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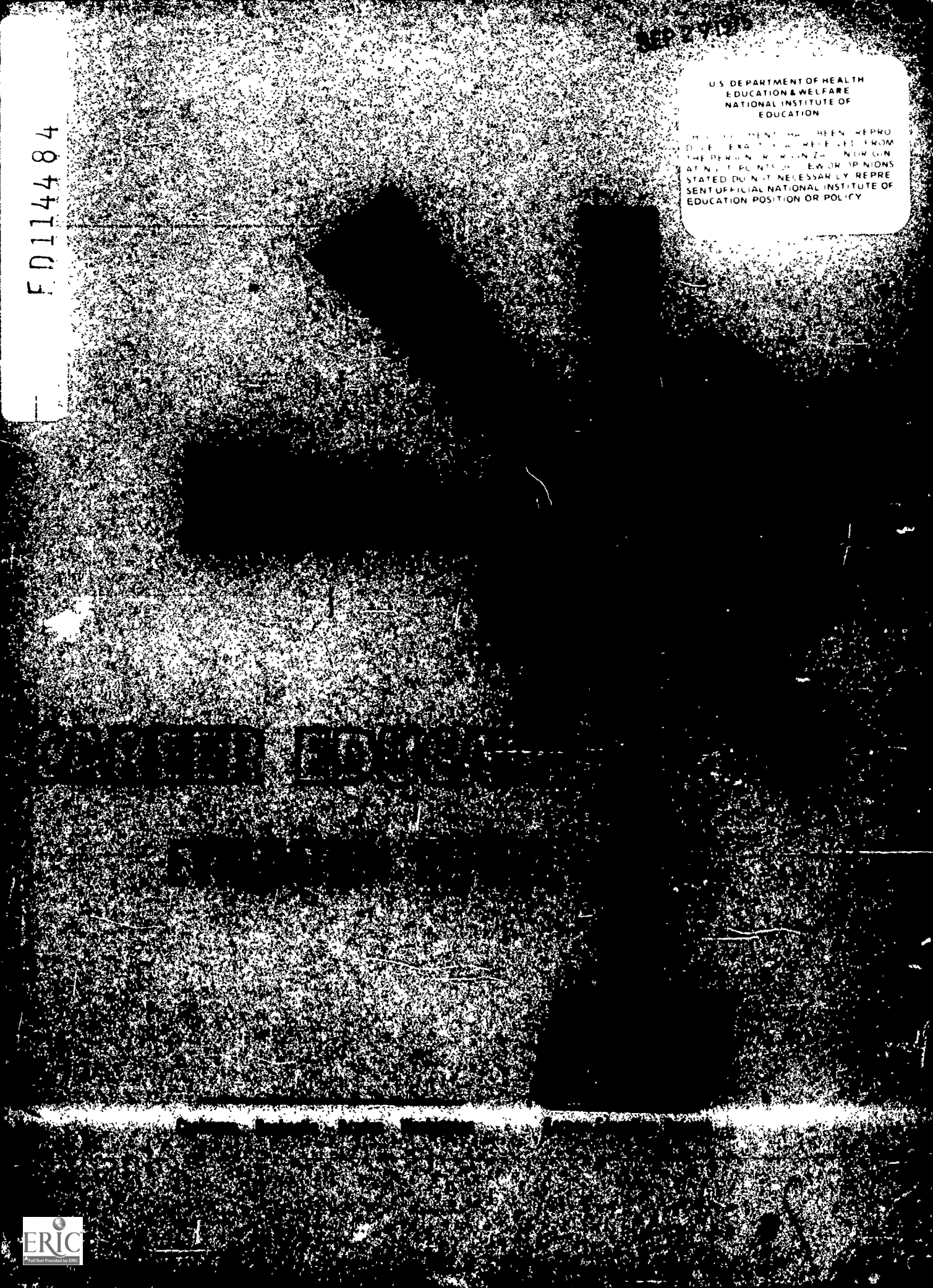
ABSTRACT

