Five career education institutes were conducted in West Virginia for 128 superintendents, principals, directors of vocational education, curriculum specialists, and guidance personnel representing 30 counties in the state. The general objective of the institutes was to provide meaningful information and experience upon which educators in local school systems would be able to make decisions relative to planning and implementing career education programs. This document contains the institute program, presentations and activities, list of participants, and evaluation. Papers were presented on task and process in career education, career education principles, career education—boon or boondoggle, the Lincoln County exemplary model, industrial arts role in career education, career education curriculum development, and career education practicum. Evaluation instruments and test scores are appended. (MF)
CAREER EDUCATION INSTITUTES

A Report on an EPDA Project Entitled:
Strategies for Developing Career Education Programs

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Department of Vocational Technical Education
Marshall University
Huntington, West Virginia 25701
PREFACE

The need to provide realistic educational experiences upon which youth can make wise decisions concerning the future has long been recognized. However, it has not been until recently that the Federal Government has authorized the expenditure of funds for comprehensive career education activities thus providing legitimacy to career education.

There has also been the growing desire on the part of local educators to provide attitudinal and decision making experiences related to the world of work to all students, in all disciplines, and at all educational levels. Because of a lack of specific information and experience related to career education, local school personnel have been reluctant to provide career education experiences to their students.

An attempt was made to overcome the paradox of a desire to provide realistic experiences on the one hand and the lack of "know how" on the other hand by Marshall University in cooperation with the West Virginia Bureau of Vocational Education and U. S. Office of Education.

Five Career Education Institutes were conducted in West Virginia during the summer of 1972 at the following sites: Charleston, Clarksburg, Glen Dale, Keyser, and Princeton. The target population consisted of Superintendents, Assistant Superintendents, Principals, Directors of Vocational Education, Curriculum Specialists, and Guidance personnel.
The staff consisted of a group of qualified individuals with expertise in diverse fields who possessed a common concern for youth and a common recognition that the public school must expand its four walls and provide more realism in the learning experiences provided to students. The staff consisted of:

Dr. Alton C. Crews  
Superintendent  
Charleston County Public Schools  
Charleston, South Carolina  29401

Mr. Herbert B. Holstein  
Director of Vocational Education and Exemplary Program Director  
Lincoln County Schools  
Hamlin, West Virginia  25523

Mr. Sidney L. Linville  
Assistant Superintendent  
Putnam County School System  
Eleanor, West Virginia  25070

Mr. Keith Smith  
Vocational Guidance Specialist  
Division of Guidance, Counseling, and Testing  
State Department of Education  
Charleston, West Virginia  25305

Mr. James Snyder  
Program Specialist, Industrial Arts  
Bureau of Curriculum and Instruction  
State Department of Education  
Charleston, West Virginia  25305

Mr. Thomas E. Woodall  
Career Guidance Specialist  
Georgia Southern College  
Statesboro, Georgia  30458

One hundred, twenty eight (128) participants representing thirty (30) counties in the State were involved in the five Career Education Institutes. The educators who were involved are as follows:

Gilbert Atkins  Assistant Director  Mercer  
Everett E. Barnett  Coordinator of Federal Programs  Barbour  
Paul C. Bartlett  Superintendent  Taylor  
Kermit B. Bias  Industrial Education  Taylor  
Evelyn C. Black  Counselor  Marion  
Joseph Blaine Board  Principal  Marion  
Elizabeth Bonie  Elementary Supervisor  Brooke  
Louise Bowers  Counselor  Grant  
Stella Brink  Adult Coordinator  Barbour  
Charles T. Brooks  Director of Vocational Education  Mercer  
James R. Brown  Superintendent  Ritchie  
Allen D. Bucklew  Superintendent  Tucker  
Jan D. Bucklew  Coordinator of Guidance and Testing  Tucker  
Clarence E. Burdette  Assistant Superintendent  State  
Robert J. Burns  Coordinator Pupil Services  Hancock
William O. Umstead III  Director-Pupil Personnel Services  Wetzel
William K. Valko  Counselor  Marshall
Kenneth Eugene Vance  Guidance Counselor  Pocahontas
Paul J. Vennari  Principal  Raleigh
Bobby E. Via  Principal  Monroe
Pamela B. Warfield  Elementary Counselor  Marshall
Paul Wassum  Director, Secondary Language Arts  Cabell
Ralph S. Webb  Counselor  Raleigh
Richard C. Whiting  Director of Instruction  Berkeley
Trixie Wood  Counselor  Raleigh
Thomas E. Woodall  Guidance Coordinator  Lincoln
James A. Wright  Principal  Raleigh

LeVene A. (Lee) Olson  EPDA Project Director
Director of Career Education
Department of Vocational-Technical Education
Marshall University
Huntington, West Virginia 25701
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INTRODUCTION

by
LeVene A. Olson

The general objective of the Career Education Institutes was to provide meaningful information and experience upon which educators in local school systems are able to systematically make decisions relative to planning, developing, promoting, implementing, and evaluating Career Education.

Through Career Education, learning experiences can become much more relevant for Americans of all ages. However, administrators and supervisors must be willing to allow teachers to: (1) move away from a regimented curriculum, (2) give up an authoritarian orientation, (3) bring the outside real world into the classroom, and (4) allow students to begin an educational experience at the point of interest and concern of the students.

Many administrators have been unwilling to attempt Career Education because of a lack of specific information and experiences related to the Career Education concept. Robert Worthington, Associate Commissioner for Adult, Vocational, and Technical Education, articulated his concern for the lack of Career Education information and experiences provided to administrators, supervisors, and counselors which has tended to perpetuate inadequate coordination of resources, a dichotomy between State Departments of Education and Institutes of higher education, poor
utilization of available support from business, industry and the community and an imbalance in strategies selected to implement priorities.¹

Educators, parents, and the public are becoming increasingly concerned about the need to provide accurate and complete information and meaningful experiences to students about occupational and educational alternatives. Although educators are usually not concerned with attitudes concerning occupations per se, they are concerned with behavior modification related to academic skills necessary in most occupations.

According to Bandura, "the development of beneficial attitudes is often regarded as a major objective of social change endeavors."² He further points out that it is assumed that a correlation exists between the attitudinal domain and subsequent actions. Yet in light of this objective, Toffler states that "the more crucial the question of values (attitudes) becomes, the less willing our present schools are to grapple with it. It is no wonder that millions of young people trace erratic pathways into the future, ricocheting this way and that like unguided missiles."³

Students possess a vast repertoire of behavior which reflects attitudes about occupations and education. Many of these attitudes are based, however, on inadequate information and experiences acquired.


from misguided socialization agents. The process of socialization (learning attitudes and values) has for the most part in the past come about unintentionally. Attitudes about occupations and education have been formed through incidental learning which has often been based on inaccurate or faulty information. But even with inaccurate or faulty information the youth of today seem to possess a high degree of sophistication. Today's students do not appear to be as naive as the students of the past. Even so, thousands of students graduate from high school each year lacking a useful education.

Addressing this point Commissioner Marland states that the students "are the unfortunate inmates, in most instances, of a curriculum that is neither fish nor fowl, neither truly vocational nor truly academic. We call it general education. I suggest we get rid of it."

In the agrarian society of the American Nation in former years, adult roles were quite visible. Large extended families provided uncles, aunts, grandparents, parents, and others for the young to imitate. Small factories and businesses were often found in the home. The youth were surrounded by and involved in work activities which provided the knowledge and experience upon which attitudes were formulated.

In the past, educated and literate employees were desired but by no means essential. Some of the greatest industries in the United States in the past were administered principally by men who could not speak

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English. However, the development of a highly sophisticated body of science and experience in its application has resulted in rare occurrence of such phenomena.

Changes in American society have virtually eliminated the traditional method of gaining knowledge and experience upon which attitudes and subsequent occupational decisions are facilitated. If students who comprise the emerging labor force are to be viable members of society, it is important that they systematically be provided with the knowledge and experience upon which future occupational decisions can be based.

The need for innovative educational programs in a period of massive technological change has long been recognized. Galbraith observed that youth has been excluded from the labor market partly because of the hardship of employment and partly to make way for education opportunities. Yet, youth has not been provided with the education (at least in full and satisfactory measure) which the exemption from labor was designed to make possible.

Congress recognized the need for "new ways to create a bridge between school and earning a living for young people" by including a section on Exemplary Programs and Projects in the Vocational Education Amendments of 1968. One method of carrying out the purposes of Part D, Section 142, is to establish innovative model programs designed


6 Galbraith, p. 262.

7 U. S. Congress, Vocational Education Amendments of 1968, Public law 90-576, 90th Congress (1968), 17.
to familiarize elementary and secondary school students with the broad range of occupations for which special skills are required for careers in such occupations.\(^8\)

Hansen suggests that present career education practices in the schools have not kept pace with theoretical developments. Traditional methods of providing career information (occupational information units, career days, etc.) need to be evaluated and possibly replaced by a sequential program, K-12. Hansen's suggestions are based on changes in vocational development theory, the nature of work and its meaning to the individual, and new information retrieval technology. The following are suggested examples of experiences that may be included in career education: (1) decision-making experiences, (2) industrial and educational experiences, (3) counseling, (4) career games, (5) simulated decision-taking experiences, (6) periodic visits to career guidance centers, (7) periodic career conferences, (8) job site visits, (9) reinforcement models, (10) staff career specialties, and (11) student career logs.\(^9\)

According to Commissioner Marland,

It is flatly necessary to begin to construct a sound, systematized relationship between education and work, a system which will make it standard practice to teach every student about occupations and the economic enterprise, a system that will markedly increase career options open to each individual and enable us to do a better job than we have been doing of meeting the manpower needs of this country.\(^10\)

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\(^8\) S. Congress, 18.


of sociological changes and the resulting ramifications for the individual in today's society and vast technological advances which leave many (to use Toffler's terminology) in a state of "future shock" makes it imperative that school administrators become knowledgeable about alternative methods of providing relevant education for the youth of the Nation.

Based on this rationale, the institutes were designed to:

1. Define career education, provide strategies for implementation, and investigate cost and effectiveness of career education.

2. Demonstrate the developmental relationship of career awareness, career orientation, career exploration, and career preparatory education.

3. Provide information concerning curriculum development, correlating curriculum, and teaching strategies suggested in career education.

4. Provide experiences related to administration, articulation, and public relations in career education.

5. Provide experiential activities with commercially produced resource materials, which can be utilized by teachers and students.

6. Formulate models and strategies upon which local schools may conduct programs of career education.

The program schedule for the five institutes was as follows:

Monday:
- Task and Process
- Definition of Career Education
- Strategies for Implementing Career Education
- Costs of Career Education
- Effectiveness of Career Education
- Career Education Model

Tuesday:
- Lincoln County Exemplary Model
- Lincoln County Resource Units and Bibliography
- Industrial Arts Role in Career Education
Wednesday:
Cognitive, Affective, and Psychomotor Objectives
The Emerging Role of Guidance and Counseling

Thursday:
Administration, Articulation, and Public Relations
Career Survey Model
Curriculum Development
Career Education Delivery System

Friday:
Designing Models and Developing Strategies
Organizing and Conducting Workshops
<table>
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<tr>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
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<tbody>
<tr>
<td>9:00  Registration for the Institute</td>
<td>9:00 Lincoln County Exemplary Model Herb Holstein (Group Interaction)</td>
<td>9:00 Cognitive, Affective and Psychomotor Objectives Lee Olson (Interaction Groups)</td>
<td>9:00 Articulation and Public Relations Sidney Linville (Group Interaction)</td>
<td>9:00 Designing Models and Developing Strategies Lee Olson (Group Interaction)</td>
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<tr>
<td>Task and Process Ed Woodall</td>
<td>10:30 Implementing Career Education Herb Holstein (Group Interaction)</td>
<td>10:30 Experiential Activities with Commercially Produced Materials Lee Olson (Interaction Groups)</td>
<td>10:30 Career Survey Sidney Linville (Group Interaction)</td>
<td>10:30 Organizing and Conducting Workshops Lee Olson (Group Interaction)</td>
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<tr>
<td>Career Education Concepts Lee Olson (Seminar Session)</td>
<td>(Seminar Session)</td>
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<td>12:00 Lunch</td>
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<tr>
<td>1:00 Cobb County Exemplary Model Alton Crews (Group Interaction)</td>
<td>1:00 Industrial Arts Technology for Children Jim Snyder (Group Interaction)</td>
<td>1:00 The Emerging role of Guidance and Counseling Keith Smith (Group Interaction)</td>
<td>1:00 Curriculum Development Lee Olson (Group Interaction)</td>
<td>1:00 Registration for Marshall University credit Lee Olson (Group Interaction)</td>
</tr>
<tr>
<td>2:15 Break</td>
<td>2:15 Break</td>
<td>2:15 Break</td>
<td>2:15 Break</td>
<td>2:00 Concluding remarks and follow-up procedures Lee Olson</td>
</tr>
<tr>
<td>2:30 (Seminar Session) Cobb County Model Alton Crews (Seminar Session)</td>
<td>2:30 (Seminar Session) Technology for Children Jim Snyder (Interaction Groups)</td>
<td>2:30 Career Education Delivery System Lee Olson (Group Interaction)</td>
<td>2:30 Career Education Delivery System Lee Olson (Group Interaction)</td>
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**Mondays**
- **9:00** Registration for the Institute
- **9:15** Orientation Lee Olson
- **10:15** Task and Process Ed Woodall
- **10:30** Career Education Concepts Lee Olson (Group Interaction)
- **12:00** Lunch
- **1:00** Cobb County Exemplary Model Alton Crews (Group Interaction)
- **2:15** Break
- **2:30** (Seminar Session) Cobb County Model Alton Crews (Seminar Session)

