negative reactions about career education on the Teacher Opinion Survey.

11. There is a difference in a favorable direction between the positive and negative reactions about career education on the Business and Industry Opinion Survey.

BACKGROUND OF THE STUDY

Lincoln County is located in the central-western portion of the State. The surface features of the county are determined by three rivers: Guyandotte, Mud, and Coal.⁷ None of the land area is occupied by urban centers of more than 2,000 population. The largest populated area is Hamlin. Lincoln County lies in the periphery of the cities of Huntington and Charleston.

The Lincoln County school system in 1969-70 had a total of 5,332 students enrolled. The enrollment was composed of 3,743 students in grades 1-8 and 1,589 students in grades 9-12.

All schools (Table 1) in Lincoln County were included in the career education project with the exception of the Early Childhood Education Center (statewide kindergarten was mandated for the school year 1972-73). The Lincoln County school system (grades one through twelve) is composed of twenty-two separate schools. Four of these schools serve grades 1-6, fourteen serve grades 1-8, two serve grades 7-12, and two serve grades 9-12.

In addition to these schools, a county vocational technical center is located in Hamlin. Vocational technical education is available to students in grades 10 through 12.

The enrollment during the 1972-73 school year was 5,175. Enrollment consisted of 2,656 students in grades 1-6, 830 students in grades 7-8, 1,581 students in grades 9-12, and 108 special education students.

SCOPE OF THE STUDY

The study was divided into three phases. The first phase relates to Career Awareness for students in grades one through six. The Career Orientation and Exploration phase concerns itself with students in grades seven through ten. The third part is called the Comprehensive Career Education phase and is concerned

Table 1
Lincoln County Schools
1972-73

Schools	16	7 8	9-10	11 12	Special Ed.
Duval High			266	220	
Guyan Valley High			326	221	12
Hamlin High		114	172	148	
Harts High		134	132	96	
Atenville Elementary	211				29
Big Ugly Elementary	84	14			
Branchland Elementary	184	64			
Cuzzie Elementary	26				
Fenellsburg Elementary	163				
Fez Elementary	104	31			
Garnetts Bend Elementary	67	19			
Graftonville Elementary	212	55			23
Hamlin Elementary	373				24
Martin Elementary	84	31			
McCorkle Elementary	92	23			
Midkiff Elementary	146	20			
Midway Elementary	175	45			
Pleasant View Elementary	252	121			
Ranger Elementary	155	56			
Sumerco Elementary	67	24			
West Hamlin Elementary	170	63			
Woodville Elementary	91	30			
Total Enrollment	2656	830	896	685	108

with opinions from students, parents, teachers, and business and industrial personnel.

SAMPLE

Career Awareness Sample

The Lincoln County Exemplary Program was initiated in eight elementary schools, grades one through six, in the fall of 1971. Intact groups of students were assigned to the experimental and control groups. Using a table of random numbers, students were randomly selected from intact groups to participate in the study.

Notation and sample size for the treatment groups (experimental = T₁ and control = T₂) and grade levels (first grade = L₁, second grade = L₂, third grade = L₃, fourth grade = L₄, fifth grade = L₅, and sixth grade = L₆) are as follows:

	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆
T ₁	n 40	n 40	n 40	n 40	n 40	n 40
T ₂	n 40	n 40	n 40	n 40	n 40	n 40

During the 1971-72 school year, two thousand, four hundred thirty-six (2,436) students were enrolled in grades one through six. The student population in the career education program was eight hundred, eighty-seven (887). The population who were not involved in the career education program consisted of one thousand, five hundred, forty-nine (1,549) students.

Of the eighteen (18) elementary schools in Lincoln County, one or more of the faculty in eight (8) schools were involved in the career education program. Twenty-nine members of the professional faculty received in-service training and subsequently implemented career education in their classes. Fifty-two members of the professional faculty were not involved in career education during the Fall of 1971.

Eighty students (experimental and control) from each grade level were pretested in September 1971 utilizing the Occupational Awareness Test. To be included in the treatment groups, a pretest score on the Occupational Awareness Test and posttest scores on the Language Achievement Test, Mathematics Achievement Test, and the Occupational Awareness Test were required. Students not participating in the testing situation for all three instruments were removed from the sample.

The sample size was reduced from $n = 210$ for the experimental treatment group to $n = 211$. The sample size for the control treatment group was reduced from $n = 210$ to $n = 205$. In many instances, the investigator possessed partial data on particular students. However, if complete data were not available, the participant was removed from the sample.

Career Orientation and Exploration Sample

The Lincoln County Exemplary Program was initiated in grades seven through ten in the fall of 1972. The experimental and control students were randomly selected from intact classes of students for each of the four grade levels involved in the study. The experimental students were selected from Lincoln County schools. The control students were selected from a comparable county school system which was not involved in career education. Notation and sample size for the treatment groups (experimental = T_1 and control = T_2) and grade levels (seventh and eighth grades = L7.8 and ninth and tenth grades = L9.10) are as follows:

	L7.8	L9.10
T_1	n 80	n 80
T_2	n 80	n 80

Comprehensive Career Education Sample

During the 1971-74 school years, career education was initiated in all twenty-two schools. Students in the sample came from intact classes in grades four through eight. All parents of students in grades one through twelve received the survey instrument used in the study. The sample consists of those parents who returned the survey instrument completed. All teachers of students in grades one through twelve were provided with a survey instrument. The sample consists of those teachers who returned the survey instrument completed. Business and industrial personnel were randomly selected and interviewed.

The sample included in this phase of the study is as follows:

Source of Data	Number
Students	522
Parents	794
Teachers	78
Business and Industrial Personnel	30

INSTRUMENTATION

Career Awareness Instrumentation

Three test instruments were administered to the experimental and control groups. California Language Achievement Tests, California Mathematics Achievement Tests, and Occupational Awareness Tests were administered by testing specialists and program supervisors. The achievement tests were devised by Ernest W. Tiegs and Willis W. Clark. The awareness test was devised by Thomas E. Woodall, Billy J. Burton, Daryle G. Elkins and Herbert B. Holstein (Appendix A-1).

Career Orientation and Exploration Instrumentation

The Career Maturity Inventory (CMI) Attitude Test was employed to pretest the students in the study. The CMI Attitude Test and Parts 1 and 5 of the CMI Competence Test were employed to posttest the students in the study. The CMI was devised by John O. Crites (Appendix A-1).

Comprehensive Career Education Instrumentation

Four instruments were utilized in this phase of the study. The Career Education Scale-Student was devised by Joseph G. Freund. The Parents Opinion Survey, Teacher Opinion Survey, and Business and Industrial Opinion Survey were devised by LeVene A. Olson (Appendix A-1).

SPECIFIC DESIGN

Career Awareness Specific Design

The students participating in this study were pretested in September 1971. The Occupational Awareness Test was used for the pretest. The posttests were administered in May 1972. The posttests included the California Language Achievement Test, California Mathematics Achievement Test, and the Occupational Awareness Test.

The independent variables and covariates were: Pretest score = X_1 , and Grade Level = X_2 . The dependent or experimental variables were: Language Achievement = Y_1 , Mathematics Achievement = Y_2 , and Occupational Awareness = Y_3 .

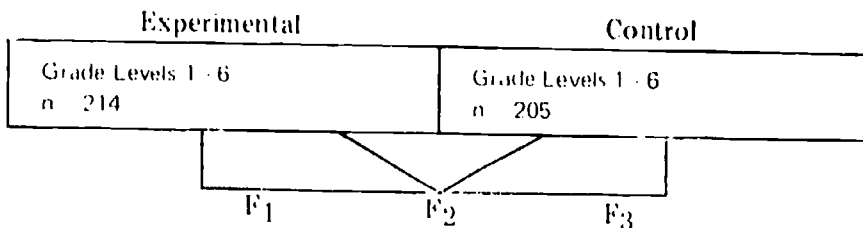
An analysis of covariance (Multiple Regression Analysis) was utilized to determine if a difference existed between the adjusted posttest scores of the experimental group and the adjusted posttest scores of the control group on the three dependent variables. Null hypotheses were rejected at the 0.01 level of significance using a directional or one-tailed test.

The design of this study was quasi-experimental design 10 (Pretest-Posttest Nonequivalent Control Group Design) described as follows by Campbell and Stanley.⁵

$$\begin{array}{ccc} 0 & X & 0 \\ \hline 0 & & 0 \end{array}$$

The experimental and control groups did not have pre-experimental sampling equivalence. Subjects were not assigned to treatment groups randomly from a common population. The experimental students were randomly selected from intact classes of student involved in the Career Awareness Program while the control students were selected from the remaining students who had not participated in the Career Awareness Program.

The analysis of covariance was applied to yield on F_1 value for language achievement, F_2 value for mathematics achievement, and F_3 value for occupational awareness.



Due to the wide range of scores on the pretest and subsequent posttests, a log transformation was utilized. To effectively estimate the coefficients, more data are required than were available at each grade level in the study. Therefore all grade levels within each treatment were grouped.

The model used to transform the data is as follows:

$$\text{Log } Y = a + b_1 (\text{Experimental versus control}) + b_2 \text{Log (Pretest score)} + b_3 \text{Log (Grade level)}$$

OR

$$Y = K (\text{Pretest } b_2) (\text{Grade Level } b_3)$$

where the value of K depends on whether the treatment was applied.

Career Orientation and Exploration Specific Design

An analysis of Covariance (Multiple Regression Analysis) was utilized to determine if a difference existed between the adjusted posttest means of the experimental groups and the adjusted posttest means of the control groups. Null hypotheses were rejected at the 0.05 level of significance, a directional or one-tailed test being used. Students were pretested in the Fall of 1972 and posttested in the Spring of 1973.

The design of the study was quasi-experimental design 10 (pre-test-Posttest Nonequivalent Control Group Design) described as follows by Campbell and Stanley:

0	X	0
0		0

In this study, design 10 was replicated in four different settings. The modification of design 10 employed experimental (T_1) and control (T_2) treatments in four settings (two for L7-8 and two for L9-10).

	L7-8	L7-8	L9-10	L9-10
T_1	0 x 0	0 x 0	0 x 0	0 x 0
T_2	0 0	0 0	0 0	0 0

The experimental and control groups may not have pre-experimental samplings equivalence. Subjects were not assigned to treatment groups randomly from a common population. The experimental students were selected from intact classes of career education students while the control students were selected from the students who had not been exposed to career education.

Comprehensive Career Education Specific Design

The design of the study is such that it required the gathering, synthesis, and analysis of information from a number of sources. Data were collected in the Fall of 1973. The process utilized was as follows:

Source of Data	Number in Sample	Type of Data	Method of Analysis
Students	522	Opinions	Percentage Favorable
Parents	794	Opinions	Percentage Favorable
Teachers	78	Opinions	Percentage Favorable
Business and Industrial Personnel	30	Opinions	Percentage Favorable

RESULTS

Career Awareness Results

The analysis of covariance was employed to "control" or "adjust" statistically for initial differences of the students, thereby allowing for an unbiased comparison of the effects of the treatment. This was accomplished by adjusting the students' scores on the dependent variables Y (criterion scores) to allow for differences in the independent variables X_1 (pretest) and X_2 (grade level). Each covariate was used only when it was significant in predicting posttest scores.

Table 2 presents the results of the analysis of covariance for the adjusted posttest means for language achievement. The data indicate that the difference between the experimental group and the control group is significant at the 0.01 level. The F ratio derived through statistical analysis of the data is 7.32. The tabled F ratio with 1 df in the numerator and 115 df in the denominator is 6.70. The computed F ratio being greater than the tabled F ratio indicates a significant difference.

Table 2
Analysis of Covariance for Treatment
on Language Achievement (Y_1)

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Values
Treatment	1	0.202	0.202	7.32*
Log Pretest	1	0.915	0.915	33.10
Log Grade Level	1	3.950	3.950	143.12
Residual	415	11.416	0.2076	

*Significant at the 0.01 Level ($F=6.70$)

Null hypothesis one is therefore rejected and the research hypothesis appears plausible. The research hypothesis states that: There is a significant difference between the adjusted posttest means of the experimental group and the adjusted posttest means of the control group on language achievement.

The adjusted posttest means for the experimental group were $(19.6 - 17.7 \times 100 - 111 - 100) 11\%$ higher than the adjusted posttest means for the control group on language achievement.

This procedure provides the adjusted posttest means for language achievement using the pretest and grade levels as covariates. The data indicate that the adjusted posttest means were greater for all grade levels in the experimental group than the control group on language achievement. This data are graphically illustrated in Figure 2.

The analysis of covariance on mathematics achievement is illustrated in Table 3. The data indicate that the difference between the experimental group and the control group is significant at the 0.01 level. The F ratio obtained following statistical analysis of the data is 14.30. The tabled F ratio is 6.70.

Null hypothesis two is therefore rejected and the research hypothesis appears highly plausible. The research hypothesis states that: There is a significant difference between the adjusted posttest means of the experimental group and the adjusted posttest means of the control group on mathematics achievement.

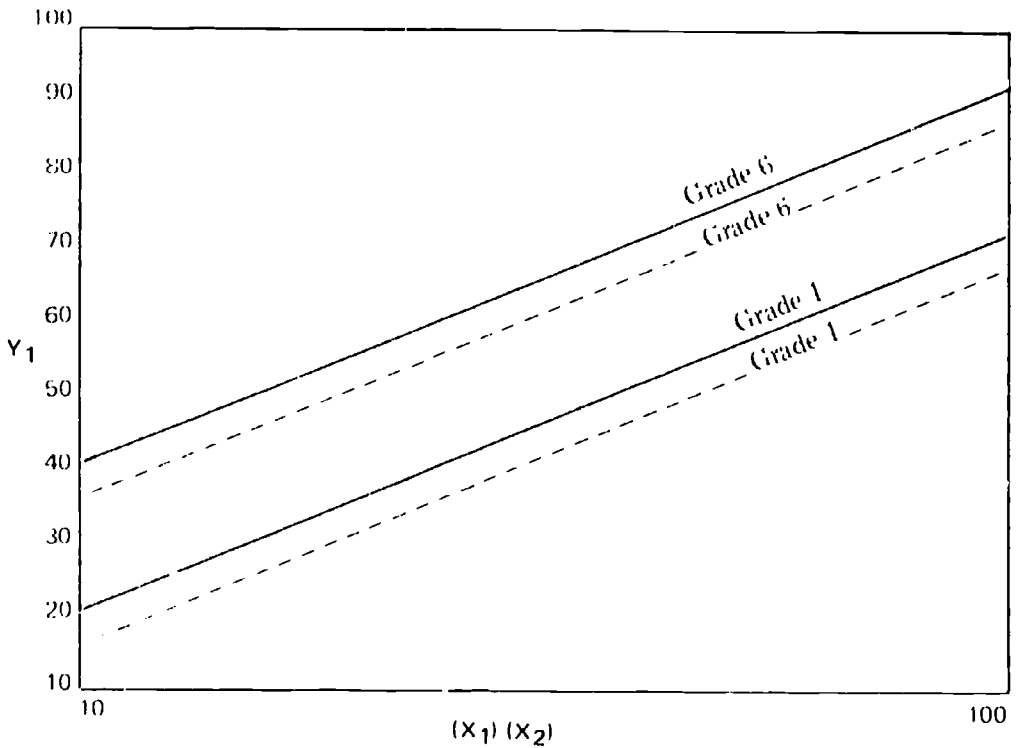


Figure 2. Adjusted posttest means for Language Achievement using the pretest and grade levels as covariates.

Key:
 Experimental Group ———
 Control Group - - - - -

The adjusted posttest means for the experimental group were $(63.5 - 51.0 \times 100 - 121.5 - 100) 21.5\%$ higher than the adjusted posttest means for the control group on mathematics achievement.