The document presents an evaluation of the Cashmere, Peshastin-Dryden, Washington School District's project to establish a comprehensive K-12 career education program, with emphasis placed upon the formative and summative stages. Background information is provided in the following chapters: (1) Objects of Evaluation discusses the evaluation model and plan; (2) Specifications of the Program presents the program rationale and discusses curriculum listings for all program levels and the National Standard Career Education Model Goal Statements; (3) Formative Assessment, an evaluation of that which was done during a project's development, discusses: an interim evaluation report prepared at the project's mid-point, a presentation of two staff questionnaires, their results and appraisal with tables, an assessment of community involvement and information dissemination, and costs; (4) Summative Assessment, evaluating student attitudes and knowledge relative to the project's intent, discusses the establishment of a control group and testing results. Types of questions and instruments used are discussed, with the format roughly following grade level sequencing, and supplemental tables are provided. Conclusions regarding the program are arranged under formative judgements and judgements of worth. It is stated that the program was exemplary, well managed, and well staffed. (LH)



Washington State Coordinating Council for Occupational Education

Research and Development Project

in Career Education

The project presented or reported herein was preformed pursuant to a Grant from the U.S. Office of Education, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

Nor, does this material necessarily reflect the policy or position of the Washington State Coordinating Council for Occupational Education.

EVALUATION REPORT FOR THE WASHINGTON STATE COORDINATING COUNCIL FOR OCCUPATIONAL EDUCATION VOCATIONAL EDUCATION DIVISION

Research and Development Project
in Career Education

Conducted Under
Public Law 90-576 Title I, Part C

Project No. V3610311
Grant No. OEG-0-73-2988

Conducted in the Cashmere and
Peshastin-Dryden School Districts

Richard D. Johnson, Superintendent
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By

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Independent Evaluator

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PREFACE

Reporting both the successes and failures of a program is an ethical as well as contractual obligation of research and development. It will be apparent in the pages that follow that although many positive aspects of the Cashmere, Peshastin-Dryden Career Education Project (CEP) are reported, so, too, are reported a number of constrainsts and limitations. The reader is asked to bear in mind that this type of reporting represented an essential and on-going element of the project itself. From the beginning, project staff sought to incorporate the evaluation process as an essential and useful element of the project. Since aspects of the project will continue an additional year as a dissemination model, it is hoped that what follows will allow interested parties to profit from the collective efforts and observations of those who were involved in the CEP program.

As a research and development project, the project was conducted under a cooperative agreement with the Washington State Coordinating Council for Occupational Education and the Cashmere, Peshastin-Dryden schools. Several important elements contributed to the nature of the project. These included: The project's goals and objectives as stated in the original research proposal, Conferences and negotiations with the Washington State Coordinating Council for Occupational Education, input from project staff, Pragmatic adaptation to the needs of the project, and Response to the project's on-going discrepancy evaluation input. As a result of the above, several diverse functions were either implicit or explicit concerning the project's operation. Essentially, these functions were as follows:

1. The project was developmental in nature in that it developed procedures and working materials suitable for a comprehensive career education program, grades K-14. Such materials and procedures were culminated with a transportable model including curriculum guides, suggested activities, resources, and recommended procedures for use at other localities seeking to implement career education into the public school curriculum.

2. The project functioned as a "process model" in that activities and materials were continuously being developed, implemented, tested, and revised through continuous involvement by project staff and district teachers. The assumption of this particular approach was that curriculum building should take place as a

consequence of the efforts of individual classroom teachers and should include the activities and ideas resulting from their interpretations of the project's purpose. The project further assumed that a process of "trial and error" is tolerable in curriculum building and that the curriculum should continuously be influenced by modification ending only when the final product is achieved. For want of a better term, this process of curriculum design could be termed an "experiential approach" to curriculum development.

3. The project had a research focus in that concomitant to curriculum development significant changes in student achievement, attitudes, and behavior were intended as a result of the career education project.