**Tuesdays**
- **9:00** Lincoln County Exemplary Model Herb Holstein (Group Interaction)
- **10:15** Break
- **10:30** Implementing Career Education Herb Holstein (Group Interaction)
- **12:00** Lunch
- **1:00** Industrial Arts Technology for Children Jim Snyder (Group Interaction)
- **2:15** Break
- **2:30** (Seminar Session) Technology for Children Jim Snyder (Interaction Groups)

**Wednesdays**
- **9:00** Cognitive, Affective and Psychomotor Objectives Lee Olson (Interaction Groups)
- **10:15** Break
- **10:30** Experiential Activities with Commercially Produced Materials Lee Olson (Interaction Groups)
- **12:00** Lunch
- **1:00** The Emerging role of Guidance and Counseling Keith Smith (Interaction Groups)
- **2:15** Break
- **2:30** Career Education Delivery System Lee Olson (Group Interaction)

**Thursdays**
- **9:00** Articulation and Public Relations Sidney Linville (Group Interaction)
- **10:15** Break
- **10:30** Career Survey Sidney Linville (Group Interaction)
- **12:00** Lunch
- **1:00** Curriculum Development Lee Olson (Group Interaction)
- **2:15** Break
- **2:30** Career Education Delivery System Lee Olson (Group Interaction)

**Fridays**
- **9:00** Designing Models and Developing Strategies Lee Olson (Group Interaction)
- **10:15** Break
- **10:30** Organizing and Conducting Workshops Lee Olson (Group Interaction)
- **12:00** Lunch
The activities related to the institutes covered a three month period. The following chart indicates the time period and activities involved.

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<tr>
<td>May</td>
<td>May 1</td>
<td>May 15</td>
<td>May 25</td>
<td>June 19</td>
<td>June 23</td>
<td>June 26</td>
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<td>J</td>
<td>K</td>
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A. Applications Received and Reviewed  
B. Applicants Notified  
C. Pre-planning  
D. Charleston Institute  
E. Pre-planning  
F. Princeton Institute  
G. Pre-planning  
H. Glen Dale Institute  
I. Pre-planning  
J. Keyser Institute  
K. Pre-planning  
L. Clarksburg Institute  
M. Final Report Prepared

The attendance areas for the institutes are indicated on the West Virginia map in Figure 1. The institute sites and dates were as follows:

- Charleston Institute: June 19 - June 23  
- Princeton Institute: June 26 - June 30  
- Glen Dale Institute: July 17 - July 21  
- Keyser Institute: July 24 - July 28  
- Clarksburg Institute: August 7 - August 11
Any worthwhile innovative programs fail because of inadequate attention to the human relations or process phase of the project. Although technical or informational data 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, a dual approach, designed to focus on both human relations and technical skill elements was utilized.

On the first day of the Institutes was devoted to getting acquainted, building trust, and communicating. Experienced situations were used to encourage participants to be involved in and learn first-hand about other military, their perceptions, and communications.

Various pre-specified exercises were utilized in different Institutes.

In looking at generalities, the film "An Eye of the Beholder" was utilized.

In looking at specifics, the utilization of the one-to-one and the way Career Education communications exercises. The utilization of two-way communications is valued.

I. One-Way CEC Exercise

A. Background Information on Career Education

Students in grade levels K-6 receive occupational experiences through the existing subject areas of social studies, mathematics, language arts, science, and fine arts. The objective of career awareness education is to provide occupational and educational experiences which will develop the student's skills, attitudes, and knowledge and result in a greater awareness of the occupational options available to the student in the world of work.

Through a process called curriculum correlation, occupational and educational experiences are introduced through a subject which is related to the occupation requirements (academic skills). The study of an occupation is introduced where interest can be stimulated.

The methods or techniques used to provide students with occupational knowledge and experiences are (1) Field experiences to business, industrial, and governmental institutions, (2) Simulation and/or hands-on activities of cognitive, affective, and psychomotor nature including paper and pencil simulation, role playing, and experiences with employers, (3) Manipulative activities such as painting, drawing, printing, sewing, sawing, hammering, sanding, etc. (4) Resource role models representing the family, community, business, industry, and government, (5) Multi-media activities such as books, films, slides, visuals, audio tapes, video tapes, organizational publications, etc. (6) Ability and aptitude assessments of informal classroom activities and formal testing, (7) Guidance and counseling by classroom teachers on a daily basis and occasionally by school counselors, (8) Interpersonal interaction through lectures, discussions, panels, etc., and (9) occupational research in the classroom library and in the community.
D. Directions For The One-way Exercises

1. Select one demonstrator from each 6-10 participants.

2. Give these demonstrators with the background information. Allow time for a complete explanation, questions, answers, and discussion of the CEC exercise.

3. Divide the participants into groups of 5-10 people. Provide one demonstrator for each group.

4. Provide a pencil and sheet of paper for each participant in all groups. Label the paper:
   
   The One-way CEC Exercise
   Career Awareness Multi-Discipline Model, K-6

5. The groups are told that the demonstrator will provide them with instructions for drawing a series of circles. The participants are to reproduce these circles according to the directions given by the demonstrator.

6. The participants are not to ask any questions or talk to any other part of the group.

7. The demonstrator may not show the participants the drawings.

8. The demonstrator may illustrate relationships with his/her arm movements.

9. After the participants and demonstrator have viewed through one or two, all demonstrators are asked to proceed with instructions for the one-way CEC exercise.

10. All groups should complete the one-way CEC Exercise as quickly as possible. All groups should finish prior to explaining the Career Awareness Model.

11. After all groups have finished the one-way CEC Exercise, the demonstrator (in a group discussion format) moves the participants' models. He should show at least why the participants' models do not look like the ones given by the demonstrator. The discussion should be in terms of how the participants feel about one-way communications.

12. Demonstrators may summarize with the following:
   A. One-way Communications: It usually quicker.
   B. One-way Communications: It usually less accurate.
   C. One-way Communications: It usually involving.
Note: The inner circles represent the teaching strategies or procedures utilized to provide realistic learning experiences. They are (1) ability and aptitude assessment, (2) field experiences, (3) guidance and counseling, (4) interpersonal interaction, (5) manipulative activities, (6) multi-media activities, (7) occupational research, (8) resource role models, and (9) simulation and/or hands-on experiences.
II. Two-Way CEC Exercise

A. Background Information on Career Exploration (Cluster Concept)

In the lower high school levels, the cluster concept approach may be utilized to provide entry level knowledge, skills, and attitudes in a large number of occupations within selected clusters.

Criteria for the selection of an occupational cluster are as follows: (1) The cluster should include occupations related in terms of duties, materials, finished products, or services performed. (2) The cluster should possess a large breadth of occupations requiring various skills, attitudes, and knowledge.

The criteria for selecting occupations within the cluster are as follows: (1) The occupation should provide good future employment opportunities. (2) The occupation should provide for entry level employment after completion of one's formal education. (3) The occupation should allow for advancement through successful on-the-job-training or additional education. (4) The occupation should be of such a nature that numerous skills, attitudes, and knowledge are necessary for successful performance in the occupation.

Entry level tasks for the occupations meeting the above criteria are identified. The tasks are analyzed to determine the common elements in the areas of skills, attitudes, and information.

The commonalities (elements common to all of the occupations) are taught in the total group situation. The introduction of the cluster of occupations should begin with the commonalities. Following the introduction, students are divided into occupational groups within the cluster. After the student has experienced numerous activities
and developed some job entry skills, he moves to a second occupation. This rotation procedure is followed until the students have experienced activities in all of the occupations offered in a cluster.

Individualized instructional packages may be utilized for selected occupations within the cluster. The instructional units should include behavioral objective(s), diagnostic instrument(s), learning activities, instructional resources, monitoring instrument(s), and achievement instruments.
B. Directions For The Two-Way CEC Exercise

1. Select one demonstrator from each 6-10 participants.

2. Provide these demonstrators with the background information, allow time for a complete explanation, questions, answers, and discussion of the CEC Exercise.

3. Divide the participants into groups of 6-10 people. Provide one demonstrator for each group.

4. Provide a panel and sheet of paper for each participant in all groups. Label the paper “Two-Way CEC Exercise Career Exploration Cluster Concept Model, 9-12

5. The groups are told that the demonstrator will provide them with directions for drawing a series of circles. The participants are to reproduce these circles according to the directions given by the demonstrator.

6. The participants may ask as many questions as desired and the demonstrator can provide as many answers and as much detail as needed by the participants.

7. The demonstrator may not show the participants the drawings.

8. The demonstrator may illustrate relationships with his hands.

9. After the participants and demonstrators have received thorough instruction, all demonstrators are asked to proceed with instructions for the two-way CEC Exercise

10. All groups should complete the two-way CEC Exercise as quickly as possible. All groups should finish prior to explaining the Career Exploration Model.

11. After all groups have finished the two-way CEC Exercise, the demonstrator (in a group discussion session) views the participants papers. He should draw out reasons why the participants' models may look better than the ones drawn in the one-way CEC Exercise. The discussion should be in terms of how the participants feel about two-way communications as opposed to one way communications.
Two-Way CEC Exercise
Career Exploration Cluster Concept Model, 9-12

Note: The inner circle represents the common elements found in a cluster of occupations. The outer circles represent specific occupations which require specific knowledge, skills, and attitudes.
CAREER EDUCATION PRINCIPLES

by
LeVene A. Olson

Career Education is a process of systematically providing elementary, secondary, post-secondary, and adult learners with meaningful experiences in academic, general, and vocational subjects. These experiences focus on helping learners become viable individuals who are capable of making accurate choices concerning future careers.

To facilitate this process, the following principles are of major importance:

1. The value of academic skills and their relationship to career success and satisfaction must be vividly illustrated.

2. Complete and accurate self understanding with emphasis on the importance of career decisions must be continuously emphasized.

3. The value, dignity, and importance of each learner must be continuously reinforced.

4. An activity centered functional approach to learning must be utilized to illustrate abstract theory.

5. An open environment which is student centered must permeate the classroom.

6. The cooperative interaction among people significant to the student must be encouraged.

7. The value, dignity, and importance of all work must be continuously emphasized.

8. The concept that occupations and careers are dynamic rather than static must be emphasized.

9. The relationship between sociological factors (leisure time activities) and occupations must be illustrated.

10. The value of acquiring entry-level occupational skills appropriate to the student's career objective must be emphasized.
CAREER EDUCATION—BOON OR BOONDOGGLE?

BY

Alton C. Crews

Ebbs and flows of educational innovations rose and fell with our nation's social, economic and political concerns during the decade of the sixties. As we move into the seventh decade of the twentieth century, school people continue to analyze and ingest events of the recent past to determine their implications for the education of America's youth. Emerging from the ferment of the sixties are several major educational thrusts that may well determine school decisions and expenditures for years to come. Identifiable influences that are emerging are: efforts to make public education more relevant and meaningful to the needs and interests of the learner; this, accompanied by a public clamor for increased efficiency in the operations of public schools, compose a dual mandate from the sometimes fickle citizenry that ultimately determine the tune that the educational fiddler produces. Pedagogical change, though widely acclaimed during the past decade, and frequently enticed by carrot-dangling federal financial incentives, may not have produced hoped for improvements.

Dysfunction of the public school's program is frequently credited with ailments that beset our society. Dropouts, vandalism, absenteeism, and excessive failures are symptomatic of the lack of relevance in school offerings. Many of today's graduates of the high school's "General and/or academic curriculum" are finding it increasingly difficult to secure employment. It is estimated that some 2½ million students each year terminate formal education through high school graduation, or college and high school dropout prior to graduation. Few of these young people possess
adequate skills to enable them to enter the labor market. Less than one of four high school graduates have been enrolled in vocational education programs. Perhaps then, those of us in education should not become indignant and defensive when the schools are accused of being dysfunctional and irrelevant for many of today's youth.