Table 3
Analysis of Covariance for Treatment
on Mathematics Achievement (Y_2)

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Values
Treatment	1	0.92	0.92	14.30*
Log Grade Level	1	1.50	1.50	23.38
Residual	416	26.74	0.0642	

*Significant at the 0.01 Level ($F=6.70$)

This procedure provides the adjusted posttest means for mathematics achievement using grade level as a covariate. The data indicate that the adjusted posttest means were greater for the experimental group than the control group on mathematics achievement. This data are graphically illustrated in Figure 3.

Table 4 provides the analysis of covariance on occupational awareness. The data reveal that a significant difference exists between the experimental group and the control group at the 0.01 level. The statistical analysis furnished an F ratio of 11.84. The tabled F ratio is 6.70.

The null hypothesis is rejected. It states that: There is no significant difference between the adjusted posttest means of the experimental group and the adjusted posttest means of the control group on occupational awareness. The research hypothesis seems highly plausible. The research hypothesis states that: There is a significant difference between the adjusted posttest means of the experimental group and the adjusted posttest means of the control group on occupational awareness.

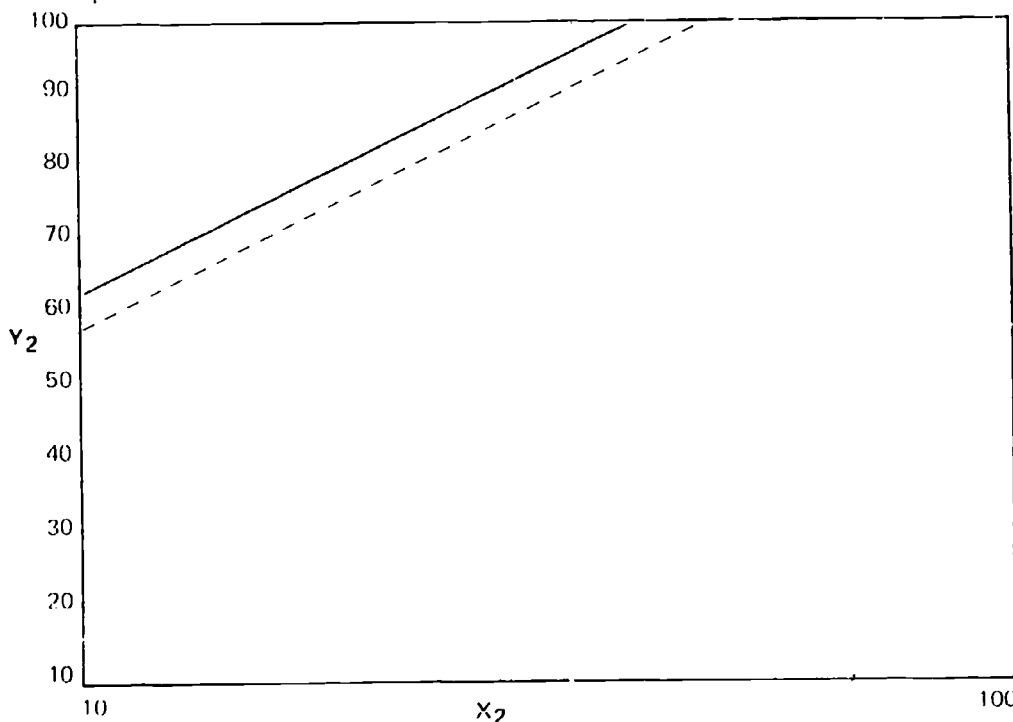


Figure 3. Adjusted posttest means for Mathematics Achievement using the grade level as the covariate.

Key:

Experimental Group _____

Control Group - - - - -

The adjusted posttest means for the experimental group were (1.94-4.18 x 100 / 118 - 100) 18% higher than the adjusted posttest means for the control group on occupational awareness.

Table 4
Analysis of Covariance for Treatment
on Occupational Awareness (Y₃)

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Values
Treatment	1	0.54	0.54	14.84*
Log Pretest	1	12.80	12.80	354.78
Residual	416	15.05	0.0361	

*Significant at the 0.01 Level (F=6.70)

This procedure provides the adjusted posttest means for occupational awareness using the pretest as a covariate. The data indicate that the adjusted posttest means were greater for the experimental group than the control group on occupational awareness. This data are graphically illustrated in Figure 4.

Career Orientation and Exploration Results⁵

The results are based on data obtained through the use of the Career Maturity Inventory Attitude Test and the Career Maturity Inventory Competence Test and statistics computed through the use of the analysis of covariance.

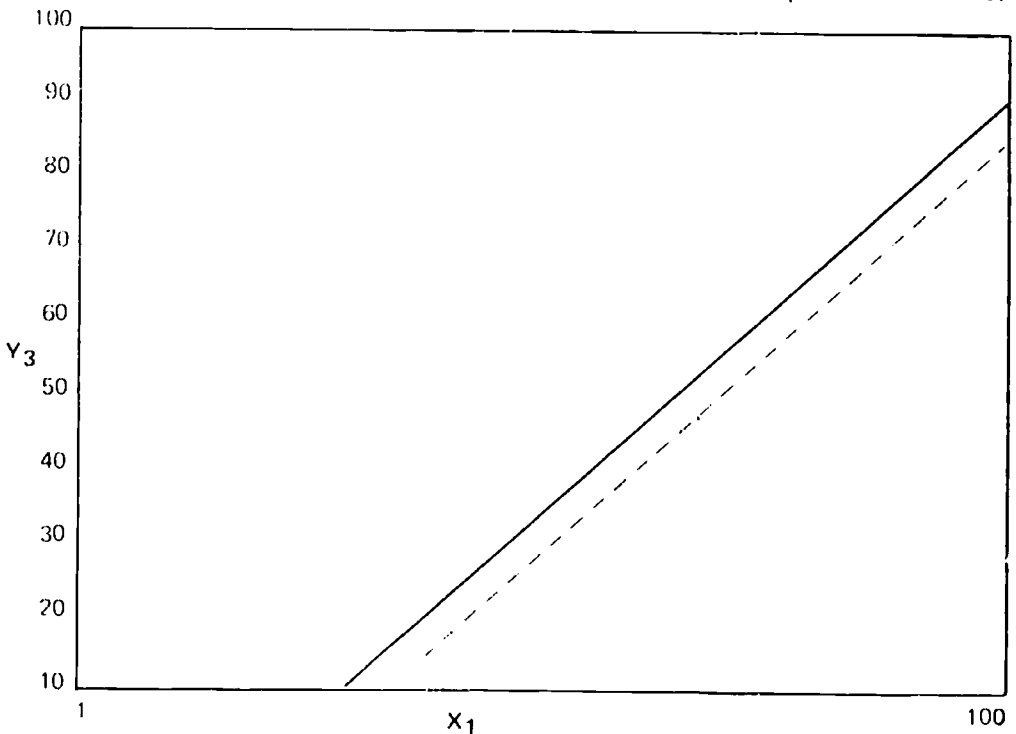


Figure 4. Adjusted posttest means for Occupational Awareness using the pretest as the covariate.

Key:
Experimental Group _____
Control Group

Table 5 presents the results of the analysis of covariance for the adjusted posttest means on attitudes related to career maturity for seventh and eighth grade students. The data indicate that the difference between the experimental group and the control group is not significant.

Null hypothesis number four is therefore accepted. This hypothesis states that there is no significant difference in attitudes between the adjusted posttest scores of the level seven and eight experimental treatment students and the adjusted posttest scores of the level seven and eight control treatment students.

The analysis of covariance for the adjusted posttest means on competence related to career maturity for seventh and eighth grade students is illustrated in Table 6. The data indicate that the difference between the experimental group and the control group is not significant.

Null hypothesis number five is therefore accepted. This hypothesis states that there is no significant difference in competence between the adjusted posttest scores of the level seven and eight experimental treatment students and the adjusted posttest scores of the level seven and eight control treatment students.

In Table 7, the results of the analysis of covariance for the adjusted posttest means on attitudes related to career maturity of ninth and tenth grade students are illustrated. The data indicate that the difference between the experimental group and the control group is significant at the 0.05 level. The F ratio derived through statistical analysis of the data is 1.81. The tabled F ratio with 1 df in the numerator and 129 df in the denominator is 3.92. The computed F ratio being greater than the tabled F ratio indicates a significant difference.

Null hypothesis number six is therefore rejected and the research hypothesis appears plausible. The research hypothesis states that: There is a significant difference in attitudes between the adjusted posttest scores of the

Table 5
Analysis of Covariance on Career Attitudes
of Seventh and Eighth Grade Students

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Values
Treatment	1	0.0107	0.0107	4.74
Log Grade Level	1	0.0026	0.0026	1.17
Log Pretest	1	0.4482	0.4482	198.33
Residual	155	0.351	0.0023	

Table 6
Analysis of Covariance on Career Competence
of Seventh and Eighth Grade Students

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Values
Treatment	1	0.0565	0.0565	2.27
Log Grade Level	1	0.1561	0.1561	6.27
Log Pretest	1	1.1524	1.1524	46.28
Residual	155	3.858	0.0249	

level nine and ten experimental treatment students and the adjusted posttest scores of the level nine and ten control treatment students.

Table 8 provides the results of the analysis of covariance on competence related to career maturity of ninth and tenth grade students. The data reveal that a highly significant difference exists at the 0.01 level between the experimental group and the control group. The F ratio derived by statistical analysis of the data is 15.10. The tabled F ratio with 1 df in the numerator and 129 df in the denominator is 6.84. The research hypothesis appears plausible. The research hypothesis states that: There is a significant difference in competence between the adjusted posttest scores of the level nine and ten experimental treatment students and the adjusted posttest scores of the level nine and ten control treatment students.

Table 7
Analysis of Covariance on Career Attitudes
of Ninth and Tenth Grade Students

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Values
Treatment	1	0.0058	0.0058	4.81*
Log Grade Level	1	0.0034	0.0034	2.98
Log Pretest	1	0.4457	0.4457	371.39
Residual	129	0.1584	0.0012	

*Significant at the 0.05 Level (F=3.92).

Table 8
Analysis of Covariance on Career Competence
of Ninth and Tenth Grade Students

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F Value
Treatment	1	0.2416	0.2416	15.10*
Log Grade Level	1	0.0493	0.0493	3.08
Log Pretest	1	0.4931	0.4931	30.82
Residual	129	2.0699	0.0160	

*Significant at the 0.01 Level (F=6.84).

Comprehensive Career Education Results

Questions asked of students, parents, teachers, and business and industrial personnel were analyzed in terms of the percentage of favorable responses as opposed to the percentage of negative responses. In the surveys and student scale, only two questions received a larger percentage of negative responses than positive responses. The first question is: Did your class walk to some place to see workers at their jobs in school or near school? For the majority of students in Lincoln County, there are very few, if any, workers outside of the school within walking distance. The vast majority of field trips for these students are taken via bus. The second question which received a majority of negative responses is: Did a worker come to your classroom to show you how he does something in his

work? The reason for the negative responses may be due to the remote areas in which some of the schools are located. Yet, there is an even greater need for these experiences in remote areas.

The results from the survey of 794 parents indicate a positive reaction to the career education program. It is worthy to note that 91% of the parents indicated that career education should be continued. A summary of the data obtained from parents is provided in Table 9.

Table 9
Summary of Results of 794 Parents
Responding to the Parent Opinion Survey

Item	Question	Percentage	
		Yes	No
1	My child talks about career education at home	75	25
2	My child has discussed my occupation with me	60	31
3	My child shows more interest in discussing the occupations of neighbors, relatives and other people in the community	54	46
4	My child's attitude toward school has improved	85	15
5	My child is more enthusiastic about going to school	79	21
6	My child is more enthusiastic about the study of math, reading, science, etc.	77	23
7	Does your child relate school activities to activities and occupations in the community?	60	40
8	Does your child attempt to relate career education activities to his interests, abilities, and desires?	67	33
9	Has career education been what you expected?	72	28
10	Is career education worthwhile?	89	11
11	Should career education be continued?	91	9

The results from the Career Education Scale-Student with 522 students in grades four through eight indicate a positive reaction to all questions with the exceptions noted above. It is significant to note that 89% of the students feel as though they are receiving experiences which help them understand themselves. Table 10 provides a summary of the data obtained from students. Additional results obtained through the use of the Career Education Scale are as follows:

1. Test data from the Lincoln County students yielded a higher percentage of positive responses to every item of career education implementation than did test data from students in the norm control groups.

2. The Lincoln County students provided a higher percentage of positive responses to twelve of fifteen items of career education implementation than did the students from the norm experimental group. The areas of less positive response were (a) walking field trip, (b) resource person-equipment, and (c) talking about work experience.

3. The Lincoln County fourth grade students were involved in relating subject content to careers, hands-on activities, role playing, and talking about work experiences to a greater extent than students of any other grade.

4. The Lincoln County fifth grade students were involved to the least extent in relating subject content and careers.

5. The Lincoln County sixth grade and seventh grade students were involved much less with hands-on activities, role playing, and talking about work experiences than students of other grades.

6. The Lincoln County sixth grade students were involved much less with the use of resource people than students of any other grade.

7. The Lincoln County eighth grade students were involved much more with resource people than students of any other grade.

8. In overall implementation of career education in Lincoln County, the fourth grade students were highest in their positive response to career education activities being provided to them. The eighth grade students received the second

Table 10
Summary of Result of 522 Students, Grades
4 - 8, on the Career Education Scale-Student

Item	Question	Percentage	
		Yes	No
1	Have you talked or done anything in school that helped you find out more about you self?	89	11
2	Have you talked or done anything in school that helped you find out more about workers?	92	8
3	Have you talked or done anything in school that helped you find out about the education or training that workers need?	85	15
4	Did your class walk to some place to see workers at their jobs in school or near school?	34	66
5	Did your class take a field trip in cars or on a school bus to see workers doing their jobs?	67	33
6	Have you done on your own to see workers doing their jobs even when you weren't told to do so?	55	45
7	Did someone other than your teacher talk to your class about careers or jobs?	74	26
8	Did a worker show your class things that he uses in his work?	57	43
9	Did a worker come to your classroom to show you how he does something in his work?	48	52
10	Did members of your class act like you were workers and do things that workers do?	59	41
11	Did members of your class make things in school that a real worker would make?	61	39
12	Did some members of your class talk about real work that they did with a worker?	53	47
13	Did some members of your class use math in a project like a real worker would use math?	66	34
14	Did members of your class use speaking and writing of correct English like a real worker would?	66	34
15	Did members of your class use science in a way that real workers would use science?	61	39

highest percentage of implementation of career education activities. The fifth grade students closely followed the eighth grade students. The seventh and sixth grades, respectively, rounded out the rank order.

Data upon which these results are based are provided in Table 11 and Table 12. Table 11 provides the means for each item at each grade level, the mean for each item for all grade levels, and the mean for all items at each grade level. A comparison of norm groups with Lincoln County students who were provided with career education experiences is provided in Table 12.

Table 11
Positive Response (%) on
Career Education Scale — Student

Item	GRADE					
	4	5	6	7	8	\bar{X}
1	88	86	98	92	89	89
2	94	95	91	90	93	92
3	67	88	86	80	94	85
4	35	56	31	36	14	34
5	73	76	64	53	72	67
6	55	48	58	55	68	55
7	64	68	53	76	84	74
8	63	68	34	42	66	57
9	50	52	33	27	57	48
10	77	63	56	54	63	59
11	80	59	55	62	49	61
12	60	55	54	54	56	53
13	86	59	60	68	56	66
14	82	58	68	68	66	66
15	80	54	66	53	75	61
\bar{X}	70	66	60	61	67	65

The results of the survey which included 78 teachers of students in grades one through twelve is extremely positive. The average percentage of favorable responses is 89% for all questions asked. The data are summarized in Table 13.

The results of the survey of business and industrial personnel are favorable. It is worthy to note that 100% of those interviewed indicated that the career education program should be continued. Table 14 provides a summary of the data obtained by interviewing 30 business and industrial personnel who operate organizations in Lincoln County.

CONCLUSIONS

The conclusions are based on data obtained through the use of the California Language Achievement Test, the California Mathematics Achievement Test, the Occupational Awareness Test, the Career Maturity Inventory-Attitudes,

Table 12
Comparison of Lincoln County
Career Education Project
with Norm Group

Item	NORM GROUP Percent Positive		LINCOLN COUNTY Percent Positive
	Experimental	Control	
1	65	64	89
2	81	68	92
3	71	52	85
4	50	28	34
5	56	20	67
6	46	49	55
7	63	41	74
8	63	28	57
9	43	20	48
10	54	34	59
11	47	31	61
12	54	37	53
13	55	46	66
14	58	46	66
15	56	52	61

the Career Maturity Inventory-Competence, the Parent Opinion Survey, the Career Education Scale-Student, the Teacher Opinion Survey, and the Business and Industrial Opinion Survey. Generalizations are confined to evaluation instruments comparable to those used in the study. The conclusions are also confined to populations similar to those used in the study. Purposes other than those outlined in the problem were not explored in the study. The conclusions suggested within the limitations of the study are as follows:

1. Students in grades one through six who were provided with planned career education experiences for two semesters were significantly different on language achievement from students in grades one through six who were not exposed to planned career education experiences. The adjusted posttest means for the experimental group were 11 percent higher than the adjusted posttest means for the control group on language achievement.

2. Students in grades one through six who were provided with planned career education experiences for two semesters were significantly different on mathematics achievement from students in grades one through six who were not exposed to planned career education experiences. The adjusted posttest means for the experimental group were 21.5 percent higher than the adjusted posttest means for the control group on mathematics achievement.

3. Students in grades one through six who were provided with planned career education experiences for two semesters were significantly different on occupational awareness from students in grades one through six who were not exposed to planned career education experiences. The adjusted posttest means

Summary of Results of 78 Teachers
Responding to the Teacher Opinion Survey

Item	Question	Percentage	
		Yes	No
1.	The purposes of Career Education were clear to me by the beginning of this school year	94	6
2.	The purposes of Career Education appeared to be clear to most of the students.	82	18
3.	The major purposes set forth for Career Education were adequately met during the school year.	90	10
4.	The time we had allotted was sufficient to accomplish the purposes set forth for Career Education.	82	18
5.	Students gained first hand knowledge of the world of work (field trips, resource people, etc.)	96	4
6.	Students were exposed to adequate hands on experiences.	87	13
7.	Students explored their capabilities in various areas under a variety of situations pertaining to the world of work.	85	15
8.	Students learned to self appraise their emerging potentials	72	28
9.	Equipment was adequate to accomplish the objectives of the Program	88	12
10.	Adequate materials and supplies were made available for the Program.	94	6
11.	Career Education of this type should be made available to every student	96	4
12.	Students became aware of the factors that contributed to success in an occupation.	96	4
	I feel that the Career Education has made most of my students:		
13.	More well-rounded	90	10
14.	More motivated and interested	94	6
15.	More skilled in planning their careers	79	21
16.	More able to use their own initiative	90	10
17.	More self confident	87	13
18.	More able to see that knowledge is relevant to job success	92	8
19.	More able to make vocational choices that are satisfying and productive for both themselves and the society of which they are a part	81	19
20.	Other teachers in this school have a favorable attitude toward Career Education.	82	18
21.	Helping students to appraise their abilities, interests and potentials is an important part of Career Education.	97	3
22.	Instruction in the Career Education is relevant to the needs of students at this level.	94	6
	The local project coordinators have provided assistance in:		
23.	Selecting appropriate instructional materials	95	5
24.	Coordinating planning activities among teachers	85	15
25.	Helping me to better understand my mission	95	5

Table 14
Summary of Results of Interviews
with 30 Business and Industrial Personnel

Item	Question	Percentage	
		Yes	No
1.	Are you familiar with career education?	93	7
2.	Have you been contacted by personnel from the project?	80	20
3.	Do you feel that career education should be provided by the schools in Lincoln County?	93	7
4.	Are students more interested in and aware of occupations of people in the community?	83	17
5.	Is business and industry more involved in school activities because of career education?	88	12
6.	Do students seem to be more interested in school since career education was started?	77	23
7.	Is the general attitude toward career education favorable?	97	3
8.	Should career education be continued?	100	0
9.	Would you like to be involved with students in career education activities?	93	7

for the experimental group were 18 percent higher than the adjusted posttest means for the control group on occupational awareness.

4. Students in grades seven and eight who were provided planned career education experiences for two semesters were not significantly different on attitudes related to career maturity from students in grades seven and eight who were not exposed to planned career education experiences.

5. Students in grades seven and eight who were provided planned career education experiences for two semesters were not significantly different on competence related to career maturity from students in grades seven and eight who were not exposed to planned career education experiences.

6. Students in grades nine and ten who were provided planned career education experience for two semesters were significantly different on attitudes related to career maturity from students in grades nine and ten who were not exposed to planned career education experiences.

7. Students in grades nine and ten who were provided planned career education experiences for two semesters were significantly different on competence related to career maturity from students in grades nine and ten who were not exposed to planned career education experiences.

8. Parents of students in grades one through twelve reacted in a positive manner to questions about career education and its value to their sons and daughters.

9. Students in grades four through eight indicated that the career education process was, in fact, being utilized in their classrooms.

10. Teachers of students in grades one through twelve reacted in a highly positive manner. They indicated that the role of career education was clear to them, that the career education process was beneficial to students, and that the project staff provided adequate assistance.

11. Business and industrial personnel with organizations located in Lincoln County reacted in a very positive manner when questioned about the merits of the career education process. All personnel interviewed felt that career education should be continued.

IMPLICATIONS

The emphasis in the study was on the career education variable and its effect on language achievement, mathematics achievement, occupational awareness, career maturity, attitudes of parents, student reaction, teacher attitudes, and attitudes of business and industrial personnel.

The results of the study indicate that career education is effective in achieving goals which were measured by the researcher with the exception of the seventh and eighth grades. However, data indicate that teachers of eighth grade students were providing a high degree of career education experiences while teachers of seventh grade students were providing much fewer career education experiences.

Data from the Career Maturity Inventory (CMI) for seventh and eighth grade students were grouped for analysis. The process of grouping the CMI data may have eliminated the effect for eighth grade students which is expected when the data from the Career Education Scale - Student (CES-S) is analyzed. The degree of career maturity achieved by seventh grade students appears to be highly correlated with the level of career education experiences provided to the students.

The implication which emerges when the data from the CMI and the CES S are compared is that career education is effective as a method of assisting students achieve life goals and subject goals when career education experiences are provided to students.

The study provides evidence to support the following hypotheses:

1. Utilizing experiential activity to illustrate abstract symbols and concepts related to career education goals (life goals and academic subject goals) is an effective method of increasing academic achievement.
2. Providing meaningful experiences to students which are related to career education goals (life goals correlated with subject goals) assists students in understanding the work oriented society and the ramifications of the concept of a meaningful career.
3. Parents value career education as an appropriate vehicle for generating interest and enthusiasm in their sons and daughters toward formal education.
4. Teachers overwhelmingly support career education as a method of creating student interest, motivating students, and developing initiative and self confidence in students.
5. The degree of career maturity achieved by students appears to be correlated with the degree and intensity of career education activities (subject goals correlated with careers through field trips, guest speakers, role playing, hands-on activities, etc.) which are provided to the students.
6. In-Service education which focuses on both process (human relations) and task (planning, development, implementation) components is effective in delivering career education activities to elementary and secondary students.
7. Effective implementation is facilitated through leadership which directs its attention to the promotion of a climate which allows teachers the opportunity for personal involvement, ego support, social mobility, introspective articulation, feedback, and professional dialogue.
8. Business and industrial personnel overwhelmingly support career education as a method of creating greater student interest and increasing the involvement of members of the community in the local school system.

RECOMMENDATIONS

The recommendations which appear justified from the results, conclusions, and implications of the study are as follows:

1. That students continue to receive career education experiences in the form of a teaching process rather than a separate content course. The role of career education must continue to be one of providing meaning to the school subjects currently being taught, providing meaning to experiences encountered in the student's world, and providing meaning to experiences related to the world of work.

2. That teachers continue to receive experiences which will build on the effectiveness that has resulted thus far and increase the degree to which career education experiences are provided to children and youth.

3. That administrative and supervisory staff continue to promote a climate which provides teachers with an opportunity for personal involvement, ego support, social mobility, introspective articulation, feedback, and professional dialogue.

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¹ LeVene A. Olson, "An Approach to Career Education in West Virginia" (Paper presented to the West Virginia Advisory Council on Vocational Education, August, 1973, Charleston, West Virginia), p. 12.

² LeVene A. Olson, *An Evaluation of Elementary Career Education Based On Language Achievement, Mathematics Achievement, and Occupational Awareness in Lincoln County, West Virginia* (Bethesda, Maryland: Eric Document Reproduction Service, 1972), pp. 51-62.

³ Herbert B. Holstein, "Improving a Rural Area School Program with Expanded Vocational Education Services by Utilizing Comprehensive Career Orientation and Exemplary Activities" (Hamlin, West Virginia: Lincoln County School System, July, 1970), 74 pp.

⁴ Holstein, "Improving a Rural Area School Program," p. 6.

⁵ D. T. Campbell and J. C. Stanley, *Experimental and Quasi-Experimental Designs for Research* (Chicago: Rand McNally & Company, 1963), p. 47.

⁶ Campbell and Stanley, *Experimental and Quasi-Experimental*, p. 47.

⁷ Olson, *An Evaluation of Elementary Career Education*, 78 pp.

⁸ LeVene A. Olson, "An Evaluation of Career Orientation and Career Exploration in Lincoln County, West Virginia" (Huntington, West Virginia: Marshall University, 1973), 40 pp.

APPENDIX A-I

INSTRUMENTATION

CALIFORNIA ACHIEVEMENT TESTS

Devised by *ERNEST W. TIEGS* and *WILLIS W. CLARK*

The California Language Achievement Test measures achievement in English language skills. The test includes sections in Capitalization, Punctuation, Usage and Structure, and Spelling. The following levels were used: Level 1 for grades one and two, and Level 2 for grades three and four, and Level 3 for grades five and six.

The California Mathematics Achievement Test measures achievement in mathematics. The test includes sections in Computation, Concepts, and Problems. Level 3 also includes a section in Fractions. The following levels were used: Level 1 for grades one and two, Level 2 for grades three and four, and Level 3 for grades five and six.

OCCUPATIONAL AWARENESS TESTS

Devised by *THOMAS E. WOODALL*, *BILLY J. BURTON*,
DARYLE G. ELKINS and *HERBERT HOLSTEIN*

The Occupational Awareness Test measures knowledge of workers. The test includes questions dealing with identification of workers, linking workers with the tools of their trade, placing workers in the environmental setting in which their job is performed, and identifying the proper duties associated with specific occupations.

The Occupational Awareness Test, level one, is a pictorial test involving a wide sampling of the occupational spectrum. The test includes four sections, each designed to focus on a particular phase of occupational awareness. Section I involves the identification of occupational figures. Section II is devoted to the selection of appropriate occupational tools. Section III is designed to test the ability of students to place workers in their proper environmental setting. Section IV relates to the students knowledge of the occupational elements of home and family.

The Occupational Awareness Test, level two focuses on occupations that exist at the community level and in cultural settings more unfamiliar to the student. In view of this factor, this test again samples a wide range of community occupations. Level two utilizes both pictures and written material and involves the same format as the level one test.

The Occupational Awareness Test, level three is designed to measure the extent to which the level three curriculum has succeeded in increasing the level of student's occupational knowledge. The test is entirely written at this level, and its four sections focus on essentially the same general areas as the level one and two tests, except for Section I, which involves the linking of occupational workers to the function that they perform.

The Occupational Awareness Test, level four is as follows: Each of the test's two sections involves the linking of twenty-six occupational workers to their appropriate duty or job. The test is matching in nature with students being asked to match a list of workers on the left of the test page with the proper job from a list of duties on the right side.

The Occupational Awareness Test, level five is designed to measure the extent to which the curriculum has succeeded in increasing the level of students occupational knowledge. This test, like that at level four, involves the matching of occupational workers with their appropriate functions or duties. There are two sections of twenty-six questions each.

The Occupational Awareness Test, level six contains two sections. The first section is multiple choice and in each question an occupation is listed. Three job duties or functions are listed as alternatives. The task of the student is to select the proper job from the available alternatives. Section II involves the matching of workers with their appropriate job or function.

CAREER MATURITY INVENTORY

Devised by *JOHN O. CRITES*

The tests were developed, standardized, and validated at the University of Iowa. The Career Maturity Inventory (CMI) was formerly called the Vocational Development Inventory (VDI). The CMI Attitude Test is comprised of statements about

1. Involvement in the choice process (the extent to which the individual is actively participating in the process of making a choice);
2. Orientation toward work (the extent to which the individual is task or pleasure-oriented in his attitudes toward work and the values he places upon work);
3. Independence in decision-making (the extent to which the individual relies upon others in choice of an occupation);
4. Preference for vocational choice factors (the extent to which the individual bases his choice upon a particular factor);
5. Conceptions of the choice process (the extent to which the individual has accurate or inaccurate conceptions about making an occupational choice).

The CMI Competence Test consists of five parts (Part 1 and Part 5 were used in this study) which measure the following Career choice Competencies:

1. Knowing Yourself (Self-Appraised);
2. Knowing About Jobs (Occupational information);
3. Choosing A Job (Goal Selection);
4. Looking Ahead (Planning);
5. What Should They Do? (Problem Solving).

PARENT OPINION SURVEY

Devised by *LeVENE A. OLSON*

The school system is interested in how you feel about Career Education. There are no right or wrong answers to the following questions.

The answers that you provide to these questions will be kept strictly confidential. Your name will not be used when the information is reported.

Please respond to each question by placing a circle around the "yes" or "no."