Unfortunately, we have drifted, either deliberately or inadvertently, into school programs referred to as college prep, or vocational. This pedagogical dichotomy has resulted in placing labels on youngsters with resulting value judgments - the college preparatory student being prestigious and highly approved while the vocational student is tolerated but not held in the highest esteem. All too frequently the so-called vocational student is a reject from the college preparatory curriculum and comes to vocational preparation programs as a second choice with a bruised self-image. The age old complaint that vocational schools become "dumping grounds" for the ne'er-do-well academic reject, certainly has some validity. But, must this be so? Is it not possible to design school programs that provide students with a humane, orderly, and prestigious path to the world of work much in the same fashion we now afford the college bound? After all, most able bodied and mentally capable persons will at some point in their lives assume the role of a producer of goods or services. For some, this entrance into the labor market will come when they drop out before high school graduation. While others will seek employment at the conclusion of high school, and a smaller group will begin their careers at the conclusion of baccalaureate and post graduate college programs. But all have one thing in common - they go to work. Yet, much of our public school program fails to recognize this obvious fact, and continues to attempt to prepare an excessive number of
students for college as though this were an end within itself. These concerns have generated a growing interest in what has come to be known as Career Education.

Commissioner of Education, Sid Marland, generally considered to be the originator of the Career Education concept, has deliberately refused to define the term. Preferring instead, to let a definition emerge from the grass roots as programs spring up across the land. Commissioner Marland, has, however, characterized Career Education as an effort to "eliminate the separation of things vocational from things academic." Career education, according to Marland, is for the "attache case professions as well as the lunch box job holder." The artificial dichotomy labeling students as partakers of academic or vocational educational fare is removed. Darrel Ward and Edward Ferguson in a paper recently presented to the American Vocational Association defines Career Education as "an education plan for all students which fully integrates academic or basic knowledge and skills with the total spectrum of occupational preparation, thus providing relevance to all education by placing the central focus and emphasis upon preparation for life's career role." The U.S. Office of Education distinguishes Career Education from vocational education in the following manner: (1) Career education is a comprehensive educational program focused on careers. It begins with the entry of the child into a formal school program and continues into the adult years, (2) it involves all students, regardless of their post-secondary plans, (3) career education involves the entire school program and the resources of the community, (4) career education infuses the total school curriculum rather than providing discreet, high profile "career education" blocks forced into the curriculum, (5) it unites the
student, his parents, the school, the community, and employers in a cooperative educational venture, (6) career education provides the student with information and experiences representing the entire world of work, (7) it supports the student from initial career awareness, to career exploration, career direction setting, career preparation and placement, and provides for placement follow-through, including re-education if desired, (8) career education is not a synonym for vocational education; but, vocational preparation is an integral and important part of a total career education system.

If career education is to become operational, there seems little hope for it to assume the form of a new course to be forced into an already overcrowded curriculum. A more feasible curriculum strategy seems to be to infuse career education experiences and materials into existing subject content disciplines. Infusion can succeed where addition may lead to failure. Through the infusion process, the career education theme is carefully woven into the total fabric of the curriculum. Such a system will have a functional unity that can bring relevance to the curriculum that will serve both the learner and the society in which he lives. Only time will tell whether career educators are successful in their efforts.

In the Cobb County, Georgia Career Education model, the elementary part of the model proposes to teach an awareness of careers to students in grades 1 through 6. Role playing, simulation, field trips, resource persons, and hands on activities are employed as teaching methods in integrating career awareness concepts in all subject disciplines. Broad clusters of occupations, 15 in number, compose the content of the program. These occupational clusters are construction, manufacturing, transportation, agriculture, home management, business, administrative,
business and office, marketing and distribution, communications and media, hospitality and recreation, personal service, public service, health, consumer and homemaking, fine arts, and humanities. Local occupations from each cluster are studied by all students in activity units utilizing the techniques mentioned above. Again, it must be emphasized that awareness of and knowledge about occupations is the objective of the elementary career educational model.

Cobb County's middle school program is built around exploration and orientation, still little emphasis being placed on teaching specific vocational skills. Using industry and businesses in the community as learning laboratories, the student gets brief hands-on experiences and learns first-hand what working conditions are like for the worker on several jobs. In the intermediate school, the student narrows his exploration from 15 occupational clusters to 3 or 4 clusters in which he has specific interests. Job visitation and exploration is accompanied by group guidance activities designed to acquaint the learner with his own career interest, aspirations, and aptitudes. Economic awareness of the free-enterprise system and skills in decision making are provided in the middle school program.

Exposed to career awareness programs in the elementary schools and provided exploratory work experience in the middle school, the student now progresses to the senior high school where he is given the option of job preparation program. Subject areas are tied in with occupational information in one or more clusters of work. At the conclusion of the preparation program, the school provides aid in job placement, enrollment in baccalaureate programs, or continuation in post-high school technical training. Such a structural sequence of learning activities spanning awareness in the early grades, exploration in the middle grades and
preparation for work or further training, along with job placement in the senior high school, seems to offer the humane path to the world of work that was mentioned at the outset of this presentation as being one of the desirable objectives of career education.

Re-training teachers and producing or securing appropriate teaching materials are essential first tasks in tooling up for career education. It has been Cobb County's experience that preparing elementary teachers to fulfill their new role has proven to be more successful than has efforts to re-direct the teaching process of the subject-centered secondary teacher. Motivating guidance counselors to devote as much time to placing students on jobs as they do in helping them gain college entrance may pose an obstacle. Removing clerical and administrative minutia from the counselor's list of responsibilities has aided, however, in inducing counselors to provide job placement services.

Initial or "start-up" cost for implementing career education constitutes a significant outlay of funds. Once this financial hurdle is crossed, however, operational costs exceed only slightly traditional program costs. Once teachers are trained, materials purchased or developed, and vocational preparation courses broadened to include most students, only the latter continues as an expanded cost.

Certain cautions for the would-be career educator may be in order. Certainly, one who would venture out onto the uncharted seas of career education may find himself the target of critics who would label him as anti-intellectual. Proponents of the traditional classic academic curriculum will be quick to claim that academic vigor and intellectual vigor are being sacrificed on the altar of pragmatism. Cobb's experience,
though of short duration, does not support this contention. Some will question the federal intrusion into curriculum planning, since the U. S. Office of Education has been the principal proponent and a major fund supplier for early career education efforts. A word of caution to the school administrator who is reluctant to give up decision-making prerogatives. Since the community serves as a laboratory in career education programs, the businessman, the entrepreneur, and the doctor, lawyer, and Indian Chief, must be taken into partnership in the educational process. No longer can the school administrator, alone, make the educational decision. Finally, can and will the community serve continually as an educational laboratory? Will local businesses and industries be willing to provide its facilities and personnel on a permanent basis to the career education program? Again, only time will tell if the private sector of the economy is willing and able to shoulder this new responsibility.

CAREER EDUCATION - A boon or boondoggle? Is career education truly an educational reform movement, or just another of a long list of educational fads that will fade quietly into oblivion after having its brief fling? Many think not. Certain conditions exist that cause many to believe that career education is a durable and lasting concept that will eventually change the public school program in a significant manner. The move to make career awareness a common learning for all has widespread public support. The purposelessness that characterizes so much of our school program is forcing educators to seek curriculum relevancy. Certainly career education is in the early stages of metamorphosis and has not yet assumed its final shape. Bits and pieces exist in hundreds of school districts across America. These must be field tested, evaluated and synthesized into a workable whole before
the claim that career education is an educational reformation holds any validity. Yet, at the same time, career-education just possibly could be the vehicle that will bring a badly needed restructuring of the public schools program. Let's at least give it a reasonable chance to be an educational boon, rather than hastily relegating it to the boondoggle scrap-heap.
THE LINCOLN COUNTY EXEMPLARY MODEL

by

Herbert B. Holstein

This paper describes the Exemplary Program conducted in Lincoln County, West Virginia. Specifically, this paper addresses itself to the following topics: goals, objectives, assimilation, program levels, supportive services, inservice training, community services, vocational preparation, evaluation, and clusters.

GOAL NUMBER ONE
To provide broad occupational orientation at the elementary and secondary school levels so as to increase student awareness of the range of options open to them in the world of work.

Career Awareness

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 multitudes 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

General Objective
To establish in grades 7-8 a curriculum which will assist the student to acquire such knowledge of the characteristics and function, the duties and rewards of the occupational families within which his choice will probably lie.

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

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 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 and 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.

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 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 due to broadened curriculum offerings made available through cooperative vocational education.

(e) To provide economic assistance to those students in need of 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 just prior to the time that they leave school.

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 supplemented 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.

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, reentry into training programs, and participation in individual counseling and group occupational guidance.

Assimilation into the Existing Structure

The task of assimilation into the existing educational structure included employing and training of professional personnel, conducting workshops and in-service training for teachers and administrators, the curriculum, testing and advising students, developing curriculum materials, establishing schedules, securing work stations, and performing other activities related to administration and supervision. Within the Lincoln County school system, the model adopted for the reorganized curriculum may be considered innovative. As such, Havelock's model for planned change was adopted.

As one strategy for installation, exemplary staff identified social systems within the county with particular emphasis upon the communication frequency and contact between individual families. The purpose of studying this aspect of the county was to identify the educational, political, economic, and social leaders. Educational leaders were asked to meet early in the discussions in order to assist in the change in the theoretical framework for the new curriculum design. The following sequence of steps have been followed:

Identification of legitimizers

Meetings with legitimizers

Meetings of all teachers, supervisors, and administrators

Identification training needs

Development committees to study needed curriculum, guides, materials, and schedules by grade level groups

Workshop held for teachers and principals in seven pilot schools when the Career Education Program was initiated this fall. The workshop facilitated program assimilation through focusing on team building and curriculum development, creation, teaching units, correlation and blending of academic subjects into a career awareness focus, and planning and administrative contingencies.

The implementation strategy also utilized a sequential phasing in of the career education concept, with grades 1-6 being introduced in the fall of 1971, grades 7-8 scheduled for spring 1972, and grades 9-12 being brought in at the beginning of the 1972-73 school year.

Career Awareness

The educational program for the first and second grades begins with the immediate environment and gradually broadens to encompass the larger community environment. The first grade child is introduced to the world of work by investigating family. This is reinforced by studying workers with whom he comes in contact. The second grade is introduced to new and different kinds of workers in the community. These workers, not in his family or at school.

The educational program for grades 3 through 6 is designed to increase occupational horizons from the immediate environment to the larger community. Comparing and contrasting occupations in the immediate area to those found in other communities provide the child with an opportunity to become aware of the encompassing nature of work.

The activities learning approach continues to be the principal method of concept development for the active youngsters. Each concept is presented and re-enforced through meaningful activities suited to the physical and mental maturity of the child in grades 3 through 6. In classes with high levels of deviation, such as handicapped and disadvantaged students, adjustments are necessary to facilitate internalizing functional occupational concepts.

The third grade continues the lower primary approach of total and small group activities under the leadership of the teacher. The fourth grader's efforts and interests are integrated into activity-planning providing for individual differences. The curriculum in grades 5 through 6 will include instruction and experience that will enable the students to develop positive attitudes toward work, identify and choose goals for themselves, and study occupational areas in which they are interested.

Career Orientation

The curriculum in grades 7 and 8 designed to give students a knowledge of the characteristics and functions, duties and rewards of specific clusters within a broad spectrum of occupational families. Youth at this age level have rather specific characteristics which suggest certain needs. For example, they have not had opportunities to explore their capabilities in

*Igo Laws, p. 87.*
their capabilities in various areas under a variety of situations; therefore, they need opportunities to self-appraise their emerging potentials, to analyze occupational information for decisions making, to understand the importance of all types of work, and to learn the educational and occupational requirements of different jobs.

The curriculum organization in grades 7 and 8 will be characterized by studying occupational clusters across content areas. In addition to integrating the entire curriculum at the grades 7 and 8 around career orientation, two hours per week in the eighth grade will be used in studying the selected occupational clusters. These courses are to be taught by present teachers at the seventh and eighth grade levels.

Career Exploration

The curriculum in grades 9 and 10 is characterized as exploratory. This involves exposure to actual work situations and, hopefully, "hands-on" experiences may be provided that are related to specific occupational clusters. The instructional material will be organized into units for more extensive study. Units for grades 9 and 10 will be selected from broad occupational areas.

Career Preparation

Three methods of student involvement will make up the curriculum in grades 11 and 12: (1) cooperative work experience, (2) specific vocational courses, and (3) pre-professional courses. The cooperative work experience will provide work stations in business and industry with related studies in the high school setting. The specific vocational courses will provide for study in specific content areas with the innovative opportunities for job "spin-off" at all levels within the occupational.
The pre-professional courses will provide laboratory settings in which salable skills will be practiced. All courses will be planned to provide for students with varying levels of learning abilities.

**Intensive Guidance and Skill Development**

For potential dropouts, dropouts, and high school graduates who have not acquired salable skills, provisions will be made for intensive guidance, and skill development may be provided in summer classes or other times during the year appropriate to student needs. A continued assessment will be made of labor market trends in the area of occupational changes through the Department of Labor (West Virginia Employment Security Service). The guidance and skill development will be held to a high correlation with job potential.

Following this intensive guidance and skill development, a follow-up study will be conducted on the job with counseling and job development training. Since Lincoln County traditionally is an area of high out migration, contracts will be negotiated with other school districts to make the necessary follow-up of students employed in other counties, regions, and states when such units provide these services.