- | | | |
|--|-----|----|
| 1. My child talks about career education at home. | Yes | No |
| 2. My child has discussed my occupation with me | Yes | No |
| 3. My child shows more interest in discussing the occupations of neighbors, relatives and other people in the community. | Yes | No |
| 4. My child's attitude toward school has improved. | Yes | No |
| 5. My child is more enthusiastic about going to school. | Yes | No |

- | | | | |
|-----|--|-----|----|
| 6. | My child is more enthusiastic about the study of math, reading, science, etc. | Yes | No |
| 7. | Does your child relate school activities to activities and occupations in the community? | Yes | No |
| 8. | Does your child attempt to relate career education activities to his interests, abilities and desires? | Yes | No |
| 9. | Has career education been what you expected? | Yes | No |
| 10. | Is career education worthwhile? | Yes | No |
| 11. | Should career education be continued? | Yes | No |

CAREER EDUCATION SCALE - STUDENT

Devised by JOSEPH FREUND

- | | | | | | | |
|-----|--|-----|-----|---|----|----|
| 1. | Have you talked or done anything in school that helped you find out more about yourself? | YES | yes | ? | no | NO |
| 2. | Have you talked or done anything in school that helped you find out more about workers? | YES | yes | ? | no | NO |
| 3. | Have you talked or done anything in school that helped you find out about the education or training that workers need? | YES | yes | ? | no | NO |
| 4. | Did your class walk to some place to see workers at their jobs in school or near school? | YES | yes | ? | no | NO |
| 5. | Did your class take a field trip in cars or on a school bus to see workers doing their jobs? | YES | yes | ? | no | NO |
| 6. | Have you gone on your own to see workers doing their jobs even when you weren't told to do so? | YES | yes | ? | no | NO |
| 7. | Did someone other than your teacher talk to your class about careers or jobs? | YES | yes | ? | no | NO |
| 8. | Did a worker show your class things that he uses in his work? | YES | yes | ? | no | NO |
| 9. | Did a worker come to your classroom to show you how he does something in his work? | YES | yes | ? | no | NO |
| 10. | Did members of your class act like you were workers and do things that workers do? | YES | yes | ? | no | NO |
| 11. | Did members of your class make things in school that a real worker would make? | YES | yes | ? | no | NO |
| 12. | Did some members of your class talk about real work that they did with a worker? | YES | yes | ? | no | NO |
| 13. | Did some members of your class use math in a project like a real worker would use math? | YES | yes | ? | no | NO |
| 14. | Did members of your class use speaking and writing of correct English like a real worker would? | YES | yes | ? | no | NO |
| 15. | Did members of your class use science in a way that real workers would use science? | YES | yes | ? | no | NO |

Career Education Scale - Student

ITEM CONTENT

- | | |
|------------------------------------|------------------------------------|
| 1. Self Awareness | 9. Resource Person - Demonstration |
| 2. Worker Awareness (General) | 10. Role Playing |
| 3. Workers Training | 11. Hands On Activities |
| 4. Walking Field Trip | 12. Work with Reporting |
| 5. Vehicular Field Trip | 13. Relationship: Careers Math |
| 6. Worker Observation - Individual | 14. Relationship: Careers English |
| 7. Resource Person - Talk | 15. Relationship: Careers Science |
| 8. Resource Person - Equipment | |

TEACHER OPINION SURVEY

Devised by *LeVENE A. OLSON*

This is not a test. There are no right or wrong answers. We are interested in your opinion about career education in your school. Information obtained during this survey will be reported on a group basis only. No information about individuals will be provided to Local, State, or Federal agencies. The information you provide will be kept strictly confidential.

Please respond to each statement by placing a circle around the answer which best indicates your opinion about each statement according to the following criteria.

- | | | | | | |
|---|-----|-----|---|----|----|
| YES: I strongly agree with the statement. | YES | yes | ? | no | NO |
| yes: I agree with the statement in general. | YES | yes | ? | no | NO |
| ?: I am not sure. | YES | yes | ? | no | NO |
| no: I disagree with the statement. | YES | yes | ? | no | NO |
| NO: I strongly disagree with the statement. | YES | yes | ? | no | NO |
| 1. The purposes of Career Education were clear to me by the beginning of this school year. | YES | yes | ? | no | NO |
| 2. The purposes of Career Education appeared to be clear to most of the students. | YES | yes | ? | no | NO |
| 3. The major purposes set forth for Career Education were adequately met during the school year. | YES | yes | ? | no | NO |
| 4. The time we had allotted was sufficient to accomplish the purposes set forth for Career Education. | YES | yes | ? | no | NO |
| 5. Students gained first-hand knowledge of the world of work (field trips, resource people, etc.) | YES | yes | ? | no | NO |
| 6. Students were exposed to adequate hands-on experiences. | YES | yes | ? | no | NO |

- | | | | | | | |
|-----|--|-----|-----|---|----|----|
| 7. | Students explored their capabilities in various areas under a variety of situations pertaining to the world of work. | YES | yes | ? | no | NO |
| 8. | Students learned to self-appraise their emerging potentials. | YES | yes | ? | no | NO |
| 9. | Equipment was adequate to accomplish the objectives of the Program. | YES | yes | ? | no | NO |
| 10. | Adequate materials and supplies were made available for the Program. | YES | yes | ? | no | NO |
| 11. | Career Education of this type should be made available to every student. | YES | yes | ? | no | NO |
| 12. | Students became aware of the factors that contributed to success in an occupation. | YES | yes | ? | no | NO |
| | I feel that the Career Education has made most of my students: | | | | | |
| 13. | More well-rounded | YES | yes | ? | no | NO |
| 14. | More motivated and interested | YES | yes | ? | no | NO |
| 15. | More skilled in planning their careers | YES | yes | ? | no | NO |
| 16. | More able to use their own initiative | YES | yes | ? | no | NO |
| 17. | More self confident | YES | yes | ? | no | NO |
| 18. | More able to see that knowledge is relevant to job success | YES | yes | ? | no | NO |
| 19. | More able to make vocational choices that are satisfying and productive for both themselves and the society of which they are a part | YES | yes | ? | no | NO |
| 20. | Other teachers in this school have a favorable attitude toward Career Education. | YES | yes | ? | no | NO |
| 21. | Helping students to appraise their abilities, interests and potentials is an important part of Career Education. | YES | yes | ? | no | NO |
| 22. | Instruction in the Career Education is relevant to the needs of students at this level. | YES | yes | ? | no | NO |
| | The local project coordinators have provided assistance in: | | | | | |
| 23. | Selecting appropriate instructional materials | YES | yes | ? | no | NO |
| 24. | Coordinating planning activities among teachers | YES | yes | ? | no | NO |
| 25. | Helping me to better understand my mission | YES | yes | ? | no | NO |

BUSINESS AND INDUSTRY OPINION SURVEY

Devised by *LeVENE A OLSON*

- | | | | | | | |
|----|--|-----|-----|---|----|----|
| 1. | Are you familiar with career education? | YES | yes | ? | no | NO |
| 2. | Have you been contacted by personnel from the project? | YES | yes | ? | no | NO |

- | | | | | | | |
|----|--|-----|-----|---|----|----|
| 3. | Do you feel that career education should be provided by the schools in Lincoln County? | YES | yes | ? | no | NO |
| 4. | Are students more interested in and aware of occupations of people in the community? | YES | yes | ? | no | NO |
| 5. | is business and industry more involved in school activities because of career education? | YES | yes | ? | no | NO |
| 6. | Do students seem to be more interested in school since career education was started? | YES | yes | ? | no | NO |
| 7. | Is the general attitude toward career education favorable? | YES | yes | ? | no | NO |
| 8. | Should career education be continued? | YES | yes | ? | no | NO |
| 9. | Would you like to be involved with students in career education activities? | YES | yes | ? | no | NO |

PART TWO

Program Description

INTRODUCTION

Career Education has emerged recently as a composite of innovations with the central theme being the development of self in relationship to education and careers. It is a concept which possesses the potential to revitalize the formal educational system and move education into the twentieth century. It is a concept which demands increased experiential learning for children, youth, and adults. "Real" experiences are utilized to illustrate abstract symbols and concepts. The purpose of the career education approach is to help students become more responsible individuals who are capable of making and implementing accurate career choices in an exceedingly complex and continuously changing society.

The intense interest which has been generated in the career education concept is due to many forces in society. These forces relate to: cognitive orientation, experiential learning, school dropouts, confined formal education, meaningful relationships, self identity, cultural and career shock, traditional and emerging occupations, dissatisfaction with work, and women's careers.

Historically, the Nation's schools have been oriented toward college entrance requirements. The system may meet the needs of the students who will enroll in college but for the majority of the students, the present system does not provide them with the competencies needed.

The time has arrived when educators must be equally concerned about students who will enter the work force prior to receiving four years of college. This is not to say that educators should not be concerned about college as an appropriate avenue to the world of work. Educators must concern themselves with all students and all careers. Schools must become oriented more toward the affective and psychomotor domains rather than being concerned solely with the cognitive domain.¹

Traditionally there has been an absence of experiences which provide students with an understanding of the relationships between education and work. Abstract concepts and symbols are taught to students in a passive manner with regurgitation expected at the appropriate time.

Little thought is given to utilizing hands-on activities to illustrate abstractions.² Students have not accepted responsibility for their actions because it is usually not expected.

For students to internalize the goals for fine arts, language arts, mathematics, science, and social studies, "real" experiences in the cognitive, affective and psychomotor domains must be provided. Students are more likely to achieve subject goals and career education goals when they are taught in an active rather than a passive environment.³

Large numbers of youth drop out of school lacking entry level employment skills. Many of these former students indicate that they will under no circumstances re-enter the formal educational system. Education has been a painful experience for some. It has not been viewed as an avenue to the world of work. It has not been viewed as a place in which entry level skills could be acquired. Unemployment rates for those who leave the educational system early are usually quite high.⁴

Experiences must be provided to all students at an early age which will help potential dropouts understand the value of education in a work oriented society. Experiences which are relevant in terms of the needs of the student must be provided.⁵

Children, youth and adults often lack a sound understanding of the relationship between education and work. Educators often assume that children and youth inherently understand the value of school subjects and their relationship to the world outside the classroom.⁶

The source of learning is often assumed to come from between the two covers of the "great books" and takes place within the four walls of the classroom. For many excellent teachers, the source of learning is based on the students personal experiences as they relate to what is found in print and other media. Structured experiences within and outside the four walls must be a source of learning.⁷ Neglect of what takes place within students causes the learning process to operate in a vacuum.

A reduction in family size has resulted in fewer significant relationships for children, youth, and adults. Coupled with smaller family size is the fact that the place of residence is often a considerable distance from other members of the family (grandparents, uncles, aunts, cousins).

In the past, awareness of self, education, and careers was a by-product of the availability of members of the family with whom children, youth, and adults could interact.⁸ With fewer significant persons with whom children and youth can interact, teachers must recognize that they are becoming more significant to students.

Many teachers have accepted this dimension to teaching. However, ways and means must be used to insure that teachers effectively interact with all students.

There has been a systematic reduction in the number and quality of relevant experiences provided in the home, school, and community which produce accurate self understanding and meaningful self acceptance. Many children, youth, and adults lack a clear self identity and fail to understand how or where they fit into the social, career, and educational structure.⁹

Many young people search aimlessly while attempting to determine their identity. Those who are successful in developing a self concept must then search for ways in which they can implement their self concept. For many people, the most meaningful method of implementing their self concept comes through rewarding work.¹⁰

The increased mobility of youth and adults has enhanced employability but has resulted in cultural and career shock. Students have not been provided with experiences related to the expectations of various social settings and of various careers. Through mobility, youth and adults are hurled into a society which contains many unknowns for them.¹¹

Adults often assume that youth of today are very sophisticated. In many ways, they are sophisticated. Yet youth have not been provided with the experiences which allow them to successfully cope with situations, such as, understanding how various occupations will help them implement their self concept, understanding how to determine employment opportunities, understanding how to apply and interview for a job, skill at interacting in various social situations, ability to meet people in new and strange surroundings, ability to meet the demands of living away from home, etc. For many youth, the shock, frustration, and anxieties are too great to gain a feeling of fulfillment.

The increase in technology has decreased the employability of many youth and adults. On the one hand, a large number of youth and adults are available for work, yet they do not possess the competencies to qualify for many occupations.¹² Jobs remain unfilled because many youth and adults are not provided with information and experience concerning the traditional and emerging occupations. Nor have experiences been provided concerning the ways in which these occupations will meet the needs of the individual.

The result of this situation has been the development of numerous schools which provide education and training in the traditional and emerging occupations. Actual on the job experiences are not usually provided until the course of

study is completed. For those who dislike the kind of work for which they were educated or trained, they have lost time, money, and commitment.

Dissatisfaction with one's present work situation has often resulted from a lack of experiences related to abilities, aptitudes, needs, likes, etc. and a lack of knowledge about the options available in the labor market.¹ In some cases, the dissatisfaction by workers has resulted in sabotage.

Many youth and adults explore careers by changing jobs many times. During this process, some youth and adults become locked into occupations because they have assumed additional family and social responsibilities which dictates certain levels of financial responsibility. For many, continued exploration of careers is replaced with job security. Often, the result is dissatisfaction.

Dissatisfactions with the milieu surrounding career opportunities available to women is quite apparent in today's society.² Schools have systematically encouraged female students to enroll in certain courses only. Society has discouraged the entrance of females into many career areas. This process has tended to channel women into a limited number of careers. Yet, women possess a sincere desire to having the option of pursuing both career goals and marriage goals.

But the fault does not lie solely with the attitudes and values of the male. Experiences which will assist females alter their attitudes must be provided. In many cases, the greatest obstacle to providing career opportunities to women is the long held attitudes and values of women. Depicting females in certain roles only, must be altered by the many commercial firms that provide resources to school systems.

Because children and youth are educated within the confines of the four walls of the classroom in a traditional manner, many do not know who they are, where they are going, or how to get there. Students have not been provided with experiences which allow them to make and implement accurate choices about the present and future.

The public school plays a vital role in the development of the student. The student develops physically, mentally, and emotionally. These developments are related to the student's future role in society. If proper experiences related to self, education, and careers are not provided to the student, career development does not keep pace with physical development. Students do develop attitudes toward self, education, and careers. Yet, many students are not provided with the experiences which facilitate proper development. As a result, few students understand themselves nor the relationship between education and work.

The cost to society of providing an education which is suited to neither student needs nor societal needs are tremendously high. Society is drained of resources for every individual who cannot successfully cope with self, education, and or employment. The unemployment lines, welfare roles, drug centers, and mental institutes are filled with individuals who have not been provided with the experiences which are necessary to successfully meet and overcome challenges and allow individuals to become contributing members of society.

School systems utilize taxpayers money to educate children and youth. It is expected that youth leaving school will possess the necessary competencies (attitudes, skills, and knowledge) to effectively function in a work oriented society. In the past, very few careers or work oriented courses were offered and then to only a small percentage of the students.

The paradox exists. On the one hand, too few courses have been career oriented and then only at the upper high school level. While on the other hand, all students eventually enter the career world through paid or unpaid work. For most students, the effort has been too little, too late.

Career Education is not a panacea for all educational ills. It does, however, offer a practical approach that makes educational experiences relevant to the needs of children and youth and relates the school program to experiences away from school.

CAREER EDUCATION

(Kindergarten Through Twelfth Grade)

Career education is an instructional approach which is used to assist children, youth, and adults understand nebulous concepts by providing concrete experiences in all school subjects which relate to self, education, and careers. Career education is based upon a long range career development process which begins long before the child enters school and continues long after the youth leaves school.

Students, parents, the business and industrial community, and educators have become painfully aware of the problems faced by many children, youth, adults. Many of the problems are caused by an absence of a clear self, educational, and career identity. For many educators, the means to resolving these problems is through a systematic approach to teaching which relates life goals to subject goals.

Career education goals emerge from the relationship of life goals to subject goals. These goals reflect concerns about attitudes, knowledge, and skills of children, youth, and adults as they venture into social, educational, and career encounters. The emphasis in career education is on reducing the difficulties which occur in these encounters with reality.

Career education is a part of all academic, general, and vocational subjects from kindergarten through adulthood. Yet, all of education is not career education. The long range goal of career education is to produce responsible individuals who are capable of making and implementing accurate choices concerning the present and future. The purpose implies that individuals possess positive attitudes, appropriate knowledge, and adequate skills to make and implement wise decisions.

The course content for career education is found in the courses currently being taught in the elementary and secondary schools. The content of the subject is related to the student's world and the career world. The emphasis is definitely not on memorizing job descriptions or lists of occupations. Rather the approach relates student needs, fears, likes, dislikes, abilities, disabilities, aptitudes, and limitations to educational endeavors and career potential.

The teaching methods or process used to illustrate abstract concepts related to both life goals and subject goals are: field trips, interpersonal interaction, hands-on activities, multi-media, guest speakers, research activities, simulation, role playing, and work experience. The primary focus of the process is the use of "real" experiences to illustrate abstract symbols and concepts related to self, education, and careers.

Career education provides meaning to the subjects currently taught in the schools. Individuals who are encouraging school systems to adopt the career education approach are sincerely committed to the development of academic skills. Research indicates that students achieve a higher level of academic skill when learning experiences relate to things outside the school rather than being confined solely within the four walls of the classroom. The student does not exist solely to attend school. Nor should the school attempt to exist separate and apart from the society in which it finds itself.

The current approach to career education may take the form¹⁵ illustrated in Figure 1. The components which comprise the career education approach are career awareness (K-6), career orientation (7-8), career exploration (9-12), career preparation (10-12), and intensive guidance and placement. All students in academic, general, and vocational subjects are involved in encounters with reality through career education.

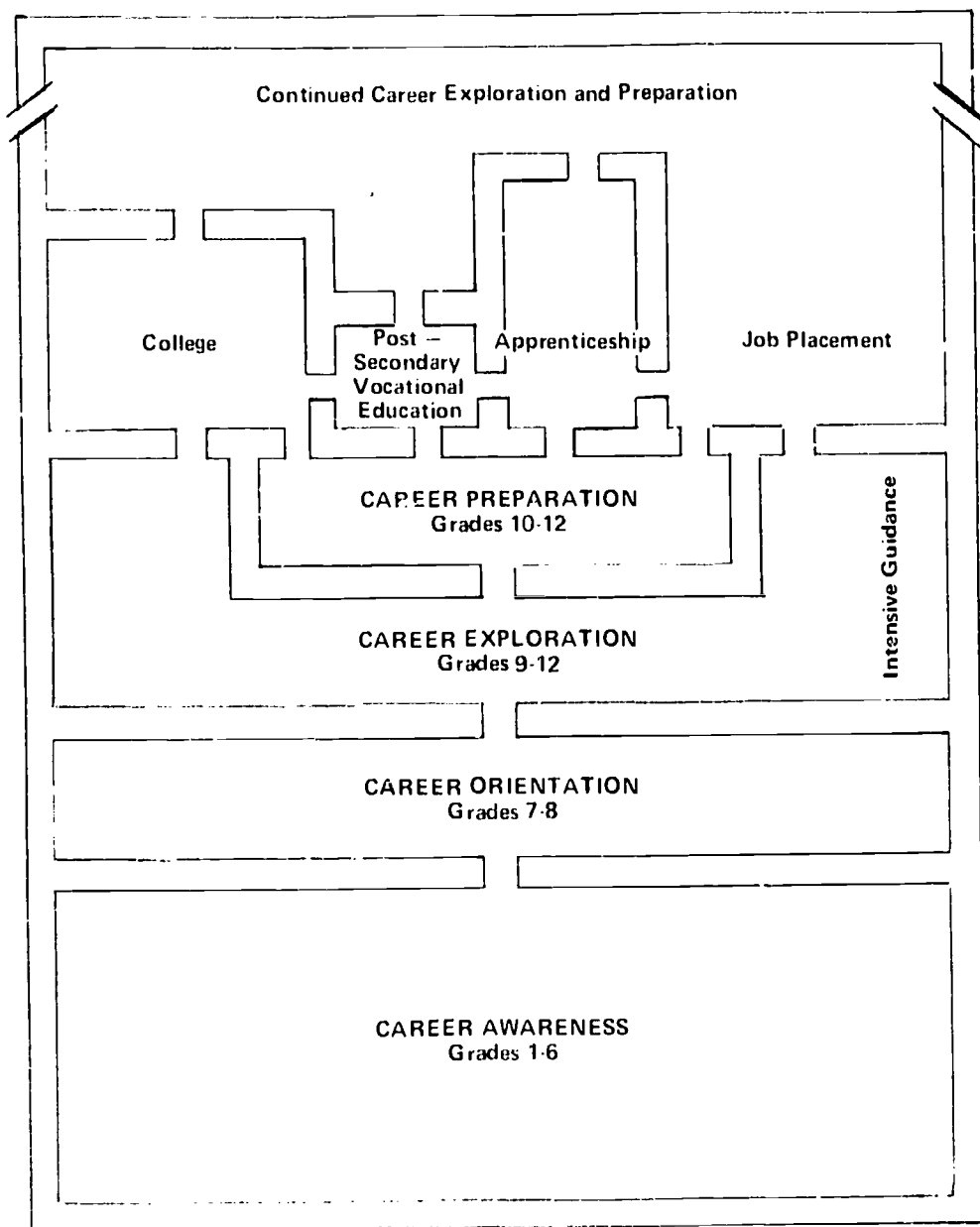


Figure 1. Career Education Components.

CAREER AWARENESS

'Career awareness' (kindergarten through six) utilizes the careers which are currently found in the books, films, etc. as the basis for relating self, education, and careers to school subjects. In the kindergarten, first, and second grades, the structure involves focusing on workers who are physically located in a particular setting or function as a part of a unit. The structure is as follows:

- Kindergarten: Home,
- First Grade: Family, and
- Second Grade: Community.

The structure for grades three through six broadens. It not only involves the physical location of workers but also the following alternative: Are the workers involved physically or mentally with other locations or are similar occupations found in other locations? The pattern for grades three through six is as follows:

- Third Grade: Multi-community,
- Fourth Grade: State,
- Fifth Grade: National, and
- Sixth Grade: International.

In the career awareness phase, experiences are provided which assist students identify their likes, dislikes, fears, needs, abilities, disabilities, aptitudes and limitations. The dignity and worth of others, social relationships, the numerous meanings of work, the need for planning and the importance of interpersonal skills are illustrated.

The value of subject content is illustrated to students and practical application provided. Experiences are provided which assist the student in developing academic skills and identifying and accepting his strengths and weaknesses. Experiences provide students with the concept that all work is of value while the structure and interrelationships in the world of work are investigated. Physical imitation of workers takes place through hands-on activities, simulation, and role playing.

The career awareness focus begins with a very narrow base at the kindergarten level. The emphasis is on the work found in and around the home. That is, the work of members of the family and work that is performed by outsiders who enter the home for service repairs, etc. Sample performance objectives which relate to career education goals are as follows.

The student will:

1. Describe the work-play in which he is involved in the home and school.
2. Talk about the work activities of the mother, father, and others who enter the home.
3. Cut out pictures of workers from magazines.
 1. Identify the ways in which the work of others helps him.
 5. Identify the kind of activity in which he likes to be involved.

At the first grade level, the focus is on the occupations held by parents, grandparents, older siblings, uncles, aunts, cousins, etc. Attempts should be made to get the children to interact with members of the family about their occupations. The emphasis should be on a beginning awareness of the many roles people play. Sample performance objectives are as follows.

The student will:

1. Tell of ways in which the work of others helps him.
2. Ask workers questions about their work.
3. Describe the ways in which he is like older workers.

4. Paint pictures of workers involved in work activity.
5. Describe how the manual skills he possesses are like or different from older workers.

Second grade students broaden their horizon by investigating the roles of workers in the immediate community. For many children, they can be involved in walking field trips to businesses located close to the school. The emphasis should be on developing an awareness that large numbers of people are involved in producing goods and services for others. Sample performance objectives are as follows:

The student will:

1. Identify the academic skills needed for various occupations.
2. Cite examples of how he differs from his peers.
3. Identify the value of being able to interact with others.
4. Describe the reasons why people work.
5. Construct model tools used by various workers.

Occupations of a multi-community nature are the concern of third grade students. Defining multi-community will vary from community to community. In some cases, it will mean the entire city rather than only a certain section. In other cases, it may mean a small number of towns within a county. Other instances will dictate that multi-community include more than one county. The concern should be in the selection of occupations which exist in various sites within the multi-community framework. Sample performance objectives are as follows:

The student will:

1. List the various reasons why people work.
2. Describe the relationship of good health and effective work.
3. Describe the reasons why workers need to be able to use arithmetic.
4. Show the proper use of occupational tools.
5. Describe the relationship between effective personal relations and success on the job.

For the fourth grade student, the emphasis is on occupations which are peculiar to the state and or are found throughout the state. This involves utilizing maps and materials available from various departments within the State Department. The goal is not to get the children to eventually move to other parts of the state but to make them aware of future options in the career world in terms of the encompassing nature of the world of work. Some of the performance objectives are as follows:

The student will:

1. Describe the psychic value of various kinds of tasks.
2. Discuss the relationship between occupations and production and distribution.
3. Identify his interests and abilities.
4. Describe the social value of various occupations.
5. Role play a worker in a way which illustrates the feelings accompanying that work role.

Fifth grade students become involved in careers of a national stature. It is important that children understand that in many career areas, they will have the opportunity and option of employment in many geographical areas. Students should be given the opportunity to investigate the relationship of careers, geographical location, and leisure time activities. This does not mean that the student should be encouraged to move from the state later but the approach does allow for additional options. Sample performance objectives are as follows.

The student will:

1. Name the sources of information related to self, education, and careers.
2. Identify the attitudes which may be necessary in various work situations.
3. Describes the relationship between work roles and leisure activities.
4. Describes the psychic rewards of work in terms of its intrinsic value.
5. Describe how he perceives his strengths and weaknesses.

Students at the sixth grade level should be encouraged to investigate careers of an international nature. This concept of international nature has a double meaning. The first meaning involves careers which are found in different nations and are very similar. The second meaning involves careers in which the people are physically and or mentally involved with more than one country. The continued emphasis is on building awareness of the broad nature of work. Sample performance objectives are as follows:

The student will:

1. Describe the relationship between geography and leisure time activities.
2. Identify the relationship between personal values and social values.
3. Demonstrates effective interpersonal skills.
4. Describes the social value of various kinds of work.
5. Determine the academic skills needed for various occupations.

CAREER ORIENTATION

The orientation phase continues to emphasize the goals which have been partially achieved during the awareness stage. Greater emphasis is placed on broader exposure to all levels of occupations. Some "real-life" exploratory experience are provided. Additional emphasis is placed on ability and aptitude testing and relating these attributes to present concerns and future potential. The realities outside the classroom are investigated through people oriented field trips to business and industry, the community, and other organizations and agencies.

Students are exposed to people who represent many walks of life. Resource people are invited to the classroom to interact with students about "official data," for example, job title, job description, educational requirements, salary range, etc. However, children and youth are also very interested in asking questions about "unofficial data," for example, do you think your work is important? How does your work affect your life away from the job? If you were to start over, what kind of work would you do?, etc.

The intent of the orientation phase is to provide career experiences related to the academic and general education courses. Occupations which require knowledge of the academic or general education subject are selected from the following clusters for inclusion into the course.

1. AGRICULTURE AND RESOURCES
 Agriculture
 Forestry
 Mining
 Petroleum
 Wildlife

2. BUSINESS and OFFICE
 Accounting
 Finance
 Management
 Personnel
 Secretarial

3. **COMMUNICATIONS and MEDIA**
Broadcasting
Journalism
Motion Pictures
Recording
Telephone
4. **CONSTRUCTION**
Electrical
Finishing
Masonry
Metal
Wood
5. **CONSUMER and HOMEMAKING**
Child Development
Clothing
Food
Home Management
Household Equipment
6. **ENVIRONMENT**
Air
Plants
Soil
Water
Wildlife
7. **FINE ARTS and HUMANITIES**
Historical
Performing Arts
Religion
Visual Arts
Writing
8. **HEALTH**
Administration Services
Emergency Services
Personal Services
Pharmaceutical Services
Supportive Services
9. **RECREATION AND HOSPITALITY**
Industrial Recreation
Private Recreation
Public Recreation
Transportation
Travel Agencies
10. **MANUFACTURING**
Engineers
Technicians
Skilled Workers
Semi-skilled Workers
Un-skilled Workers
11. **MARINE SCIENCE**
Aquaculture
Fishing
Mineral and Chemical
Extraction
Research
Support Personnel
12. **MARKETING and DISTRIBUTION**
Distribution
Management
Purchasing
Promotion
Sales
13. **PERSONAL SERVICES**
Apparel Services
Beauty Services
Domestic Services
Food Services
Lodging Services
14. **PUBLIC SERVICES**
Education
Health
Postal
Protective
Utility
15. **TRANSPORTATION**
Air
Highway
Pipeline
Rail
Water

Sample performance objectives for the seventh grade level are as follows.
The student will:

1. Describe his needs, fears, likes, and dislikes as they relate to careers.
2. Graph the role of supply and demand as it relates to one's future.
3. Describe the psychic value of various kinds of work.

4. Describe physical characteristics and maturation necessary for various careers.
5. Identify social responsibilities or lack of responsibilities related to various careers.

Sample performance objectives for the eighth grade level are as follows.

The student will:

1. Identify sources of educational and career information.
2. Identify the value of various school subjects as they relate to various careers.
3. Describe the contribution of various occupations in terms of the individual and society.
 4. Discuss the relationship between immediate gratification and postponed gratification as it relates to one's career.
 5. Decide upon tentative educational plans which provide options for various careers.

CAREER EXPLORATION

The exploration phase provides additional emphasis on information and hands-on "real-life" exploratory experiences. During the high school years, students are forced to make tentative decisions related to broad areas of interest and disinterest. Sequential planning, adjustment and flexibility are stressed. Educational and experience avenues to careers are investigated.

Emphasis during career exploration focuses on "trying-out" one's self identity in real or simulated situations. These experiences are provided in academic classes, career centers, and/or through coordinated efforts with business and industry. While the experiential base is broadened during the exploratory phase, the informational base concerning more specific careers is also heightened. The emphasis of achieving goals related to self, education, and careers in the attitudinal, knowledge, and skilled areas is continued. Although it is recognized that rational decisions are not always based on possessing accurate information and achieving successful experiences, it is anticipated that the decisions made by the student will be more accurate than in the past.

Occupations which require knowledge of the academic or general education subject are selected for inclusion into the course. A sample of these occupations related to the subjects are as follows:

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. ART
 Beautician
 Cabinet Maker
 Commercial Artist
 Designer
 Engineer | <ol style="list-style-type: none"> 4. ECONOMICS
 Businessman
 Economist
 Interviewer
 Production Manager
 Teller |
| <ol style="list-style-type: none"> 2. BIOLOGY
 Dental Hygienist
 Dietician
 Game Warden
 Gardner
 Physician | <ol style="list-style-type: none"> 5. ENGLISH
 Actor
 Printer
 Receptionist
 Teacher
 Telephone Operator |
| <ol style="list-style-type: none"> 3. CHEMISTRY
 Exterminator
 Painter
 Secretary
 Surgeon
 X-Ray Technician | <ol style="list-style-type: none"> 6. FOREIGN LANGUAGE
 Airline Stewardess
 Buyer
 Interpreter
 Journalist
 Lawyer |

- | | |
|---|---|
| <p>7. GEOGRAPHY
Cartographer
Guide
Mapmaker
Travel Agent
Truck Driver</p> <p>8. HEALTH
Environmentalist
Lifeguard
Model
Nurse's Aid
Occupational Therapist</p> <p>9. HISTORY
Lawyer
Librarian
Police Officer
Researcher
Secretary</p> <p>10. INDUSTRIAL ARTS
Decorator
Draftsman
Sheetmetal Worker
Teacher
Welder</p> <p>11. LIFE SCIENCE
Dentist
Farmer
Florist
Nurse
Orderly</p> <p>12. MATHEMATICS
Accountant
Carpenter
Cashier
Engineer
Machinist</p> | <p>13. MUSIC
Composer
Dancer
Musician
Sales Person
Singer</p> <p>14. PHYSICAL SCIENCE
Ceramics
Mechanic
Miner
Oculist
Radio Technician</p> <p>15. SCIENCE
Auto Mechanic
Chemist
Forester
Pharmacist
Photographer</p> <p>16. SOCIAL STUDIES
Anthropologist
FBI Agent
Fireman
Home Economist
Program Director</p> <p>17. SOCIOLOGY
Caseworker
Criminologist
Probation Officer
Shop Foreman
Sociologist</p> <p>18. SPEECH
Announcer
Businessman
Clergyman
Salesperson
Stewardess</p> |
|---|---|

Sample performance objectives for the ninth grade level of exploration are as follows.