**Curriculum**

The curriculum has become much more experience based providing students with opportunities for field experiences, simulations of occupations, contact with actual role models of various occupational persons, and access to a wide variety of multi-media occupational information. A curriculum blending approach has been taken, with the traditional academic subject matter areas organized around a career education theme, and using team teaching as a vehicle for implementation. The Lincoln County Career
team teaching as a vehicle for implementation. The Lincoln County Career Awareness Curriculum Model emphasizes the student's entering the program at any given point among the academic alternatives and career education elements on the basis of the results of his contact with a diagnostic instrument which assesses his occupational knowledge, skill, and attitudes. Throughout his involvement he will have an opportunity to assess his acquisition of occupational knowledge, skills, and attitudes. Throughout his involvement he will have an opportunity to assess his acquisition of occupational knowledge, skills, and attitudes through the use of Achievement Instruments which will aid in identifying his abilities, aptitudes, needs, likes, dislikes, fears, interests, feelings, and values, with an opportunity for modification or re-cycling of his involvement in the curriculum if appropriate. Flexibility, involvement, and experience are the key elements in the current curriculum approach.

Supportive Services

The program has basically five segments:
(1) Career awareness activities in grades 1-6. This segment can utilize a number of supportive services from within the structure of the Lincoln County School System, such as the health and social services furnished by the ESEA Program, including eye care, remedial health services, and counseling and guidance on health, social, personal and educational concerns. Also for the disadvantaged, linkages with the Department of Welfare will make that agencies resources accessible. The full range of multi-media occupational materials housed in the Lincoln County Demonstration Center will also be available for use by elementary students. Also available for use will be a wide range of businesses and organizations which will provide resource persons and field trip visitation sites. Board of Education school buses have been made available for field trip transportation.
(2) Occupational activities in grades 7-8. All the supportive services discussed above will be available. Counseling and guidance will be provided by the staff, ESEA guidance personnel, and school counselors to enable students to acquire a knowledge of the characteristics and functions of the family, the duties and needs of the occupational families, and the lives of people in those families. Vocational counseling will probably be given.

(3) Entrepreneurship in grades 9-10. The Lincoln County Vocational-Technical Center will offer facilities for students to obtain "hands-on" experiences in various occupational fields. ESEA guidance personnel will encourage students to obtain experiences that will enable them to make occupational choices, experiences in working with others, and the psychological aspects of work as it relates to their own temperaments, personalities, and values.

(4) Intensified occupational guidance, counseling, and job placement activities for those students who desire to enter work at the termination of their course work. This segment of the program will utilize businesses and institutions in the community who will provide cooperative work settings including neighborhood youth corps programs and anti-poverty agencies. Vocational activities can utilize the resources of the West Virginia Department of Employment Security. Training programs will be conducted in the Lincoln County Vocational and Technical Center.

(5) Skill development activities for those students who have not previously been enrolled in a vocational program and who have shown a desire to terminate their formal education. One of the primary supportive services offered by the segment will be the resources of the Department of Employment Security, who will make a continued assessment of the labor
market trends in the area of occupational changes so that guidance and skill development can be held to a high correlation with job potential.

Inservice Training

Those elementary school teachers already involved in the program on a pilot basis, were involved in a week long Inservice Training Session August 16-20. The workshop focused on an overview of the purpose and rationale for career education, team building, and organizational development, consulting skills, and development of objectives, curriculum and methodology by grade levels.

The first day of the workshop, which ran for six hours daily, was devoted to staff and group development, team building and the creation of a consultative helping relationship between project coordinators and participating teachers. The framework for this session was a sequential group building process which took all participants through four basic stages of team development, from getting acquainted and trust building, to the formation of helping relationships, and finally group collaboration on a common task. Through the use of a modified laboratory training approach participants were divided into four groups, each with a leader trained in group dynamics. Experiential situations were created which allowed participants to be involved in, and learn first-hand about effective communication, consulting, problem solving, planning, feedback, group decision making, and teamwork.

The second day a model of career education was presented in the total group by Dr. LeVene A. Olson with reaction and discussion following in the
small groups that were built the first day. The model emphasized a sequential approach with first graders learning about occupations in the immediate family, and each grade broadening its perspective until sixth graders would be studying the interdependence of occupations on a world wide basis. Junior high orientation and exploration would lead to specific choices at the senior high level followed by post high school technical training, a job, or continued academic training. Also on the second day Mr. Joel Smith from a similar project already in operation shared experiences and insights gained from the efforts of he and his staff. Again, the cohesive, unified groups created during the first day were able to share effectively the application of this presentation to implementation of the project in Lincoln County Schools.

On Wednesday, each of the four groups went through the process of developing a Career Awareness Unit that could be used in the classroom, culminating in a role playing situation, in which the groups simulated typical roles played by the occupational persons on which the units focused. Each group observed the others in their role playing efforts, and then offered constructive feedback on positive and negative elements noted.

Thursday's session opened with a lecture (short Lecture) to the methodologies, and emphasized the inclusion of academic subjects, correlation of academic subjects, identification and study of related occupations, and classroom simulation of the occupation including role playing and manipulative activity. The remainder of Thursday was spent with teachers divided by grade level developing actual units for use in the classroom during the
resources for work experience and cooperative education work stations is planned to cultivate community support and acceptance of the project, thus assuring its continuation beyond the time frame presently allocated.

Vocational Preparation

The Career Awareness Curriculum in grades 1-6 will expose students to the broad range of occupational possibilities, with emphasis on the development of positive attitudes toward work, and enabling students to identify and choose goals for themselves, and study occupational areas in which they are interested. As the student moves into junior and senior high school the program will become more directly job preparation. The curriculum organization in grades 7-8 will be characterized by studying occupational clusters, and areas.

The emphasis on job preparation will intensify in the 9th and 10th grades. At these levels the curriculum is characterized as exploratory. This involves exposure to actual work situations and hopefully, "hands on" experiences may be provided that are related to specific occupational clusters. The instructional material will be organized into units for more extensive study.

At the 11th and 12th grade levels three methods of student involvement will aid in job preparation: (1) cooperative work experience, (2) specific vocational courses, and (3) pre-professional courses. The cooperative work experience will provide work stations in business and industry with related studies in the high school setting. The specific vocational courses will provide for study in specific content areas with the innovative opportunities for job "spin-off" at all levels within the occupational cluster. The pre-professional courses will provide laboratory settings in which saleable skills will be practiced.
An additional feature of the job is an aspect of the program will be intensive guidance and skill development in grades nine through post-high school. For potential dropouts and high school graduates who have not acquired salable skills, provisions will be made for intensive guidance, followed by intensive skill development. This preparation, guidance, and skill development may be provided in summer classes or other times during the year to meet student needs.

Evaluation

Three basic methods of educational assessment will be used: (1) structured interviews, (2) instruments yielding quantitative and qualitative measures of cognitive and affective characteristics, and (3) instruments yielding comparative profiles. When available, and appropriate, measures germane to the stated objectives, standardized instruments will be used. (In the absence of standardized instruments appropriate to measures of achievement and performance, instruments will be devised and constructed.) Data gained from constructed instruments will enter into the evaluative model only after the reliability and validity of each instrument is determined. Because of the non-existence of objective instruments for measuring occupational knowledge in grades 1-6, the staff of the Lincoln County Project found it necessary to develop tests for this purpose.

The following occupational clusters are utilized in grades seven through twelve with reference books made to them by the teachers of the elementary level:

1. Agri-business and Natural Resource Occupations
2. Communication and Media Occupations
3. Construction Occupations
4. Consumer and Foremerging Occupations
5. Environmental Occupations
6. Fine Arts and Humanities Occupations
7. Health Occupations
8. Hospitality and Recreation Occupations
9. Manufacturing Occupations
10. Marine Science Occupations
11. Marketing and Distribution Occupations
12. Office Occupations
13. Personal Service Occupations
14. Public Service Occupations
15. Transportation Occupations
Criteria of Different cls
"Within Given Occupation"

Professional
1. Important function
2. Independent
3. Varied responsibility
4. Deals with policy making and interpretation
5. High level of education where relevant

Semi-Professional and Managerial
1. Some independence
2. Varied responsibility
3. Policy interpretation
4. High level of education where relevant

Technical and Skilled
1. Some variation in responsibility
2. Some policy interpretation and decision making
3. Special training, apprenticeship and/or experience
4. Knowledgeable in a particular skill or area

Semi-Skilled
1. Little or no responsibility
2. Some special training, apprenticeship and/or experience

Unskilled
1. No special training and/or skill

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Herbert B. Haskel, Bill Herman, George Spilks, and Thomas E. Woodall, Lincoln Coun. Ex. 1976:152. Education Using the Occupational Curriculum of Career Orientation
(Hamlin, West Virginia: Lincoln County 3rd. Ann. 1976, pp. 2-52.)
Simulated or Work Experience for Agri-Business and Natural Resources Occupational Cluster

Professional-------------------Geologist:
Gather & classify geological material from surrounding area.

Semi-Professional and Managerial-------------------Soil Scientist:
Collect, test, and classify soils from surrounding area. Using Cooperative Extension Service for guidance.

Technical and Skilled-------------------Landscape Technician:
Draw & design landscape area for part of the school area.

Semi Skilled-------------------Gardener:
Raise & care for plants and flowers in school area. Could use the organic method for this.

Unskilled-------------------Caretaker:
Care for lawn and grounds at local school and other local civic areas.
AGRI-BUSINESS OCCUPATIONS

Professional

Agricultural Economist
Agricultural Engineer
Crop Scientist
Wildlife Manager
Geologist
County Agent
Soil Scientist

Semi-Professional and Managerial

Agricultural Communications & Public Relations Worker
Rancher
Seismograph Computer
Spectroscopist
Smoke Tester
Air Analyst
Food Technologist

Technical and Skilled

Forest Technician
Dairy Technologist
Dairy Farmer
Coal Miner
Farmer
Inspector
Nurseryman
Tree Surgeon
Butcher
Animal Trainer
Salesman

Semi-Skilled

Dairy Industry Worker
Mining Worker
Game Warden

Unskilled

Cowboy
Farmer Laborer
Meat Packer
Saw Mill Worker
Poultryman
Gardener
Greenskeeper
Logger
Simulated or Work Experience for Communication and Media Occupational Cluster

Professional: Editor
Responsible for producing school paper.

Semi-Professional: Manager
Assigning different work roles to people involved in gathering the news.

Technical and Skilled: Reporter
Writing up news as you observed it in your assigned role.

Semi-Skilled: Pressman
Running paper off school press.

Unskilled: Vendor
Selling school paper.
COMMUNICATION MEDIA OCCUPATIONS

Professional
Producer
Director
Editor (film & paper)
Actors
Actress
Writer

Semi-Professional and Managerial
Radio-Television Announcer
Reporter
Program Director
Public Affairs Director
Journalist
Artist
Cartoonist

Technical and Skilled
Broadcast Technician
Studio Technician
Operator
Linenman
Disk Jockey
Photographer
Audio Engineer
Cameraman
Reporter

Semi-Skilled
Compositors
Printing Pressman
Copywriters
Telephone Installers
Telephone Operators
Teletype Operators
Radio-Television Serviceman
Jockey
Lay Men
 Morse Operator
 Teletype Clerk
 Engravers
 Typesetters
 Projectionist
 Salesman
Simulated or Work Experience for
Construction Occupational Cluster

Professional-------------------Architect:

Semi-Professional and Building
Managerial-------------------Contractor:

Technical and Skilled--------Carpenter:

Semi-Skilled----------------Carpenter Helper:

Unskilled-------------------Laborer:

Draw plans with specifications for local facilities.

Gather information: material costs and estimate total costs of specific building.

Construct table or bookcase for career project materials relevant to that particular need.

Assist the carpenter in all of his functions.

Help semi-skilled and skilled workers in their different construction occupations.
CONSTRUCTION OCCUPATIONS

Professional
- Civil Engineer
- Architect
- Aeronautical Engineer

Semi-Professional and Managerial
- Building Contractor
- Surveyor
- Draughtsman

Technical and Skilled
- Cost Estimator
- Salesman of Materials
- Building/site Inspector
- Engineering Assistant
- Foreman
- Carpenter
- Plumber
- Electrician
- Pipefitter
- Stenographer
- Electrician
- Iron/Structural Steel Worker
- Roofer
- Glasser
- Stone Mason
- Tiler
- Machinery Operator
- Plasterer

Craft Skills
- Bricklayers Tender
- Chimney
- Treasurer
- Painter/Decorator
- Naval Mechanic
- Construction Painter
- Floor Covering Installer

Unskilled
- Labourer
- Scaffolding
- 3rd Carriage
- Tagger
Simulated or Work Experience for Consumer and Homemaking Occupational Cluster

Manager:
Do planning and buying of supplies for the school lunch program.

Dietician:
Plan balanced menus for the school hot lunch program.

Cook:
Preparing school lunches.

Assistant Cook:
Helping the cook in preparing the school lunches.