The student will:

1. Describe his abilities, aptitudes, and limitations in terms of potential careers.
2. Utilize positive attributes to enhance endeavors.
3. Display flexibility in various school-social situations.
4. Describe the process involved in sequential planning.
5. Work at various jobs and relate information and experience to other members of the class.

Sample performance objectives for the tenth grade level of exploration are as follows.

The student will

1. Compare the psychic value of work as it relates to his value system.
2. Identify his potential life style as it may relate to potential occupations.

3. Accept abilities, disabilities, aptitudes, and limitations as they relate to potential occupations

1. Demonstrate flexibility when confronted with obstacles to success.

5. Research occupations by interviewing workers, taking pictures, and gathering information.

Sample performance objectives for eleventh grade students involved in the exploration phase are as follows.

The student will:

1. Describe the structure of the career world by identifying factors which contribute to the success of various workers.

2. Describe the sequence of education and experience necessary for various occupations.

3. Seek information (official and unofficial) from various sources available.

4. Write letters to firms, organizations, and institutions to obtain educational and career information.

5. Write a report concerning his positive and negative traits while illustrating ways of maximizing positive traits and minimizing negative traits.

Sample performance objectives for the twelfth grade level of exploration are as follows.

The student will:

1. Identify plans following high school graduation.

2. Prepare a resume.

3. Identify ways of implementing career goals.

4. Illustrate in writing optional methods in which career goals can be achieved.

5. Research data to determine manpower projections in various career areas.

CAREER PREPARATION

Career preparation is scheduled during the tenth, eleventh, and twelfth grades of high school through vocational technical education programs. This training provides students with either entry level skills or precision skills for jobs in many related occupations. Many of these students will proceed directly into a job following graduation. However, others will continue their preparation in postsecondary vocational technical education or college.

The career preparation stage for some students will take place following high school graduation. For students not involved in vocational-technical education, they receive career preparation in colleges, in post secondary vocational technical education programs, in apprenticeship programs, and on the job.

The Vocational Technical Center is unique in that a flexible or variable schedule is utilized with emphasis on occupational clusters and individualized instruction. Students are able to build toward their career objective by selecting needed skills and information units from the total program. The program is composed of an individual sequence of units that fit the student's career objective. The student is able to advance as rapidly as his abilities and interests allow.

The curricula is designed to meet the shifting and expanding requirements of vocational and technical manpower as expressed by demands of an ever changing economy and technology. A continued evaluation of the curricula is utilized to assure that career areas and content keep abreast of the changes in business and industry. Population mobility requires that students be educated

for the requirements of the state and nation as well as the immediate needs of the local community.

Students spend one half of the school day at the vocational technical center and the other half of the day at the home high school where they receive the required subjects for graduation. Co-curricular activities are provided in the home high school.

The selection of students is a cooperative effort of the home high school and the vocational technical center. Admission is based on the following:

1. Interest,
2. Ability,
3. Physical Aspects,
4. Attitudes,
5. Discipline Record,
6. Human Relations,
7. Attendance,
8. Recommendations, and
9. Test Results.

The basic principle underlying career and vocational education is the fact that all students must eventually earn a living. Secondly, the student will associate with others, hopefully, as a responsible citizen and contributing member of society. Satisfying work not only provides material wealth but also contributes to personal fulfillment.

The objectives for the preparatory level are as follows.

The student will:

1. Gain the basic knowledge and skills of an occupation suited to his aptitudes, needs, and interests.
2. Develop basic skills which will enable him to specialize and do advanced work later.
3. Develop efficient work habits which will result in excellence in all tasks.
 1. Develop an awareness of the worth and dignity of honest work.
 5. Understand obsolescence and adaptability to new approaches.
 6. Develop the ability to work cooperatively with others.
 7. Develop an appreciation and understanding of socio-economic contributions of various occupations.
 8. Develop reflective thinking, problem solving, and creativity.
 9. Develop an understanding of the social importance of personal traits, interpersonal relations, and employer-employee relations.
 10. Develop emotional maturity, economic understanding, and safe work habits.

INTENSIVE GUIDANCE AND JOB PLACEMENT

The primary purpose of vocational technical training is the development of competencies related to occupational knowledge, skills, and attitudes. The result of gaining these competencies is that the student possesses the necessary qualifications for employment. Yet, students need additional assistance in understanding the process of locating employment, contacting employers, interviewing, etc. Based on this recognized need, guidance and placement services are offered by the vocational technical center to all students in the school system in grades ten through twelve. The areas of concern are as follows:

1. Interests, Abilities, and Aptitudes
2. Personal Needs
3. Value System
4. Decision Making
5. Alternatives
6. Risk Taking Probabilities
7. Planning (strategies)
8. Sources of Information
9. Psychological Meaning of Work
10. Manpower Projections
11. Educational Avenues
12. Experience Avenues
13. Life Styles
14. Dissatisfaction with Work
15. Career Objectives
16. Testing Self Identity
17. Choosing a Career Area
18. Job Application
19. Job Interview
20. Writing a Resume

Career development, however, is not complete at the end of a formal educational program. Career development continues throughout life. Men and women continue to go through awareness, orientation, exploration and preparation stages. The factors that influence career development continue to be society, business and industrial community, education programs, peers, and parents.

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- ¹⁴ Robert W. Smuts, *Women and Work in America* (New York: Schocken Books, 1971), 176 pp.
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APPENDIX A-II

Goals And Objectives Of The Lincoln County Exemplary Program

GOAL NUMBER ONE

To provide broad occupational orientation at the elementary and secondary school levels which will increase student awareness of the range of options open to them in the world of work.

Career Awareness

(Grades 1-6)

General Objective

To provide an instructional system designed to present occupational information to children in Grades 1-6.

Specific Objectives

- (a) To provide students with occupational information to make them aware of the meaning of work and its importance to them and society.
- (b) To provide experiences in which the world of work is presented in a manner that is realistic and appropriate to the student's state of development.
- (c) To inform students about the multitude of occupational opportunities.
- (d) To present to students a realistic view of the world of work and encourage them to consider their own abilities and limitations.
- (e) To provide students with basic information about major occupational fields.
- (f) To stress the dignity in work and the fact that every worker performs a useful function.
- (g) To visit local businesses and industries to get a first-hand view of the "world of work".

Career Orientation

(Grades 7-8)

General Objective

To establish in grades 7-8 a curriculum which will assist the student to acquire knowledge of the characteristics, function, the duties, and rewards of the occupational families.

Specific Objectives

- (a) To give students an understanding of the knowledge and skills basic to the broad spectrum of the occupational families.
- (b) To provide the student with a guide to educational and occupational requirements of different jobs (occupational families).
- (c) To assist the student in acquiring a technique of analysis of occupational information and to analyze such information before making a tentative choice.
- (d) To stress habits and attitudes which are needed for successful and continued employment.
- (e) To provide students with experiences designed to develop an awareness and self-realization that leads to the selection of the appropriate career with realistic aspiration levels.

Career Exploration

(Grades 9-10)

General Objective

To provide students in grades 9-10 experiences that will enable them to make realistic occupational choices, experiences in working with others, and understanding of the psychological aspects of work as it relates to their own temperaments, personalities, and values.

Specific Objectives

- (a) To inform students about occupational and educational opportunities at all levels.
- (b) To provide students not finishing high school with information related to the opportunity to enter an occupational training program and/or employment.
- (c) To provide students with knowledge in broad fields of work which will assist the individual in making long range vocational plans.
- (d) To provide "hands-on" experience in various occupational fields offered at the county vocational-technical education center.
- (e) To make the student aware of the continuous changes occurring in the world of work which necessitates continuing education or training in the various career areas.
- (f) To provide the student with information concerning other educational opportunities (colleges and other post secondary programs).

GOAL NUMBER TWO

To provide work experience, cooperative education and similar programs making possible a wide variety of offerings in many occupational areas.

Cooperative Vocational Education Work Experience and Work-Study

(Grades 11-12 Post Secondary)

General Objective

To expand present and planned vocational program offerings to include (a) cooperative vocational programs to assist in removing the artificial barriers between education and work, and (b) work-study programs designed to assist those in need of earnings from such programs to commence or continue their enrollment in vocational education programs.

Specific Objectives

- (a) To provide students with the background necessary to further their career preparation in post secondary training programs.
- (b) To provide students with a salable skill necessary for job entry.
- (c) To provide students with skills, attitudes, and work habits necessary for employment in a cluster of closely related occupations.
- (d) To increase student participation in programs of broadened curriculum offerings made available through cooperative vocational education.
- (e) To provide economic assistance to those students who need such assistance in order to remain in school and to continue their enrollment in vocational education programs.
- (f) To provide opportunities for learning by doing in actual work situations.

GOAL NUMBER THREE

To provide students not previously enrolled in vocational programs opportunities to receive job entry skills prior to the time that they leave school.

Job Entry Level Skill Development

(Age 16 Grade 12)

General Objective

To provide each student leaving school opportunities for appropriate training to develop job entry skills necessary for employment.

Specific Objectives

- (a) To integrate vocational and academic instruction with an orientation toward job competence.
- (b) To adapt the occupational level of skill training to the abilities and aptitudes of the student.
- (c) To provide intensive summer programs for entry level skill development.
- (d) To provide opportunities for individually oriented vocational training.
- (e) To provide job orientation, work observation and on-the-job training activities.
- (f) To provide job creation, job development, job placement and job-coaching activities.
- (g) To provide ungraded instruction complemented with specialized, technically competent instructors and instructional packages to assist students in completing the instructional program on an intensified basis.

GOAL NUMBER FOUR

To provide intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling.

Intensified Occupational Guidance and Job Placement

(Age 16 - Grade 12)

General Objective

To provide intensive vocational counseling for occupational and educational decision-making and job placement services for students who are dropping out of school and those in grades eleven and twelve.

Specific Objectives

- (a) To provide opportunities for students to learn more about themselves, ways of working with others, and psychological aspects of jobs as they relate to their values, personalities, aptitudes, and abilities.
- (b) To provide students with information regarding post secondary career development opportunities.
- (c) To provide opportunities for students to relate occupational aspirations to educational goals.
- (d) To provide students with opportunities to develop understanding of and make realistic career choices.
- (e) To provide students with assistance in finding their first job.
- (f) To provide school follow-up services and opportunities for replacement on different jobs, re-entry into training programs and participation in individual counseling and group occupational guidance.

APPENDIX B-II

Personnel

PROJECT DIRECTOR: *Herbert B. Holstein*

Duties:

1. Responsible to the County Superintendent of Schools for the overall direction of the project.
2. Make recommendations relative to policy in regard to the project.
3. Make recommendations and prepare for superintendent's final approval project fund expenditures.
4. Supervise project personnel.
5. Coordinate the proposed program with the presently operating educational program in the county.
6. Coordinate efforts of project personnel with those of other school personnel in the county.
7. Responsible for all reports including progress, final and fiscal reports.
8. Secure community involvement in the program.
9. Coordinate programs efforts with similar efforts of other public agencies.
10. Conduct meetings of staff and project advisory committee.
11. Coordinate the proposed program with similar projects and programs in the state and nation.
12. Plan, coordinate, and supervise the total project effort including teacher in-service preparation, and project evaluation in order to assure project continuation at the termination of federal funding.

HUMAN RESOURCES COORDINATOR: *Daryle G. Etkins*

Duties:

1. Establish and maintain liaison with, and make referrals to, the local employment security office and other manpower agencies in the area.
2. Coordinate placement activities with counselors in each of the high schools.
3. Contact area employers and acquaint them with the nature of the services offered and secure their cooperation in the use of the services provided.
4. Identify current employment needs of area businesses and industries.
5. Maintain files of current employment opportunities and disseminate this information to high school counselors.
6. Identify both full-time and part-time job opportunities in the area.
7. Provide information to counselors and students relative to various occupations, job opportunities, and educational services.
8. Conduct orientations with students on job search methods, conduct mock job interviews, and contact employers to whom students have been referred to determine the performance of students during the interview process.
9. Conduct follow-up counseling of students placed on jobs. In event students migrate from the area coordinate this activity with school systems where the student migrates.
10. Work cooperatively with the cooperative education instructor in locating job placement opportunities.

11. Assist with project evaluation and the preparation of technical progress and final reports.

GUIDANCE COORDINATOR: *Thomas E. Woodall* (1st year) and
Thomas M. Miller (2nd year)

Duties:

1. Coordinate the efforts of counselors at Hamlin, Guyan Valley, and Harts High School and the vice-principal of Duval High School who has a dual responsibility of administration and counseling in helping students to understand themselves in relation to the world of work.
2. Provide group counseling.
3. Participate in workshops for teachers.
4. Provide individual counseling when necessary.
5. Provide counseling service to potential dropouts and dropouts and encourage them to remain in school or enter an intensive training program.
6. Work with the E.S.E.A. testing coordinator in administering tests and analyzing results which may be used for a better understanding of the student.
7. Work with the elementary teachers in grades 1-8 and the high school guidance counselors to develop an information folder for each student in the Lincoln County school system. Information in the folder should include name, age, address, health, handicaps, achievements, test results, aptitudes, and intelligence, family background, family occupation, and economics status.
8. Visit the student's homes when the situation indicates the need to do so.
9. Serve as the coordinator between the school and other institutions to increase services to students.
10. Coordinate the scheduling of field trips for students to various businesses and industries for on-site observation of work.
11. Coordinate activities related to job placement with the human resources coordinator.
12. Assist with project evaluation and the preparation of technical progress and final reports.

CURRICULUM COORDINATOR: *Billy J. Burton*

Duties:

1. Serve as a consultant to teachers in intergrating occupational information into existing subject matter areas, such as social studies.
2. Obtain and present existing materials (films, slides, tapes, etc.) to teachers involved in the project.
3. Aid in establishing and maintaining an occupational information center.
4. Conduct workshops for the purpose of identifying and making available curricular materials that may be utilized.
5. Coordinate efforts of teachers and other personnel involved in the project in relation to the development of curriculum materials.
6. Schedule, maintain, and distribute materials to be used by teachers in classroom instruction.
7. Serve as a consultant to teachers in integrating occupational information into existing subject matter areas.
8. Assist with project evaluation and the preparation of technical progress and final reports.

PART THREE

In-Service Design

INTRODUCTION

Planning for the continued education of educators who are currently in service of the local education agency is based upon how the planner views those who are to be provided with in-service. If teachers, counselors, principals, and supervisors are viewed as incompetent, in-service efforts will be remedial in nature. When the above premise is used as the basis for in-service education, the approach used is usually quite impersonal with very little involvement and commitment on the part of those receiving the in-service. On the other hand when educators are viewed as professionally competent individuals who can be assisted in their continuous intellectual growth, in-service education will be oriented differently. In-service education described in this paper is based upon the following assumptions:

1. Educators are self directing.
2. Educators are professionally competent.
3. Educators are intellectually curious.
1. Educators are interested in professional growth.

These assumptions dictate that in-service education be planned and conducted in a climate which will support professional growth by providing educators with an opportunity for personal involvement, ego support, social mobility, introspective articulation, feedback, and professional dialogue.

A method of providing the kinds of experiences which are based on the above assumptions requires that a dual focus be employed. The in-service must possess both process (human relations) and task (planning, development, implementation) functions.