Dishwasher:
Assist school lunch personnel in caring for the cafeteria.
CONSUMER HOME ECONOMICS OCCUPATIONS

Professional

Nutritionist
Dietician
County Home Economist
Research Economist

Semi-Professional and Managerial

Executive Housekeeper
Chef
Manager of Cafeteria
Food Products Tester
Home Service Representative
Food Inspector
Manager

Technical and Skilled

Baker
Tailor
 Seamstress
Garment Examiner
Garment Inspector
Director of School Lunch Programs
Plant Hostess
Kitchen Supervisor
Home Lightning Demonstrator

Semi-Skilled

Cook
Clothing Maintenance Specialist
Caterer
Wardrobe Speciality Worker
Wardrobe Mistress
Cutter
Checker

Unskilled

Waiter
Waitress
Child Care Attendant
Nursemaid
Helper (cook's)
Housekeeper
Dishwasher
Simulated or Work Experience for
Environmental Occupational Cluster

Professional------------------Botanist:

Semi-Professional and-------Park Ranger:
Managerial

Technical and Skilled--------Tree Surgeon:

Semi-Skilled-----------------Tree Trimmer:

Unskilled---------------------Forestry Aid:

Study and classify plant life in the area and how these affect ecological balance of nature.

Help manage recreational facilities of the school. Could promote campaign to help prevent forest fires and stop litter. Work with civic people in Keeping America Beautiful.

Could assist local citizens in care and management of trees in the protection against insects and pests. Work with local conservation officials.

Work with local citizens in doing light tree trimming work.

Help map and blaze out nature trail by working with local forestry officials.
ENVIRONMENTAL OCCUPATIONS

Professional
City Planner
Ecologist
Geologist
Geo-Physicist
Oceanographer
Physicist
Chemist
Astronomer
Paleontologist
Biochemist
Meteorologist
Botanist
Zoologist
Geneticist
Anthropologist
Landscape Architect

Semi-Professional and Managerial
Park Ranger
Forester
Game Warden
Conservationist

Technical and Skilled
Technician
Science Writer
Technical Writer
Fire Fighters (Forest)
Tree Surgeon

Semi-Skilled
Tree Trimmer
Wildlife Manager
Fisherman
Lumberman
Pest Control Operators

Unskilled
Animal Keeper
Forestry Aides
Simulated or Work Experience for Fine Arts and Humanities Occupational Cluster

Professional-----------------Actor-Actress: Act in class or school productions. Take part in civic productions.

Semi-Professional and Managerial-----------------Interior Designer: Plan, design, and decorate the interior of school classrooms, teachers lounge, or students individual room in their own residence.

Technical and Skilled-----------------Sound Technician: Setting up different audio-visual equipment for different school activities to insure the best sound possible.

Semi-Skilled-----------------Property Aide: Obtaining and taking care of different types of equipment used in school activities.

Unskilled-----------------Stage Hand: Make sure that everything is in its proper place for school activities.
Professional

Conductor
Band Director
Curator
Instrumentalist
Composer
Opera & Concert Singer
Ballet Dancer
Artist
Producer
Playwrite
Actors
Actress
Director

Semi-Professional and Managerial

Teacher
Dancer
Film Writer
Singer
Interior Designer
Script Writer
Free Lance Writer
Linguisticist

Technical and Skilled

Cheeriographer
Film Editor
Photographer
Fashion Designer
Commercial Artist
Cartoonist
Set Designer
Technicians

Semi-Skilled

Cameramen
Assistant Technicians
Instrument Tuner
Property Aide

Unskilled

Stagehand
Usher
Simulated or Work Experiences for Health

Occupational Cluster

Professional-------------Dietitian: Help with the management and food service activities of the school cafeteria.

Semi-Professional and Managerial-------------Registered Nurse: Work with the county health nurse in the administrative area's relating to primary students health records.

Technical and Skilled--------Practical Nurse: Visit on a weekly basis on elderly person in the community where they could care in general for the person's welfare.

Semi-Skilled----------------Nursing Aid: Work with the kindergarten children.

Unskilled----------------Orderly: Help keep things clean in the Kindergarten.
Hospital Administrator
Surgeon
Physician
Dentist
Veterinarian
Nursing Administrator
Pharmacist

Semi-Professional and Managerial

Diabetes Educator
Registered Nurse
Public Health Sanitarian
Social Worker
Speech & Hearing Therapist
Sanitary Engineer
Dental Hygienist

Technical and Skilled

Dental Assistant
Medical Illustrator
Medical Record Librarian
Medical Secretary
Radiologist
Medical Technologist
Inhalation Therapist
Licensed Practical Nurse

Semi-Skilled

Laboratory Technician
Laboratory Assistant
Practical Nurse
Personnel Worker
Ambulance Attendant

Unskilled

Nursing Aide
Orderly
Janitor
Caretaker
Ambulance Driver
Simulated or Work Experience for Hospitality and Recreation Occupational Cluster

Professional-----------------------------Athletic Director: Set up supervised play-activities with elementary students.

Semi-Professional-------------------------Athletic Coach: Coach team of students in activities or referee the activity.

Semi-Professional and Managerial

Technical and Skilled---------------------Athletic Official: Call the sport activities or referee the activity.

Semi-Skilled-------------------------------Score Keeper: Keep accurate report of the activity that is being done.

Unskilled---------------------------------Caretaker: Take care of the area where the activity is taking place. Both before and after the activity.
HOSPITALITY AND RECREATION OCCUPATIONS

Professional

Professional Athletics
Athletic Coaches
Hotel Managers
Motel Managers
Chef
Athletic Director

Semi-Professional and Managerial

Restaurant Manager
Theater Manager
Instructor
Athletic Director
Travel Counselor
Salesman

Technical and Skilled

Superintendent of Services
Tourist Director
Bar Tender
Receptionist
Cook Florist

Semi-Skilled

Travel Clerk
Desk Clerk
Camp Counselor
Wine Steward
Hotel-Motel Workers
Motion Picture Projectionists
Bell Captain
Hostess
Waiter Captain
Carver
Charwomen
Chamber Maid
Time Keeper/Score Keeper
Simulated or Work Experience for Manufacturing

Occupational Cluster.

Professional --- Fashion Designer: Design clothes in lower economic class

Semi-Professional and Managerial --- Custom Tailor: Make special garments to order which have been designed in the class

Technical and Skilled --- Cutter: Cut material from patterns which have been designed before hand

Semi-Skilled --- Operator: Sewing clothes together which have been cut by hand. Could put up a small type of production to speed up production

Unskilled --- Packer: Fold, pack and label garments which have been made in class
Simulated or Work Experience for Marine Science Occupational Cluster

Professional----------Ship Designer:
Work on models with emphasis on sketches, specifications, scale drawings, and full-sized drawings of the entire ship.

Semi-Professional and Managerial----------Ship Builder:
Do various occupations concerning building models; such as painting or various other types of skilled work.

Technical and Skilled----------Ship Fitter:
Fitting pieces of the model together, as indicated on the blueprint.

Semi-Skilled------------------Calkers:
Tighten seams and join to make them watertight and airtight of the model.

Unskilled---------------------Marina Worker:
Tending and taking care of the models which have been built by other students.
MARINE SCIENCE OCCUPATIONS

Professional

Oceanographer
Ship Designer
Engineer

Ecologist (Marine)
Zoologicalist (Marine)
Microbiologicalist (Marine)
Botanist (Marine)

Semi-Professional and Managerial

Junior Engineer
Ship Builder
Laboratory Manager

Technical and Skilled

Diver
Machinist Foreman
Ship Fitter
Instrument Maker
Mechanic
Marine Plant Grower
Fish Hatcher & Raiser

Laboratory Technician
Dredger (Off Shore)
Driller (Off Shore)
Life Guard
Ocean Fisherman

Semi-Skilled

Fisherman
Ship Builder
Apprentice Machinist
Motor Boat Mechanic
Gear Man
Calker

Seafood Processor
Seafood Packor
Unskilled

Marina Attendant
Motorboat Mechanic Helper
Machinist Helper
Lookout
Simulated or Work Experience for Marketing and Distribution Occupational Cluster

Professional-------------------Manager: Establish a cooperation which can be further developed into a school store.

Semi-Professional
and Managerial--------------Buyer: Buy items that can be later sold in the store that serves in school supplies for the student body.

Technical & Skilled-----------Displayer: Displays merchandise so that it will attract attention and sell.

Semi-Skilled-------------------Salesperson: Works in the store selling different items.

Unskilled---------------------Stock Personnel: Takes care and inventory of all stock in the store.
MARKETING AND DISTRIBUTION OCCUPATIONS

Professional:
- Bank President
- Planning Administrator
- Public Relations Worker

Semi-Professional and Managerial:
- Store Manager
- Fashion Designer
- Store Owner (Merchant)
- Newspaper Reporter
- Administration Manager
- Advertising Account Executive
- System Analysts
- Buyers
- Broker
- Escrow Officer

Technical and Skilled:
- Department Manager
- Auctioneer
- Insurance Agent
- Manufacturing Salesman
- Radio-TV Time Salesman
- Travel Agent
- Real Estate Agent
- Bank Teller
- Adjuster
- Model
- Salesman
- Statistician
- Technologist

Semi-Skilled:
- Retail Salesman
- Cashier
- Checker
- Interviewer
- Clerks
- Courier
- Stock Price

Unskilled:
- Stock Personnel
- Do
- Comparison Shopper (Buyer)
- Inventory ‘Stock’
- Credit Collector
- Shipping Clerk
- Delivery Boy
- Packer
Simulated or Work Experience For
Office Occupational Cluster

| Professional | Manager | Practice sets in General Business or Office Administration. Can keep set of books for the store which would be up in marketing and distribution. |
| Semi Professional and Managerial | Cashier | Work with money that would go through the store or office of the school. |
| Technical or Skilled | Typist | Type materials for the school or correspondence for a store. (General typing work) |
| Semi-Skilled | File Clerk | Filing correspondence pertaining to school administration. |
| Unskilled | Messenger | Taking messages to different personnel within the school building. |
OFFICE OCCUPATIONS

Professional
Office Manager
Auditor
Certified Public Accountant
Statistician
Actuary

Semi-Professional and Managerial
Bank Editor
Programmer
Account Executive
Accountant
Clerk

Technical and Skilled
Paymaster
Buyer
Secretary
Court Reporter
Bookkeeper
Stenographer
Data Processing Operator
Bank Clerk
Typist
Estimator
Legal Secretary
Mail: Secretary
Copy Writer

Semi-Skilled
Office M.H.D. Operator
Teletype Operator
Library Technician
Cable Subscriber
Hotel Clerk
Shipping Clerk
Switchboard Operator
Machine Operators

Unskilled
Sorter
Orderer
Addresser
File Clerk
Credit Clerk
Messenger
Office Boy or Girl
Simulated or Work Experience for Personal Service Occupational Cluster

Professional Director: Set up weight control clinic and general health care clinic in the school for any student who would care to enroll.

Semi-Professional and Managerial: Food Technology: Plan talks and demonstrations concerning foods to eat and still maintain balanced meal.

Technical and Skilled: Technician: Discuss and show methods of avoiding skin conditions by not eating proper types and amounts of food.

Semi-Skilled: Inspector: Measure weighing the proper amount of food so that human body gets the right amount of calories.

Unskilled: Observer: Lead group in certain basic exercises to keep muscles, in tone, and in shape. *

*All of the above should work closely with the Vocational teacher and county

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PERSONAL SERVICE OCCUPATION:

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PERSONAL PROPERTY AND MORTGAGES:

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Unskilled

Service Station Attendant
Houseman
Caretaker
Parking Attendant
Grave Digger
Laundry Worker
Valet
Baggage Man
Itiner
Presser
Exerciser
Simulated or Work Experience for Public Service

Occupational Cluster

Professional------------------City Administrator:

Semi-Professional and Managerial---------City Manager:

Technical and Skilled------City Planner:

Semi-Skilled-----------------Technician:

Unskilled-------------------Laborer:

Plan and conduct activities such as meetings which would be similar to those of a city.

Responsible for carrying out or seeing that the responsibilities are done.

Design things to improve the city or area where the school is located.

Do things to improve the looks of the area that has been designed by others such as cleaning up local park.

Helping to see that everything is done by actual on the job experience.
PUBLIC SERVICE OCCUPATIONS

Professional
City Administrator
Sociologist
Counselor
Judge
Psychometricist
College Administrator
City Manager
Occupational Therapist
Parole Worker
Political Scientist
Secret Service Agent
School Superintendent

Semi-Professional and Managerial
Teacher
Social Worker
City Manager
Cooperative Extension Worker
Guidance Counselor
Internal Revenue Agent
Safety Engineer
Speech Correctionist

Technical and Skilled
Custom Inspector
Civil Service Worker
Policeman
Mailing Supervisor
Shipper
Fire Warden
Fireman
City Planner

Semi-Skilled
Postal Clerk
Guards
Sheriff
Rural Mail Carrier
Meter Reader
Technician

Unskilled
Mail Sorter
Alarm System Worker
Bakeryman
Bathroom Attendant
Unskilled

- Garbage Collector
- Laborer
- Camera Girl
- Elevator Operator
- Groundskeeper
- Gardener
- Maid
- Doorman
- Bus Boy
- Waiter-Waitress
- Caddy
- Car Hop
- Dishwasher
- Bellman
- Rack Clerk
- Key Clerk
- Mail Clerk
- Red Cap
Simulated or Work Experience For Transportation

Occupational Cluster

Professional----------Traffic Engineer:
Plan, design, and develop traffic-control systems to prevent accidents, minimize congestion in the school, school activities, and parking facilities of the school.