Many worthwhile innovative programs fail because of inadequate attention to the human relations or process phase of the venture.¹ Although technical and informational components are often highly functional and relevant, process problems may intervene to minimize the potential effectiveness of the effort. In order to avoid this barrier to program implementation, in-service workshops (or in-service classes) with a dual emphasis designed to focus on both the process and task elements of program implementation and change is suggested.

If the plan for in-service is to be provided via the workshop format, it should run a minimum of five days, six hours daily. Workshops (and classes) should open with the process focus and then move into the task component, utilizing the process skills developed in the early phase of the training. The specific areas on which the first day's session should focus are staff and group development, team building, and the creation of a consultative helping relationship between staff and participating teachers, counselors, and principals. The framework for this session is a sequential group building process which takes all participants through four basic stages of team development: (1) getting acquainted, (2) trust building, (3) formation of helping relationships, and (4) group collaboration on a common task. Through the use of a modified laboratory training approach, participants are divided into groups, each with a leader. Experiential situations are created which allow participants to be involved in, and learn first-hand about effective communications, consulting, problem solving, planning, feedback, group decision making, and team work.

On the second day, a model of career education is presented to the entire group with reaction and discussion following in the small groups that were organized on the first day. A speaker from a similar project already in operation or a member of the State Department staff may share experiences and insights

gained from earlier efforts. This speaker is able to legitimize the new project to the local teachers, counselors, and principals. Again, the cohesive, unified groups created during the first day are able to effectively share application of the presentation to implementation of career education.

On the third day, each of the four groups are sufficiently equipped to go through the process of developing a career education unit that may be used in the classroom. This unit is culminated in a role playing situation in which the groups simulate typical career roles (including psychic factors) on which the units focus. Each group should observe the others in their role playing efforts and then offer constructive feedback on positive and negative elements noted.

The fourth day's session opens with a lecture to the entire group on unit development. The lecture should include references to goals, objectives, procedures, student activity, and resources and evaluation. The remainder of the day is spent with teachers divided by grade levels developing units for use in the classroom during the school year. The project director, coordinators, and in-service specialists act as consultants.

On the last day, work is completed on the units and the afternoon session is used by school faculties meeting as a staff to plan around scheduling, correlation of subject matter, team teaching concerns, and issues involved in securing resources and materials. Initial units are selected for implementation during the first semester. Plans between central staff and teachers in a systematic consulting-helping relationship are initiated.

By the end of the workshop the various school staffs, both teachers and administrators are well organized and ready to begin the first semester of career education activities. Data gained from verbal contact with teachers and principals indicate that the two-pronged (process and task) approach of the workshop results in the development of a cohesive, committed team of teachers, principals, and central staff personnel unified around the career education concept with skills in the technical or informational aspect, as well as competence in such process areas as communications, cooperation, and problem solving. This combination can be the key to a successful project which facilitates central staff and teacher integration and accelerates the development and maintenance of teamwork and consensual behavior.

MARSHALL UNIVERSITY CAREER EDUCATION COURSES

Marshall University professors have assisted Lincoln County and other local education agencies plan, develop, and implement career education.² Educators in these school systems are offered the option of registering and receiving undergraduate or graduate credit for workshops, seminars, in-service days, and in-service classes.

Two of the courses which have been offered in Lincoln County are: Career Education Curriculum Development and Career Education Practicum. These courses are described on the following pages.

CAREER EDUCATION CURRICULUM DEVELOPMENT

An instructional resource unit is developed which incorporates activities which will assist children and youth achieve academic, general, or vocational subject goals and also career education goals. The unit includes goals, objectives, procedures, student activities, resources, and evaluation. Educators are involved in the following process:

Module No. 1 Teaching Strategy:
Interaction

I. Course Goals:

1. Provide a supportive atmosphere in which participants may become better acquainted with fellow educators.
2. Provide activities which will help the participants become a cohesive and committee group.

II. Student Objectives:

1. Be able to achieve social mobility.
2. Be able to achieve visibility within the group.
3. Be able to meet and understand others in the group.
4. Be able to accept others who possess similarities and differences.

III. Instructor Activities:

1. Direct getting acquainted exercises.
2. Allow for trust building activities.
3. Provide setting which will initiate helping relationships.
4. Arrange for group collaboration activities.

IV. Student Evaluation:

You will be evaluated on your personal involvement in the group activities.

V. Class Resources:

1. *Handbook of Structured Experiences for Human Relations Training.* (Volumes I-IV)
2. Sources Available

Module No. 2 Teaching Strategy:
Discussion

I. Course Goals:

1. Provide an understanding of the objectives and methodology of this course in Career Education.
2. Provide a broad conceptualization of the Career Education Approach.

II. Student Objectives:

1. Be able to describe the nature and focus of this course.
2. Be able to describe the requirements and options in this course.
3. Be able to identify the Career Education approach to Education.
4. Be able to identify the similarities and differences with other approaches.

III. Instructor Activities:

1. Discuss curriculum development emphasis in this course, and follow-up practicum.
2. Discuss assignments and grading procedure.
3. Discuss class meetings (time, place, dates).
4. Determine the make-up of the class (grade levels and subjects taught).
5. Describe the relationship between this class and local efforts.
6. Illustrate the Kindergarten through Adulthood concept of career education.
7. Describe various approaches to career education.

IV. Student Evaluation:

You will be evaluated on your written introduction prepared in Module No.

1. Be concerned with the broad concept as well as how it applies to the grade and subject(s) you teach.

V. Class Resources:

1. *Career Education, A Handbook for Implementation.*
2. Hoyt, *Career Education What it is and how to do it.*
3. Marland, *What is Career Education?*
4. Olson "An Approach to Career Education in West Virginia."

Module No. 3 Teaching Strategy:
Multi-Media

I. Course Goals:

1. Provide an understanding of the developmental efforts in the State and throughout the Nation.
2. Provide a contrast of approaches used at various sites.

II. Student Objectives

1. Be able to describe the rationale for Career Education.
2. Be able to identify various Career Education Approaches.
3. Be able to describe the Career Education continuum, K-14.
4. Be able to identify the methods of implementation.

III. Instructor Activities:

1. Discuss the need for open interaction in a class of this nature.
2. Discuss the reasons why career education is emerging at this time.
3. Describe the four career education Models.
4. Ask the class participants to write a two-four page paper describing their career development.
5. View and discuss the film: "Career Education."

IV. Student Evaluation:

You will be evaluated on your understanding of the enabling and inhibiting factors noted in your personal career development. Note all factors which have influenced you during your career development.

V. Class Resources:

1. "Career Education" (film), U.S. Department of Health Education and Welfare.
2. Hoyt, *Career Education, What it is and How to do it.*
3. Marland, *What is Career Education?*
4. *Career Education, A Handbook For Implementation.*
5. Olson, *Career Exploration*, ED 064 511.

Module No. 4 Teaching Strategy:
Discussion

I. Course Goals:

1. Provide an understanding of correlating Career Education with the academic subjects.
2. Provide an understanding of the process used in developing Career Education curricular materials.

II. Student Objectives:

1. Be able to identify methods of correlation for all subjects that you teach.
2. Be able to describe the relationship among goals, objectives, learning activities, evaluation, and resources.
3. Be able to describe methods of expanding the four walls of the classroom.
4. Be able to identify and describe the themes for Career Education.

III. Instructor Activities

1. Discuss Career Education goals and academic goals in terms of methods of correlating the two sets of goals.
2. Describe the relationship among the components found in a module.
3. Develop a sample module on the chalkboard.
4. Ask class participants to development a sample module in class.
5. Ask class participants to write an introduction to their unit.

IV. Student Evaluation:

You will be evaluated on the quality and comprehensiveness of your introduction. You will be evaluated on the description, method of integrating the unit, and correlation activities.

V. Class Resources:

1. Olson, *Career Development Components*, ED 064 509.
2. Olson, "A.C. Approach to Career Education in West Virginia."
3. *Career Education, A Handbook For Implementation*.

Module No. 5 Teaching Strategy:
Lecture

I. Course Goals:

1. Provide information concerning the importance of self understanding and self acceptance.
2. Provide a conceptualization of the important role of self esteem as it relates to Career Education.

II. Student Objectives:

1. Be able to describe methods which provide for differences in individual interests, attitudes, abilities, and aptitudes.
2. Be able to identify methods of increasing the options for students in their future careers.
3. Be able to identify methods of enhancing self understanding and self acceptance.
4. Be able to identify methods of promoting decision making abilities.

III. Instructor Activities:

1. Discuss completion of the sample module and testing it in the classroom. This will be discussed in Module No. 8.
2. Discuss the value system and the forces which influence values.
3. Discuss activities which will enhance self understanding and self acceptance.
4. Discuss the role of "significant others" as it relates to school personnel.

IV. Student Evaluation:

You will be evaluated in your unit on the degree to which you incorporate activities which help students gain a better self understanding and self acceptance.

V. Class Resources:

Sources Available

Module No. 6 Teaching Strategy:
Discussion

I. Course Goals:

1. Provide an understanding of the classification systems for occupations.
2. Provide a conceptualization of the value of academic skills and their relationship to career education.

II. Student Objectives:

1. Be able to identify various methods of classifying occupations.
2. Be able to identify a representative sample of occupations in a selected occupational family.
3. Be able to illustrate the value of subjects (subject utility) as they relate to careers.
4. Be able to describe methods of correlating Career Education with academic subjects.

III. Instructor Activities:

1. Discuss the classification of occupations.
2. Discuss occupational information as it relates to sociological and psychological factors.
3. Discuss the value of subject content as it relates to careers.
4. Discuss methods of correlating subject content with Career Education.
5. Ask participants to select an occupational area and list representative occupations for the unit they will develop.

IV. Student Evaluation:

You will be evaluated on your list of representative occupations in relationship to the grade level and subject(s) that you teach. Later you will be evaluated on the degree to which you cite sociological and psychological factors related to work.

V. Class Resources:

1. "Teacher, Your Work Ethic is Showing." *AV Journal*, January, 1973.
2. "What the Future Holds for the Meaning of Work." *AV Journal*, January, 1973.
3. *American Vocational Journal*, March, 1972.
4. *Occupational Outlook Handbook*.
5. *Dictionary of Occupational Titles*.
6. *Career Education, A Handbook For Implementation*.

Module No. 7 Teaching Strategy:
Developmental

I. Course Goals:

1. Provide an understanding of the role of performance objectives.
2. Provide an understanding of the mechanics of writing performance objectives.

II. Student Objectives:

1. Be able to differentiate affective, psychomotor, and cognitive objectives.
2. Be able to describe the advantage and criticisms of performance objectives.
3. Be able to discuss the rationale for the use of performance objectives.
4. Be able to write performance objectives in the affective, psychomotor, and cognitive domains.

III. Instructor Activities:

1. Describe the relationship between goals and objectives.
2. Discuss the use of performance verbs and their relationship to evaluation.
3. Illustrate methods of writing performance objectives in the knowledge, attitude, and skill domains.
4. Ask the class participant to select career education goals and write three performance objectives for each domain.

IV. Student Evaluation:

You will be evaluated on the quality of your objectives and the degree to which they relate to the goals in Career Education.

V. Class Resources:

1. Mager, *Preparing Instructional Objectives*.
2. Hernandez, *Writing Behavioral Objectives*.
3. Pophan & Baker, *Establishing Instructional Goals*.

Module No. 8 Teaching Strategy:
Lecture-Reaction

I. Course Goals:

1. Provide an understanding of the components which comprise the instructional resource unit.
2. Provide an understanding of the process used to develop an instructional resource unit.

II. Student Objectives:

1. Be able to identify the components which comprise the instructional resource unit.
2. Be able to describe the purposes of each component.
3. Be able to describe the content of each component.
1. Be able to develop a module which illustrates the proper function of each component.

III. Instructor Activities:

1. Discuss the relationship among the components found in a module.
2. Discuss problems which the class participants are encountering.
3. Discuss reactions to the testing of the sample module developed in the fourth meeting.

IV. Student Evaluation:

You will be evaluated on the module and its components. The evaluation will be based on the degree to which the module reflects a systematic approach of relating goals, objectives, learning activities, evaluation and resources.

V. Class Resources:

1. General Learning Corporation, *Career Education Resource Guide*.
2. Olson, "An Approach to Career Education in West Virginia."

Module No. 9 Teaching Strategy:
Experiential

I. Course Goals:

1. Provide experiences with materials currently available.
2. Provide information about sources of commercially produced materials.

II. Student Objectives:

1. Be able to identify materials that are available and applicable to the occupational area and subjects taught.
2. Be able to describe the merits of various kinds of commercially produced materials.
3. Be able to identify materials as affective, psychomotor, or cognitive oriented.

III. Instructor Activities:

1. View selected films. Discuss attitudinal concepts illustrated in the films.

2. Listen to selected audio tapes. Discuss whether audio tapes are a viable approach to career education with various types of students.
3. Review selected printed materials. Ask teachers to make tentative decisions about their use in the classroom.
4. Discuss the availability of materials and their use in the classroom.
5. Discuss student activities in Module No. 10 (Field Trip).

IV. Student Evaluation:

You will be evaluated on the degree to which the materials you cite in your list of resources help in achieving the stated objectives.

V. Class Resources:

1. Printed materials
2. Cassettes
3. Film strips
4. Films

Module No. 10 Teaching Strategy:
Field Trip

I. Course Goals:

1. Provide an opportunity to assess the attitudes and values of workers in a particular occupational area.
2. Provide an opportunity to better understand the role and contribution of workers in a particular occupational area.

II. Student Objectives:

1. Be able to identify the attitudes and values of workers and their relationship to leisure time activities.
2. Be able to describe the physical and emotional setting of the work place.
3. Be able to describe the role and contribution of workers and the relationship to other occupational areas.
4. Be able to describe the career requirements and career ladders and lattices.

III. Student Activities:

1. Schedule field trip with authorized personnel.
2. Read: Secure and read information available about the organization and its employees.
3. Write: Prepare a list of questions you desire answered.
4. Visit the organization and talk to personnel at various job levels.
5. Write: A capsule report of your findings.

IV. Student Evaluation:

You will be evaluated on the thoroughness of your questions and answers as noted in your written report.

V. Class Resources:

1. Business and industrial organization personnel.
2. Occupational and promotional information.

Module No. 11 Teaching Strategy:
Interaction

I. Course Goal:

1. Provide an atmosphere in which ideas and concerns can be exchanged with fellow teachers.
2. Provide an atmosphere in which feed back can be provided by the professor.

II. Student Objectives:

1. Be able to identify and express concerns about the development of Career Education materials.
2. Be able to share your ideas and approaches to the development of materials.
3. Be able to accept criticism of the approach you are currently using.
4. Be able to accept ideas and approaches and revise the materials.

III. Instructor Activities:

1. Discuss developmental efforts of the instructional resource units.
2. Discuss problems encountered by the class participants.
3. Discuss the role and purpose of the advisory committees.
4. Discuss committee meetings (Module Nos. 12 and 14) and student activities.

IV. Student Evaluation:

You will be evaluated on the quality of your instructional resource unit. The class will not be placed on the bell curve and compared with each other. Therefore, feel free to share ideas.

V. Class Resources:

1. Fellow Teachers.
2. School Administrators
3. Professor of Career Education

Module No. 12 Teaching Strategy:
Committee

I. Course Goals:

1. Provide an opportunity for selected teachers to critique the instructional resource unit.
2. Provide the author of the instructional resource unit with specific recommendations concerning areas of revision.

II. Student Objectives:

1. Be able to justify the occupational area and representative occupations found in the unit.
2. Be able to justify methods of illustrating the themes: self, education, and careers.
3. Be able to justify the goals, objectives, learning actives, evaluation, and resources.
4. Be able to justify methods and techniques of correlating career education with the academic disciplines.