Semi-Professional and Managerial----------Station Manager

Technical and Skilled----------Toll Collector:
Responsibility for selling tickets for parking vehicles at school.

Semi-Skilled----------Automobile Mechanic:
Check school buses for things as oil, etc.

Unskilled----------Service Station Attendant:
Give faulty care, such as oil, water, tires, clean windshield, and etc.
TRANSPORTATION OCCUPATIONS

Professional

Aerospace Engineer
Airline Pilot
Airport Manager
Flight Engineer
Traffic Engineer
Ship Captain
Train Engineer

Semi-Professional and Managerial

Helicopter Pilot
Air Traffic Control
Chief Mate
Station Master
Pipe Line Superintendent

Technical and Skilled

Aerospace Technicians
Airline Dispatchers
Airline Stewardesses/Stewards
Traffic Agent
Air Mechanic
Brakeman
Driving Instructor
Long Distance Truck Drivers
Ship Pilots
Dispatchers
Ticket Agent
Second Mate

Semi-Skilled

Auto Body Repairman
Auto Mechanic
Airline Mechanic
Busdriver
Merchant Seaman
Railroad Telegrapher
Boatswain
Third Mate
Purser
Asbestos & Insulation Worker
Assemblers
Structural Workers
Die Maker
Tool Maker
Repairman
Iron & Steel Worker
Semi-Skilled

Leather Mfg. Worker
Sheet Metal Worker
Machine Operator
Pipefitter
Plumber
Seamstress
Gunsmith
Blacksmith

Unskilled

Driver
Pump Operator
Track Worker
Chauffeur
Blacksmith
Lubrication Man
Gasoline Station Attendant
Utility Man
Collector
Car Checker
Assembly Worker
Book Binder
Yardage Caller
Canning Worker
Dry Goods Worker
Warehouse Checker
Shipping Clerk
Receiving Clerk
Laborers
Maintenance Helper
Sniffer
Career education—what is it? Who is it for? How should it be implemented in the public schools? At what levels of school should it be implemented? These are questions that are commonly asked and you have heard some ideas already. I would like to attempt to answer these and other questions as I speak to you today.

What does career education do for children and adults? I would like to relate a story to illustrate what this concept can do for children: "While walking down the street with a friend one day, a teacher passed a large fish store where a fine catch of codfish, with mouths wide open and eyes staring, were arranged in a row. The teacher stopped, looked at them and clutching his friend by the arm exclaimed: 'Heavens, that reminds me—I should be teaching class!'" The story points out the eagerness to learn as a result of a curriculum so filled with relevant material that children and adults are waiting to be taught more—eyes wide open and mouths agape. It should not, however, be instituted like the "fellow who put on a clean pair of socks every day and by the end of the week, he couldn't get his shoes on." Career education is not meant to be another area of study to force upon teachers who are already overwhelmed with subject matter during the day. It is to encourage activity within the curriculum to provide meaning for what is being taught. It is not enough to say 'You will need this in your later studies.' There must be a now meaning for doing. The miner recognizes "pay dirt" as "ore-bearing rock" and if education is to produce "pay dirt" the curriculum must "bear some ore".

As I envision education I do not see career education as a new sign or slogan on the horizon. It has, however, risen its head to be singled out.
Since 1969, and even before, industrial arts educators have been asked questions related to "... career development or preparation for occupational competence as a part of the instruction in industrial arts courses."

Frank C. Pratzner, in an article "Changing The Goals of Industrial Arts: An Occupation Development" in 1969--recommended the replacement of the typical industrial arts program with an "occupational development curriculum" intended to provide exploratory experiences across the practical arts in the junior high school. He advocated discarding many of the traditional industrial arts objectives and emphasizing interest in occupations and the development of worthy leisure time interests. At the senior high school level he advocated a required program of occupational development, involving a work-study program, independent occupational studies, and small group activities. Under this plan, specific vocational training would be conducted at the post-secondary level.

In 1970, Howard F. Nelson, in "Which Way Industrial Arts in the 70's" recommended modification of the existing senior high school program as necessary to include information about and preparation for post-secondary occupational programs. He suggested an emphasis upon the development of good habits of learning and working, the use of the community as a classroom, and such pre-vocational learnings as adjustment to job demands, honesty, dependability, loyalty, and flexibility. He argued that it was possible for industrial arts programs to meet such recommendations within the framework of existing objectives, courses, and facilities.
In 1971, Donald J. Lux, while writing the article "A Call for Action", took exception to Nelson's recommendations, and argued that the occupational use of the body of knowledge identified as industrial arts is only one of the many purposes to which the knowledge may be applied by the learner. He indicated that industrial arts should serve technical, recreational, consumer, cultural, and social purposes as well as occupational purposes in the vocational enterprise. Lux emphasized his position that occupational or vocational education is a purpose, not a body of knowledge; while industrial arts is a body of knowledge which may be used for any of the six educational purposes he outlined.

Again, in 1971, the article "Teaching Industrial Arts in a Workaday World", John G. Bradley argued that instruction in industrial arts courses could stimulate interest in future vocational pursuits. He went on to emphasize the need for practical instruction oriented to the value of work, dignity, and pride of accomplishment, and individual development. While Bradley did not recommend that industrial arts should assume the total spectrum of occupational preparation, he did indicate that industrial arts should provide an effective foundation for later, more specific vocational courses.

Grant Venn, in the article "On Industrial Arts and Vocational Education", urged industrial arts educators to expand their programs to provide the exploratory experiences needed to make a wise career choice and the basic skills useful in many occupational endeavors. The same time, he

\[4\] op cit p. 26

\[5\] op cit p. 26
indicates that industrial arts should continue to attempt to fulfill its other objectives, especially the function of nurturing creativity. 6

And finally Edward Kabakian while writing, "A Pole to Play in "as- power Development" recommended the expansion of industrial arts programs as a means of providing a broad range of experiences at all educational levels in order to reduce the dropout rate and improve the accuracy of career selection. 7

I have related this to you only to illustrate the thinking that has taken place in industrial arts and continues to take place in our professional field.

We may ask why career education has risen at this time. Career Education, What It Is and How To Do It, by Kenneth B. Hoyt & others state two points in the rising favor: "1. It has emerged at a moment when dissatisfaction with educational practices and outcomes are at a peak.

2. It promises to attack and improve some of the apparent sources of that dissatisfaction." 8

Dr. Sidney Marland, U. S. Commissioner of Education expresses that career education is designed for all children at all grade levels and indicates it is the nucleus, not core because of misunderstandings, of all education. He states, "The fundamental concept of career education is that all educational experiences...should be geared to preparation for economic independence, personal fulfillment, and appreciation for the dignity of work." 9

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6 op cit p. 26
7 op cit p. 26
8 American Vocational Journal, Career Education. Every Student Headed for a Goal, Dr. Sidney P. Marland, March 1972, p. 35.
Along this same thought E. Arthur Stunard, *Effecting Change Through The Elementary Classroom Teacher: Institute Phase*, mentions, "...technology can be a base from which to develop all areas of learning that might take place in the school environment. " He goes on to say, "...technology in the classroom provides a total learning environment that pulls on all areas of the established curriculum."

While much has been done on the upper levels of public schools in terms of industrial arts and career education, the elementary level is now gaining momentum. This is an important level of emphasis. The elementary grades serve as the awareness stage for career education in Commissioner Marland's blueprint. I will treat the entire curriculum plan, while presenting some models of an interdisciplinary approach, with much interest given to grades K-9. It is at this level a foundation will be established to allow for wise decision in terms of career choice. Career education should assist individuals in developing their unique possibilities as human beings to enhance their abilities to make a proper choice of work. The attitudes and values they develop will be very important. The established attitude of living in a technological society with all its obsolescence and being able to adjust is vital.

To illustrate industrial arts in career education I wish to utilize the following transparencies:

- #1 The Curriculum Development--expand
- #2 Goals of Career Education in Relationship to Industrial Arts
- #3 Model of Career Education (I. A. Role)
- #4 My Concept of I. A. Role--Line drawing
- #5 Model depicting I. A. Based upon Preceding I. A. Concepts

Let us first explore the definition of the career education level and then pursue curriculum content of industrial arts. *Awareness: Webster's 7th...*
The New Colloquial Dictionary defines it as syn

**conscious, sensible**, alive, awake: **Aware** implies vigilance in observing or alertness in drawing interest from what one sees or hears or learns: **Cognizant** implies having special or certain knowledge as from firsthand sources: **Conscious** implies having an awareness of the present existence of something: **Sensible** implies direct or intuitive perceiving especially of intangibles or of emotional states or qualities: **Alive** adds to sensible the application of acute sensitivity to something: **Awake** implies that one has become alive to something and is on the alert.

Industrial arts activities at the elementary school level serve many purposes. They help the child growing up in an industrial society to acquire firsthand knowledge of how materials are altered to better serve the needs of people in that society. They also help the child to deal more effectively with variety of concrete media through the use of tools as extensions of himself.

Industrial arts activities offer tasks of a technical nature which transcend the usual paper pencil oriented tasks of the classroom. They not only provide children with a greater variety of activities in which to achieve success but also enable them to understand the diversity of human activity, within this context of understanding.

In a sense this goal is vocational in the broadest possible way. For example, reading and writing in the elementary school could be considered vocational, inasmuch as

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ship bezweent manip,ilat;ve is to provide a context :c'

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the significance of the skill acquired, the specific tools,

materials, and processes used, or the prod..i developed

Elementary grades--activities are to familiarize students with the

many kinds of work people do on: the interrelationship of such work in pro-

ducing and using goods and services. Emphasis is placed on attitudes, values,

and manipulative activities that group interaction, tools & materials, indi-

vidual curiosity, role playing, simulation games, etc.

The range and nature of the manipulative aspects of industrial arts
activities are diverse and vary from school system to school system. Chi-

dren in kindergarten make produce items: cut and shape thermoplastics;

vacuum form plastics: pound clay into tree stamps: print with ABC blocks:

print by the silk-screen method: work with battery, bulb, and buzzer cir-
cuits: run the liquid duplicator: cut shape clay and fire it. As the children
As they get older, they engage in these and other processes on a more sophisticated level. They make their own cameras; develop their own film; build a variety of electrical devices such as motors and crystal radio sets; construct transits for mapping; construct musical instruments; make paper for printing; and even build and launch rockets. Their activities may range from felling trees for construction of an authentic log cabin to manage all the aspects of a rubber-stamp business, including bookkeeping and the technical process of making the rubber stamps.¹⁰

**Exploration:** level II—to seek. . . to search. . . to examine minutely especially for diagnostic purposes. . . to make or conduct a systematic search during the middle or junior high grades children would be able to "explore" in a laboratory of technology and careers. This implies the utilization of a multiple activities classroom where children could experience technical concepts, research career opportunities, solve problems and study interdependencies of careers, jobs, industry, etc. This would be a great change over traditional industrial arts labs where projects are the center of activity. The conceptual approach affords children a broad exposure to concepts of the world of work. The fact that while functioning within such an environment children would be problem solving, all areas of the curriculum would be emphasized. Conversation, written report findings, demonstrations, calculations, group interaction, scientific/physical properties being used and worked with would be evidence of a natural integration of interdisciplinary teaching. This does not imply totality but only a segment of our curriculum. It is not my belief that one concept should be overpowering the others.

¹⁰ ibid. *Industrial Arts Education: Elementary Schools* p. 7
The accomplishment of problem-solving does not always require an extemperanious idea but may be in the form of simulation, models, games, role play. It is not to imply that these experiences could not be performed in the subject area classroom but could also be accomplished in this laboratory. Many situations may require greater setting up or durations of time that could be suited to the laboratory. Special equipment may and will be required which would be best suited to a laboratory. This then would offer children the exploratory phase to the career education concept. Remembering this is to be for all and not selected students.

The industrial arts teacher, versus vocational teachers, is broad in his vision to careers and technologies. He is interested in a breadth of exposures to assure students a greater base of knowledge to establish work decisions at a later period in his life. The student can make a wiser selection of career with this broad base to work from. He will be exposed to many sectors of industry and technology. He learns the solving of problems by scientific process. He interacts within groups to design, implement and evaluate a mass production problem. There are many exercises to perform in the understanding of a technological society which is composed of varying careers.

The industrial arts teacher would not be concerned about the utter exactness of a skill but rather the conceptual understanding of application and utilization in the world of work. With this kind of involvement children find a meaning in their education. It becomes fun and when learning becomes fun children "turn-on" and get excited. We as adults are drawn to certain activities and oppose others based upon our enjoyment of the activity.

Thus, the exploratory phase built upon the awareness stage becomes another step in a logical sequence toward career decision and pursuit.
Occupational selection, level III, funnels down to explicit choice and the program is developed around the students interest.

In an interdisciplinary approach we see by subject area the concepts to be developed at various grade levels and can detect the implication of activity through industrial arts and career education.

- Social studies—activities
- Science—activities
- Language arts—activities
- Math—activities
- Illustrates implementation of science for paper
  - Language Arts—use of paper
  - Math—amounts of materials
  - Industrial arts—use of tools and materials to make paper

Dr. William Purkey at the Open School Conference at Berkeley County stated "There's no such thing as an unmotivated kid. A kid is always learning." He declared: "Teach him he's valuable and able and what it means to be a human being."

I would like to conclude by showing this group a video tape of the "Design for Learning," a Ford Foundation project.
1.1 Calculation and selection of major emphasis areas.

- Solid areas represent major emphasis areas,
- Shaded areas represent activity as result of exposure.
CAREER EDUCATION

Vocational Education
- Music
- Art
- Language Arts
- Science
- Industrial Arts
- Social Studies
- Math
- Supportive Services

Secondary
- Placement
- Counselling
- Guidance

Elementary (K-6)
- Awareness (careers)
- Tools & Materials (hands-on)
- Interdependencies
- Attitudes
- Self (inner being enhancement)
- Values
- Group Interaction
- Technology Development
- Consumer Knowledge
- Environmental Education

Secondary (7-12)
- Conceptual Understanding of Technological applications
- Role Playing
- Simulation & Games
- Specificity of study (Research & Development)
- Post-secondary preparation
- Broad first hand experiences with occupations-speakers, field trips, interviews
- Related activities of technology
- Selected activities suited to interest, aptitudes, etc.
- Continued Consumer knowledge
- Environmental Education
- Relationship to Civilization
- Organization & Management
- Planning for production, manufacturing
- Distribution
- Service
This course in Career Education at Marshall University involves an introduction to the process of systematically providing students with realistic educational experiences which focus on the developmental process of career maturation. The teaching strategies or techniques of field experiences, interpersonal interaction, manipulative activities, multi-media activities, occupational research, resource role models, and simulated and/or hands-on experiences are investigated.

The concept of curricular correlation utilizing fine arts, language arts, mathematics, science, and social studies is introduced. Sources of commercially produced materials and methods of student-teacher produced materials are investigated.

The goals of the course are: To assist educators in stating behavioral objectives and in relating performance criteria to student evaluation; to develop increased awareness of the relationship between teaching strategies and curricular correlation as they relate to preparing and teaching an instructional resource unit; and to develop increased skill in researching an occupational area and selecting strategies for implementation of career education as an integral part of the existing courses offered in the local school.
OBJECTIVES

The participants involved in developing curricular materials will:

1. Define Career Education and develop a rationale for Career Education.

2. Prepare a bibliography of Career Education resource materials.

3. List teaching procedures and student activities appropriate to a specific grade level and appropriate to the career education model.

4. Prepare a list of goals for a specific grade level and specific subjects.

5. Prepare a list of Career Education goals based on the occupational matrix and career education model.

6. Determine and list activities to be used to achieve the subject and career education goals.

7. Write psychomotor, affective and cognitive objectives appropriate to the occupational matrix and the career education model.

8. Prepare descriptive occupational information appropriate to the occupational matrix and the career education model.

9. Prepare concepts for each module.

10. Prepare a list of correlation activities for the subject areas which are appropriate to the occupational area being developed.

11. Prepare measurement and evaluation procedures appropriate to the instructional resource unit and students.

12. Develop an instructional resource unit for the appropriate grade level which contains a certificate of advisory committees, subject goals, career education goals, a list of correlation activities, descriptive occupational information, behavioral objectives, outline of content, teacher activities, student activities, resources, measurement and evaluation instruments, and a bibliography.

13. Utilize an occupational advisory committee to critique the instructional resource unit.

14. Utilize an educational advisory committee to critique the instructional resource unit.
INSTRUCTIONAL UNITS

Units 1 & 2
INTRODUCTION TO CAREER EDUCATION

Unit 3
DEVELOPING CURRICULAR MATERIALS IN CAREER EDUCATION

Unit 4 & 5
IMPLEMENTING CAREER EDUCATION

Unit 6 & 7
EDUCATION AND THE WORLD OF WORK

Unit 8
MEASURABLE BEHAVIORAL OBJECTIVES

Unit 9
UNIT DEVELOPMENT CONCEPTS

Unit 10 & 11
EXPERIENTIAL ACTIVITIES IN UNIT DEVELOPMENT

Unit 12
UNIT DEVELOPMENT

Unit 13
OCCUPATIONAL ADVISORY COMMITTEE MEETING

Unit 14
SEMINAR ON UNIT DEVELOPMENT

Unit 15
UNIT DEVELOPMENT

Unit 16
EDUCATIONAL ADVISORY COMMITTEE MEETING

Unit 17
SEMINAR ON UNIT DEVELOPMENT
UNITs, METHODS, AND ASSIGNMENTS

Units 1 & 2

INTRODUCTION TO CAREER EDUCATION
Career Education Principles
Career Education Models

Methods of Presentation
U.S.C.E. Film "Career Education"
Handout: Career Education Principles

Assignment
Define Career Education

Unit 3

DEVELOPING CURRICULAR MATERIALS IN CAREER EDUCATION
Subject Goals
Career Education Goals
Behavioral Objectives
Advisory Committees
Occupational Matrix
Occupational Information
Curriculum Development
Correlated Curriculum
Teaching Strategies
Bibliography

Methods of Presentation
Lectures
Discussion

Assignment
Develop a rationale for Career Education

Units 4 & 5

IMPLEMENTING CAREER EDUCATION
Career Education Model K-A
Career Education in Practice

Methods of Presentation
Visuals
Slides
Discussion
Interaction Groups

Assignment
List teaching procedures and student activities appropriate to the grade level you are teaching and appropriate to the Career Education Model.
Units 6 & 7

**EDUCATION AND THE WORLD OF WORK**

- Occupational Clusters
- Occupational Matrix
- Subject Goals
- Career Education Goals
- Correlating Curricula

**Methods of Presentation**

- Lecture
- Discussion
- Interaction Groups

**Assignment**

1. Prepare a list of goals for the grade level and subjects you teach.
2. Prepare a list of goals in Career Education based on the Occupational Matrix and Career Education Model.
3. Prepare a bibliography of resource materials.

Unit 8

**MEASURABLE BEHAVIORAL OBJECTIVES**

- Visible Behavior
- Conditions
- Performance Level
- Taxonomy of Objectives

**Methods of Presentation**

- Lecture
- Handouts
- Group Exercise
- Individual Exercise
- Discussion

**Assignment**

- Write psychomotor, affective and cognitive objectives related to the occupations upon which your unit is based.

Unit 9

**UNIT DEVELOPMENT CONCEPTS**

- Behavioral Objectives
- Occupational Information
- Content
- Teacher Activities
- Subject Correlation
- Student Activities
- Resources
- Evaluation
EXPERIENTIAL ACTIVITIES IN UNIT DEVELOPMENT

Behavioral Objectives
Occupational Information
Teacher Activities
Subject Correlation
Student Activities
Resources
Evaluation

Methods of Presentation
Lecture
Discussion
Interaction Groups

Assignment
Combine assigned components of the unit and continue development of your unit. Select your advisory committees.
Develop concepts for each module.

UNIT DEVELOPMENT

Method of Presentation
Individual work

Assignment
Arrange for your Occupational Advisory Committee to meet and critique your unit in terms of the occupational activities and experiences.

UNIT 10 & 11

Methods of Presentation
Lecture
Discussion

Assignment
Gather occupational information related to the occupations upon which your unit is based.
Prepare methods of correlating the curricula.

UNIT 12

Method of Presentation
Individual work

Assignment
Arrange for your Occupational Advisory Committee to meet and critique your unit in terms of the occupational activities and experiences.

UNIT 13

Method of Presentation
Discussion

Assignment
Utilize the comments and information provided by your advisory committee to revise your unit.
Unit 14

SEMINAR ON UNIT DEVELOPMENT

Method of Presentation
Discussion

Assignment
Continue development of your unit

Unit 15

UNIT DEVELOPMENT

Method of Presentation
Individual Work

Assignment
Arrange for your Educational Advisory Committee to meet and critique your unit in terms of the educational activities and experiences.

Unit 16

EDUCATIONAL ADVISORY COMMITTEE MEETING

Method of Presentation
Discussion

Assignment
Utilize the comments and information provided by your advisory committee to revise your unit.

Unit 17

SEMINAR ON UNIT DEVELOPMENT

Method of Presentation
Discussion

Assignment
Complete your Instructional Resource Unit
PEOPLE WHO WORK IN

Career Education Instructional Resource Unit

Grade Level

by

Teacher's Name

School

Address
Certificate of Advisory Committees

We hereby certify that the attached Instructional Resource Unit was prepared in consultation with the Occupational Advisory Committee.

Name __________________________
Occupation ______________________
Employer _________________________

Name __________________________
Occupation ______________________
Employer _________________________

Name __________________________
Occupation ______________________
Employer _________________________

We hereby certify that the attached Instructional Resource Unit was prepared in consultation with the Educational Advisory Committee.

Name __________________________
School __________________________

Name __________________________
School __________________________

Name __________________________
School __________________________
INTRODUCTION

In one or two pages, define career education and develop the rationale (reason or need) for this educational approach being used at a particular grade level. Explain how this unit is to be used by the teacher.
SUBJECT GOALS

Fine Arts
1.
2.
3.

Language Arts
1.
2.
3.

Mathematics
1.
2.
3.

Science
1.
2.
3.

Social Science
1.
2.
3.
CORRELATED CURRICULA

Fine Arts
1.
2.
3.

Language Arts
1.
2.
3.

Mathematics
1.
2.
3.

Science
1.
2.
3.

Social Science
1.
2.
3.
DESCRIPTIVE INFORMATION

To assist the teacher and students, include information concerning the occupations studied in this unit. The amount of information will depend on the grade level in which this unit is to be used. Suggested types of information which you may want to include are as follows:

1. Advancement Possibilities
2. Advantages
3. Disadvantages
4. Dress Requirements
5. Education Requirements
6. Fringe Benefits
7. Future Outlook
8. Geographic Location
9. Legal Requirements
10. Occupational Advancement
11. Occupational Tools
12. On-The-Job Training
13. Physical Requirements
14. Related Occupations
15. Skill Requirements
16. Subject Knowledge Requirements
TITLE OF UNIT

Module No. _____________________________  Grade Level _____________________________

Behavioral Objectives

1. ____________________________________
2. ____________________________________
3. ____________________________________

I. Concept

II. Teaching Procedures:
   1. Field Trips
   2. Interpersonal Interaction
   3. Manipulative Activities
   4. Multi-Media Activities
   5. Occupational Research
      Resource Role Models
   7. Simulation, role playing, and/or hands-on-Activities

III. Subject Correlation

IV. Student Activities
   1. Bulletin Boards
   2. Buzz Sessions
   3. Career Club Activities
   4. Constructing Props
   5. Constructing Models
   6. Discussions
   7. Displays
   8. Dramatization
   9. Drawings
  10. Exhibits
  11. Field Trips
  12. Games (Participate)
  13. Questioning
  14. Hands-on-Experience
  15. Interviewing
  16. Listening
  17. Murals
  18. Oral Reports
  19. Panel Discussions
  20. Pantomime
  21. Plays
  22. Psychomotor Activities
23. Readings
24. Research
25. Role Playing
26. Singing
27. Speeches
28. Scrapbooks
29. Simulation Exercises
30. View Films
31. View Television
32. Write Letters
33. Write Plays
34. Write Reports

V. Evaluation
1. Anecdotal Records
2. Conferences
3. Discussion
4. Formal Tests
5. Interpretive Exercises
6. Observation
7. Rating Scales
8. Work Samples

VI. Resources and Materials
REFERENCES


"Marland on Career Education," American Education. (Questions selected and posed to Commissioner Marland by the editors).


CAREER EDUCATION PRACTICUM

by

LeVene A. Olson

This course in Career Education at Marshall University involves the implementation and validation of a career education instructional resource unit. Career Education is a process of systematically providing learners with meaningful experiences which focus on helping them become viable individuals who are capable of making accurate choices concerning future careers.

This course focuses on the development and/or revision of needs assessment techniques, definition of career education, rationale for career education, subject goals, career education goals, behavioral objectives, concepts, teaching procedures, subject correlation, student activities, evaluation techniques, and resources. The development and/or revision of these components are based on their effectiveness as measured by the teacher.