III. Student Activities:

1. Report: Orally report to the committee on areas noted in the above objectives.
2. Discuss: Allow for complete and thorough discussion of the instructional resource unit.
3. Write: Note all recommendations made by the committee.
4. Revise: Make revisions to the unit which you think are appropriate. The signatures of members of the committee indicate that you have provided them with an opportunity to express their feelings about the various components.

IV. Student Evaluation:

You will be evaluated on the objectives as they are reflected in your unit.

V. Class Resources:

1. Teachers, counselors, supervisors, and administrators.

Module No. 13 Teaching Strategy:
Discussion

I. Course Goals:

1. Provide for a review of the curriculum development model.
2. Provide for a review of the techniques and procedures used in developing curricular materials.

II. Student Objectives:

1. Be able to identify components and indicate options available to the teacher in developing materials.
2. Be able to describe performance objectives and identify their relationship to other components.
3. Be able to describe techniques and procedures in correlating career education with the academic disciplines.
4. Be able to describe the relationship among resources noted in the learning activities component, the resource component, and references.

III. Instructor Activities:

1. Discuss progress in developing instructional resource units.
2. Discuss problems encountered by the class participants.
3. Assist teachers in their efforts.

IV. Student Evaluation:

You will be evaluated on your unit, techniques, and procedures following Module No. 16.

V. Class Resources:

1. Olson, "An Approach to Career Education in West Virginia."

Module No. 14 Teaching Strategy:
Committee

I. Course Goals:

1. Provide an opportunity for business and industrial personnel to critique the instructional resource unit.
2. Provide the author of the instructional resource unit with specific recommendations concerning areas of revision.

II. Student Objectives:

1. Be able to justify the occupational area and representative occupations found in the unit.
2. Be able to justify the learning activities in terms of the representative occupations.
3. Be able to identify affective and cognitive components of the descriptive information.
4. Be able to identify sources for field trips and resource role models.

III. Student Activities:

1. Report: Orally report and seek out information on areas noted in the above objectives.
2. Discuss: Allow for complete and thorough discussion of the instructional resource unit.
3. Write: Note all recommendations made by the committee.
4. Revise: Make revisions to the unit which you think are appropriate. The signature of members of the committee indicate that you have provided them with an opportunity to express their feelings about the various components.

IV. Student Evaluation:

Following Module No. 16, you will be evaluated on your unit.

V. Class Resources:

1. Business and industrial personnel.

Module No. 15 Teaching Strategy:

Lecture

I. Course Goals:

1. Provide information about methods and techniques of evaluating the effectiveness of the instructional resource unit.
2. Provide an understanding of the procedures for revising the unit.

II. Student Objectives:

1. Be able to identify student reactions in terms of effectiveness.
2. Be able to translate student suggestions in terms of effectiveness.
3. Be able to identify your feelings about the effectiveness of the unit.
4. Be able to systematically revise the components of the unit.

III. Instructor Activities:

1. Discuss the concept of validation.
2. Describe the various techniques used to determine the effectiveness of career education units.
3. Determine how teachers are currently validating their methods and materials.
4. Assist class participants in designing systematic approaches to validating all components of the unit.
5. Ask the teachers to prepare a written statement describing their planned validation procedures.

IV. Student Evaluation:

You will be evaluated on the approach that you have designed to determine the effectiveness of the unit.

V. Class Resources:

1. *Career Education, A Handbook For Implementation.*

Module No. 16 Teaching Strategy:

Discussion

I. Course Goals:

1. Provide information about the continuing efforts in Career Education in the State and local school system.
2. Provide information about developmental and implementation efforts of the local school system.

II. Student Objectives:

1. Be able to describe State and local efforts in Career Education.
2. Be able to identify implementation strategies to be used in your classroom.
3. Be able to describe continuation efforts following the completion of your unit.

III. Instructor Activities:

1. Provide final instructions on methods for turning in materials which have been developed.
2. Discuss follow-up activities.

IV. Student Evaluation:

You will be evaluated on the degree to which the unit reflects the themes and goals for a particular occupational area. The unit should reflect learning activities which are appropriate to the objectives and grade level. Adequate subject correlation should be noted.

V. Class Resources:

1. *Career Education. A Handbook For Implementation.*
2. Olson, "An Approach to Career Education in West Virginia."

CAREER EDUCATION PRACTICUM

An instructional resource unit is implemented and validated during the time that you are enrolled in this course in career education.

The course focuses on the development and/or refinement of needs assessment techniques, definition of career education, career education goals, performance objectives, procedures (including correlation techniques), student activities, resources, and evaluation techniques. The development of new components or the refinement of existing components is based on their effectiveness as measured by the teacher.

The goals of the course are to assist educators in implementing career education instructional resource units, to develop an awareness of the effectiveness of the unit, and to further develop and/or refine the components of the unit to increase the effectiveness of career education.

The student objectives of the course are as follows:

1. To integrate career education into the elementary and secondary curricula through the use of the instructional resource units.
2. To assist children and youth achieve career education goals and subject goals through didactic and experiential learning as noted in the instructional resource units.
3. To validate the components (goals, objectives, learning activities, evaluation procedures, and resources) found in the instructional resource units by changes, additions, and deletions.
4. To interact with other educators about the accomplishments, failures, problems, and concerns which have been encountered during the implementation.
5. To share concrete experiences related to teaching strategies, e.g. field trips, hands-on activities, role playing, etc. through the use of slides.

The student activities of the course are as follows:

1. *Teach the career education unit which was developed during the first semester.* Every effort must be made to teach career education as a part of the subjects which are currently being taught. However, extra time is often needed to accomplish certain learning activities. Continuous effort must be expended to illustrate the value of the subject(s) taught and their relationship to the student's world and the world of work.
2. *Arrangements will be made for the local coordinator and your professor to visit your classroom.* We will be interested in problems and concerns that you may have, the students' reactions to what they have been involved in, and samples of the students' work.
3. *Take ten to twenty photographic slides of students, teachers, parents, and business and industrial personnel involved in career education activities.* Contact your local coordinator to make arrangements for the use of a camera if you do not have one. Take candid pictures rather than having people pose for the pictures. Try to include people in all of your pictures.

1. *Based on the validation procedures used, make the necessary revisions to your unit.* Teachers generally find that they have not included all of the learning activities which are involved in the unit. New resource materials are generally located after the unit is completed. These two areas (learning activities and resources) are generally the ones which are altered to the greatest degree. However, be sure that your goals and objectives are appropriate also.
5. *Attend the three seminars which are scheduled for this semester.* The first seminar concerns itself with organizational matters. The second seminar will deal with problems and concerns which you have. Be prepared to discuss these problems and concerns with us when we meet. The third seminar will consist of slide presentations by each of you. Be prepared to talk informally about your career education experiences. Bring samples of your student's work if they are available.

Sample validation forms (only the first part of each form is reproduced) which may be used by the students of the course are as follows:

VALIDATION FORM I

Objectives:

1. Are the objectives stated in performance or behavioral terms: yes ___ no ___
2. If no, what performance term should be used? _____
3. To what degree are the students achieving the stated performance? _____

4. Should the performance objective be altered? yes _____ no _____
If yes, how should it be stated? _____

VALIDATION FORM II

Title of Unit

Teacher _____ Grade _____

Objective _____

Goal _____

1. Teaching Strategy _____

Effectiveness

--	--	--	--	--

unsatisfactory poor average good outstanding

Recommended Revision _____

VALIDATION FORM III

Anecdotal Record of _____
Students Name

List behavior of the student which indicates that the career education goals are or are not being achieved.

VALIDATION FORM IV

Daily Log of Career Education Activities

Date	Time	Activity	Teacher Reaction	Student Reaction

DEVELOPING CURRICULAR MATERIALS

Steps in Unit Development

The development of resource units must follow a systematic process to assure that the unit possesses the appropriate components which will achieve the desired outcome. The steps to be utilized in developing career education curricular materials (K-12) which are correlated with academic, general, and vocational subjects are as follows:

1. Note the goals and objectives for the content that you are currently teaching. These goals and objectives are for your use only. Do not include them in your unit.
2. Decide upon the broad occupational or career area with which your students will be concerned. This decision is based upon the structure of the career education model and the relationship between the subject content and the occupational area. The unit should be based upon many occupations found within a career area.
3. Select the career education student goals from the list that you have been provided. Select the goals for the entire unit. Assign the goals to modules 1, 2, 3, etc. You may want to group certain goals which are similar. Use the resource unit worksheet in assigning the goals to various modules.
4. Select the module which represents the goals which should be achieved first. Write objectives which will indicate that the goals have been achieved for one of the modules.

5. Decide upon the major teaching procedure which will be used; e.g., field trip, media, role playing, etc. Recognize that for each major teaching procedure, many learning activities from other teaching procedures may also be used. Your decision should be based upon the goals and objectives for the particular module. You will want to expand this section following the selection of learning activities.

6. Based upon the objectives, a variety of learning activities which will help students achieve the objectives are selected. Note subjects with which activities are correlated in the procedure column.

7. Select the resources to be used in each module which will help the student achieve the objectives.

8. Decide upon the evaluation methods and procedures to be used to ascertain the degree to which the learning activities have helped the student achieve the objectives.

Resource Unit Worksheet

Subject goals: _____

Occupational or Career Area _____

Module No. 1

Career Education Goals: _____

Performance Objectives: _____

Teaching Procedure: _____

Module No. 2

Career Education Goals: _____

Performance Objectives: _____

Teaching Procedure: _____

Module No. 3

Career Education Goals: _____

Performance Objectives: _____

Teaching Procedure: _____

Module No. 4

Career Education Goals: _____

Performance Objectives: _____

Teaching Procedure: _____

Module No. 5

Career Education Goals: _____

Performance Objectives: _____

Teaching Procedure: _____

Module No. 6

Career Education Goals: _____

Performance Objectives: _____

Teaching Procedure: _____

Unit Format

CAREER EDUCATION RESOURCE UNIT

Grade Level _____

Title: (Select a goal from the list that you have been provided.)

Objectives: (Write objectives in terms of student behavior which is expected to indicate that the goal has been achieved.)

Procedures	Student Activity	Resources and Evaluation
(Note major teaching procedure. Indicate the arrangements to be made by the teacher, materials to be secured, and the kinds of assistance to the student. Note correlation with school subjects.)	(List in detail the activities which are to be used to achieve the objectives.)	<p>Resources: (Identify the books, films, materials, etc. in brief form that are to be used to achieve the objectives. If the activity calls for a visit by a resource person, list names of potential role models. If the activity calls for a field trip, list potential sites.)</p> <p>Evaluation: (Describe precise procedures to be used to ascertain the degree to which the objectives have been achieved, for example, anecdotal records, conferences, discussion, formal tests, interpretive exercises, observation, rating scales and/or work samples.)</p>

Student Goals

1. *Self Understanding*: To appraise one's interest, beliefs, attitudes, values, needs, fears, likes, dislikes, abilities, disabilities, aptitudes, and limitations
2. *Self Acceptance*: To accept with confidence and security one's negative and positive attributes while weighing inhibiting and facilitating factors in terms of tentative plans for the present and future.
3. *Dignity and Worth of Others*: To value others as unique individuals who possess varying degrees of negative and positive traits and as respected individuals who contribute to the welfare of others.
4. *Social Needs*: To recognize that jobs emerge and diminish because of the social value of the resulting products and services.

5. *Psychic Value of Work*: To experience the intrinsic satisfaction of work beyond the financial rewards, e.g., physical, emotional, social, creative, etc.
6. *Life Styles and Work*: To recognize the relationship between life styles and the dictates of the work situation, e.g., financial, hours of work, geographical location, physical, emotional, social, creative, etc.
7. *Sequential Planning*: To investigate educational and experience requisites for career options and tentatively and continuously plan various alternatives.
8. *Adjustment and Flexibility*: To experience the complexities of society and learn to cope with social and work expectations.
9. *Interpersonal Skills*: To develop the skill to interact effectively in a variety of situations while being aware of the needs of others.
10. *Academic Understanding*: To appraise academic abilities, disabilities, aptitudes, and limitations.
11. *Academic Acceptance*: To accept ones strengths and weaknesses while maximizing the positive factors and minimizing negative factors in terms of present and future plans.
12. *Acceptance of Others*: To value others who possess varying degrees of academic strengths and weaknesses as unique individuals with the potential for success in many occupations.
13. *Subject Utility*: To perceive the value of academic, general, and vocational subjects in terms of their function in the world outside the classroom.
14. *Subject Correlation*: To perceive ways in which subject content is functional within and outside the classroom in the career world.
15. *Educational Avenues*: To investigate and formulate alternative educational and experience paths which allows the individual access to various careers.
16. *Communications*: To gain skills in thinking, listening, speaking, reading, writing, and referencing.
17. *Mathematical*: To gain skills in conceptualizing and operationalizing concepts, such as, numbers, sets, notations, equations, inequalities, principles, arithmetic operations, mathematical application, geometric operations, and measurement.
18. *Scientific Process*: To conceptualize and operationalize the process of observation, description, classifying, generalizing, hypothesizing, defining, experimenting, and concluding.
19. *Career Understanding*: To appraise abilities and limitations in terms of responsibilities, financial, willingness to postpone gratification, opportunities, etc.
20. *Career Acceptance*: To accept abilities and limitations in terms of inhabiting and facilitating factors and relate potential career opportunities to tentative plans.
21. *Valuing Work*: To value all forms of work in terms of its contribution to the welfare of the individual and society.
22. *Occupational World*: To understand the structure and methods of classifying occupations and recognize sources of information and experience.
23. *Economics*: To understand the relationship between occupations and the production, distribution, and consumption of goods and services.
24. *Supply and Demand*: To recognize that supply and demand stimulates or retards opportunities and is a factor to be considered in planning a career.
25. *Imitation of Workers*: To personally become involved in physically, mentally, and emotionally imitating the role of workers who demonstrate effective work habits.

26. *Exploration of Work*: To explore activities of workers to learn "first hand" of the affective, cognitive, and psychomotor dimensions that accompany various kinds of work.
27. *Precision Skills*: To gain entry level precision skills related to the affective, cognitive, and psychomotor dimensions of an occupation or a cluster of occupations.

Teaching procedures and Student Activities

1. *Field Experiences* of a cultural and career nature which broadens the students experience base: business, industry, community, home, and educational institutions (coupled with planning, interviewing, drawing pictures, photographs).
2. *Interpersona Interaction* which allows one to verbalize his attitudes and values while also becoming aware of the attitudes and values of others: buzz sessions, career club, discussion, oral reports, singing, brainstorming, show and tell, listening, recording, student demonstration, committee work, debates.
3. *Hands-on Activities* which help illustrate abstract theory: bulletin boards, models, displays, drawings, exhibits, murals, clay work, microscopes, painting, making films, making books, printing newsletters, care for aquarium and terrarium, making posters and maps.
4. *Multi-Media Activities* which stimulate interest and/or provide additional clarification of nebulous concepts: audio tapes, books, films, film-strips, pamphlets, pictures, slides, television, video tapes, visuals, read books, read news papers.
5. *Resource Role Models* with which children and youth can identify and learn first hand of feelings, emotions, and values of workers: interviewing, questioning, listening, discussion.
6. *Research Activities* which provide additional information about careers and related concerns: interviewing, pictures of workers, scrapbooks, write letters, write plays, write reports, library research, surveys, collections, polls.
7. *Simulation and Role Playing* activities which allow students to try work roles to better understand how they feel about themselves and careers: dramatization, games, pantomime, plays, puppet shows, radio and television programs, student teaching.
8. *Work Experience* activities through paid or voluntary services in the home, school, and community. These experiences allow the student to determine the psychic factors about specific types of work roles and the degree to which the student's needs are met through specific work roles.

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