The goals of the course are: to assist educators in implementing a career education instructional resource unit; to develop an awareness of the effectiveness of the unit based on student reaction; and to further develop and/or revise the components of the unit to increase its effectiveness.
PROCESS OBJECTIVES

The participants involved in implementing and validating curricular materials will:

1. Develop and/or revise needs assessment techniques to ascertain the developmental level of the students.
2. Develop and/or revise a definition and rationale for career education.
3. Develop and/or revise subject goals.
4. Develop and/or revise career education goals.
5. Develop and/or revise behavioral objectives.
6. Develop and/or revise descriptive information about occupations.
7. Develop and/or revise concepts for each teaching procedure noted in the unit.
8. Develop and/or revise teaching procedures.
9. Develop and/or revise subject correlation activities.
10. Develop and/or revise student activities.
11. Develop and/or revise evaluation techniques.
12. Develop and/or revise resources and materials.

PRODUCT OBJECTIVE

Each participants will complete a validated career education instructional resource unit which contains a needs assessment inventory, definition of career education, rationales, subject goals, career education goals, behavioral objectives, descriptive information, concepts, teaching procedures, subject correlation, student activities, evaluation techniques, and resources.
Title of Unit

Teacher

Objective

Concept

1. Teaching Strategy
   Effectiveness: unsatisfactory poor average good outstanding

   Recommended Revision

2. Student Activities
   Effectiveness: unsatisfactory poor average good outstanding

   Recommended Revision

3. Subject Correlation
   Effectiveness: unsatisfactory poor average good outstanding

   Recommended Revision
4. Resources & Materials: effectiveness

unsatisfactory  poor  average  good  understanding

Recommended Revision

5. Student Reaction

6. Teacher Comments
EVALUATION

by

LeVene A. Olson

The concern in planning, developing, and implementing any educational project is that of providing experiences which will achieve the objectives.

The general objective for the institutes was to provide meaningful information and experiences upon which educational leaders in the local school systems are able to systematically make decisions relative to planning, developing, providing, implementing, and evaluating Career Education. A second general objective which is present in all situations in which the project director is sensitive to the needs of the participants is that of creating an open atmosphere which allows for free and honest feedback upon which program adjustments can be made.

The Problem

The general question asked in this study is as follows: Will administrative, supervisory, and counseling personnel representing local education agencies who have been provided career education information and experience in an open environment that is both task and process oriented reflect more knowledge and more positive attitudes about career education than they did prior to the career education institute? The specific research question involved the comparison of pretest and posttest scores representing attitudes, familiarity, and perceptions of career education.

Limitations

The study was limited to those participants who were pretested at the beginning of the Career Education Institutes conducted in Charleston,
Princeton, Glen Dale, Keysers, and Clarksburg, West Virginia and post-tested subsequent to each institute.

Research Objectives

The research objectives of this study are as follows:

1. To compare the participant's attitudes related to career education prior to the Career Education Institute with their attitudes related to career education subsequent to participation in the Career Education Institute.

2. To compare the participants' familiarity with career education prior to the Career Education Institute with their familiarity with career education subsequent to participation in the Career Education Institute.

3. To compare the participants' perceptions of career education prior to the Career Education Institute with their perceptions of career education subsequent to participation in the Career Education Institute.

Instrumentation

The Familiarity Scale, Attitude Scale, and Semantic Differential devised by the researcher for the Career Education Institutes were utilized to determine the effectiveness of the experiences which were provided to the participants. The instruments are included in Appendix A.

Findings

The differences between the pretest and posttest means on the attitude scale were large enough to indicate a very definite change in attitudes in a positive direction. Refer to Figure 1 for a graphic illustration and to Appendix B for test scores.

Figure 2 illustrates the differences between the pretest and posttest means on the Familiarity Scale. The differences indicate a definite increase in degree of familiarity with certain concepts which are important in career education.
The results of the Semantic Differential are illustrated in Figures 3 and 4. The differences, although positive, were so small that no definite significance can be attached to them.

CONCLUSION

The results of the evaluation of the Career Education Institutes indicates the effectiveness of utilizing a task and process approach to inservice education. Educators as well as elementary, secondary, and college students are seeking meaning and relevancy in their endeavors.

But of more importance than the test results has been the receptivity by educators at the local level to the career education concept. Since the Career Education Institutes were completed, the interest and concern of local educators has been translated into action by many participants. Many of the staff members on this EPDA project have been involved in numerous local school systems in conceptualizing and implementing career education in West Virginia.
Figure 2. Familiarity Scale
Figure 3. Semantic Differential (Vocational)
Figure 1. Semantic Differential (Career)
APPENDIX A

Attitude Scale

Familiarity Scale

Semantic Differential Scale
This is not a test. There are no right or wrong answers. We are interested in how this group of educators feel about certain statements. Information used from this instrument will be reported only on a random basis. No information on individuals will be provided to Local, State, or Federal agencies. The information you provide will be kept strictly confidential.

Please respond to each statement on the following pages by placing an "X" in the space which best indicates your opinion about each statement according to the following criteria:

SD: I strongly disagree with the statement
D: I disagree with the statement
NO: I have no opinion about the statement
A: I agree with the statement
SA: I strongly agree with the statement

1. Adults find their imaginations taxed to comprehend a new world, a now world that youth understand and accept with ease.

2. All persons in all communities of the state should be provided
ready access to Vocational Education Programs.

3. Career Education should begin at the kindergarten or first grade level.

4. The most effective and efficient form of instruction is the lecture-demonstration approach.

5. It is possible that some secondary schools in West Virginia should not offer Vocational Education Programs.

6. Vocational counseling and guidance, to provide career exploration experiences upon which career decisions can be made, should begin in the middle school and be a pressing issue in high school.

7. Vocational Education should not stress the theory that the mind is a muscle and requires exercise.

8. At the elementary level, activity centered projects give the student concrete experiences which serve to provide specific vocational skills.

9. Acquisition of job entry level skills is not a characteristic of career education programs at the Jr. high school level.
10. Educators should strive for a dual system of education (vocational and academic).

11. Teachers serving the disadvantaged and/or handicapped students at the secondary level should provide a separate specialized program for these students.

12. Vocational teachers should work closely with academic and administrative personnel in a school to insure that vocational education does not become a separate discipline.

13. Exemplary programs are designed to provide information and experiences for students which will enable them to make occupational choices.

14. Rotation of students through several vocational courses is sufficient occupational orientation for any student.

15. Career Education will provide students with broader career opportunities.

16. A separate vocational school or distinct vocational tracks should be provided to high school students.

17. Vocational and technical programs should be readily available to most adults.
18. Students of a Kindergarten through Adulthood Program should possess mobility on a geographical basis.

SD____ D____ NO____ A____ SA____

19. Industrial arts is able to provide career exploration experiences to students.

SD____ D____ NO____ A____ SA____

20. Graduates of multi-occupation vocational education programs should be able to adapt to technological change with little difficulty.

SD____ D____ NO____ A____ SA____

21. In-depth preparation for a specific occupation should be accomplished by most students after graduation from high school.

SD____ D____ NO____ A____ SA____

22. The integration of academic subject matter with vocational education course content is a good idea which will never work in reality.

SD____ D____ NO____ A____ SA____

23. Most sophomores in high school are capable of making definite career decisions.

SD____ D____ NO____ A____ SA____

24. Integration of academic areas with vocational education will enable students to apply various subjects to their courses in vocational education.

SD____ D____ NO____ A____ SA____

25. Students graduating from a general education program will be able to obtain employment in a number of occupations with little difficulty.

SD____ D____ NO____ A____ SA____
26. Individualized prescribed instruction should only be used for remedial work with lower ability students.

SD D NO A SA

27. A two and one half hour block of time, five days a week for vocational education is a deterrent to program enrollment.

SD D NO A SA

28. The use of a single instructor in teaching several occupational areas within one classroom is not feasible.

SD D NO A SA

29. Vocational education in all the service lines should provide career exploration experiences for students.

SD D NO A SA

30. Career education should be limited to those students who do not intend to pursue a college education.

SD D NO A SA
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CAREER EDUCATION INSTITUTE

SEMANTIC DIFFERENTIAL

Name: __________________________

Position: ________________________

Institute Site: ____________________

Circle one: Male    Female

This is not a test. There are no right or wrong answers. We are interested in how this group of educators feel about certain concepts. Information used from this instrument will be reported only on a random basis. No information on individuals will be provided to Local, State, or Federal agencies. The information you provide will be kept strictly confidential.

At the top of each page in this booklet is a word. Beneath each of these words there are pairs of words with opposite meanings.

You are to place an "X" in the space nearest to the meaning which tells how you feel about the concept.

For example:

SCHOOL

Pleasant   X   Unpleasant

Inactive   X   Active

Friendly   X   Unfriendly

In this example the person felt that SCHOOL was sort of pleasant, but not very pleasant so he placed an "X" in one space away from pleasant.

Then he felt that SCHOOL was very active, so he placed an "X" in the space right next to the word active.
Then he felt that SCHOOL was not friendly and was not unfriendly, so he placed an "X" in the middle space between friendly and unfriendly.

Remember, put only one "X" on a line and complete each page before turning to the next page.
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APPENDIX B

Test Scores
### CAREER EDUCATION INSTITUTE
#### Site One

| Participant Random Number | Career Education Attitude Scale | | Career Education Familiarity Scale | | Semantic Differential Vocational Career Awareness |
|---------------------------|--------------------------------|---|--------------------------------|---|-----------------|-----------------
|                           | Pretest | Posttest | Pretest | Posttest | Pre | Post | Pre | Post |
| 1                         | 19      | 67       | 44      | 87       | 40  | 43   | 41  | 41   |
| 2                         | 62      | 67       | 53      | 88       | 37  | 40   | 42  | 42   |
| 3                         | 61      | 66       | 43      | 68       | 35  | 36   | 38  | 38   |
| 4                         | 39      | 48       | 68      | 65.5     | 31  | 35   | 35  | 36   |
| 5                         | 30      | 58       | 62      | 69       | 32  | 34   | 42  | 42   |
| 6                         | 60      | 64       | 92      | 95       | 34  | 33   | 42  | 41   |
| 7                         | 73      | 85       | 92      | 100      | 41  | 43   | 42  | 42   |
| 8                         | 43      | 57       | 59      | 83       | 38  | 41   | 41  | 43   |
| 9                         | 66      | 71       | 71      | 74       | 41  | 45   | 44  | 43   |
| 10                        | 39      | 31       | 36      | 50       | 44  | 45   | 44  | 46   |
| 11                        | 49      | 56       | 66      | 74       | 39  | 40   | 43  | 41   |
| 12                        | 59      | 49       | 66      | 87       | 39  | 36   | 41  | 37   |
| 13                        | 43      | 56       | 60      | 81       | 41  | 42   | 42  | 42   |
| 14                        | 36      | 46       | 70      | 77       | 40  | 43   | 42  | 42   |
| 15                        | 61      | 60       | 67.5    | 70       | 41  | 41   | 44  | 46   |
| 16                        | 47      | 67       | 42      | 62       | 37  | 37   | 39  | 38   |
| 17                        | 55      | 48       | 41      | 56       | 43  | 45   | 38  | 37   |
| 18                        | 55      | 56       | 35      | 56       | 27  | 31   | 35  | 37   |
| Mean                      | 42      | 55       | 69      | 80       | 40  | 40   | 40  | 41   |
| Standard Deviation        | 17      | 15       | 16      | 12       | 4   | 4    | 5   | 9    |
| Standard Error            | 4       | 3        | 3       | 3        | 1   | 1    | 1   | 2    |

Scores for participants who did not complete both the pretest and posttest are not reported.
### Site Two

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Scores for participants who did not complete both the pretest and posttest are not reported.
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**Standard Error:** 2 3 2 2 1 1 1 2

Scores for participants who did not complete both the pretest and posttest are not reported.
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- Career Education Attitude Scale: 50
- Career Education Familiarity Scale: 58
- Semantic Differential Vocational: 59
- Semantic Differential Career Awareness: 75

**Standard Deviation**
- Career Education Attitude Scale: 14
- Career Education Familiarity Scale: 12
- Semantic Differential Vocational: 17
- Semantic Differential Career Awareness: 14

**Standard Error**
- Career Education Attitude Scale: 3
- Career Education Familiarity Scale: 3
- Semantic Differential Vocational: 4
- Semantic Differential Career Awareness: 3

Scores for participants who did not complete both the pretest and posttest are not reported.
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<td>40</td>
<td>51</td>
</tr>
<tr>
<td>16</td>
<td>57</td>
<td>87</td>
<td>47</td>
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<tr>
<td>17</td>
<td>40</td>
<td>71</td>
<td>63</td>
</tr>
</tbody>
</table>

| Mean                      | 45      | 63       | 59      | 81       | 38  | 41   | 39  | 42   |
| Standard Deviation        | 12      | 15       | 14      | 8        | 3   | 4    | 5   | 4    |
| Standard Error            | 3       | 4        | 3       | 2        | 0   | 1    | 1   | 1    |

Scores for participants who did not complete both the pretest and posttest are not reported.