For reference to the outcomes and products resulting from number one cited above, the reader should be referred to the final curriculum guides of the career education project. These materials are obtainable through the Washington State Coordinating Council for Occupational Education and from the project office located in the Cashmere School District, Cashmere, Washington. The project's final evaluation report deals with an assessment of the project's formative and summative stages.

This evaluation report was prepared by Dr. James F. Parsley, Jr., who served as an independent evaluator for the Cashmere, Peshastin-Dryden Career Education project. The independent evaluator was contracted to provide outside expertise and, to the extent possible, a neutral observer who would be as objective as possible in assessing the project's worth. It is hoped that the final evaluation report adds additional clarity to the reader's understanding of the project and that the report is of assistance to the reader in making his or her objective judgment based upon the facts presented.

Appreciation is expressed to the career education staff who spent many hours in recording and furnishing data from which this report was compiled. Additionally, gratitude is expressed for the very excellent working relationship between CEP staff members and the evaluator. A high degree of professionalism was displayed by project staff throughout the conduct of the project's evaluation.

I. OBJECTIVES OF THE EVALUATION

A. Purpose of the Evaluation. Section 103.45 of Title 45 of the Code of Federal Regulations, entitled "Research and Training, Exemplary and Curriculum Development Programs in Vocational Education," provides for a third-party independent evaluation at the end of each operational year. In this capacity, the intended audience for this final evaluation report is the Vocational Education Division of the Washington State Coordinating Council for Occupational Education and the United States Office of Education, Department of Health, Education and Welfare. Other intended audiences for the project's final evaluation are those professional educators and lay citizens alike who have interest in the Cashmere, Peshastin-Dryden Career Education Project, U.S.O.E. Project #V361031L (Grant No. OEG-0-73-2988). Purposes of the independent third-party evaluation were as follows:

1. To conduct the research specified in the research proposal

2. To measure progress toward the accomplishment of the project's amended objectives

3. To verify data reported by project personnel and to assist staff pursuant to their estimate of cost regarding transportability of each component of the project

4. To collect and assess appropriate data concerning the project's strengths, needs and weaknesses. Said data to serve as a basis for recommendations by the third-party evaluator relative to the project's overall effectiveness and worth

5. To provide an on-going external assessment of the project's operational effectiveness with recommendations which will be presented to either the Project Director, and/or District Superintendent, and/or the Washington State Coordinating Council for Occupational Education as requested or as needed in the judgment of the third-party evaluator

B. Rationale for the Evaluation Model. According to the terms of the evaluation contract, the third-party evaluator was charged with the execution of the evaluation plan and was responsible for on-site visitations, collection of data, preparation of specified evaluation reports, and preparation and administration of instruments. In addition to conferences,

direct interrogative, and less formal communications, the evaluator was provided with copies of relevant documents provided during the project's operation. Materials shared in this manner were as follows:

1. Appropriate Federal regulations affecting the project and its evaluation,
2. U.S.O.E. guidelines and policy statements,
3. Final project proposal as approved by U.S.O.E.,
4. Pertinent correspondence between the project and U.S.O.E.,
5. Copy of contracts between the project and other technical assistance sources affecting the party evaluator's work, and
6. All reports, materials, and documents developed during the contract period.

In performing his services, the third-party evaluator was an independent contractor and should reiterate that at no time did there exist an employer-employee relationship between the evaluator and the career education project.

Since elements of the project will continue as a dissemination and demonstration model, it is anticipated that the results of the evaluation will, in several instances, assist the continued efforts of project staff during fiscal year 1974-75. Additionally, it is thought that those interested in implementing career education programs in the future will find the final evaluation report useful in their efforts to implement similar programs. It is anticipated that those interested in judging the worth of the 1973-74 CEP program will allow the following report to guide their decision-making process.

C. The Evaluation Plan. The evaluation plan can be depicted as having followed a discrepancy evaluation format which illustrates comparisons, either statistically or intuitively, concerning the degree of congruence between the project's intents and what was actually observed by the project staff, clientele, district personnel, and an independent evaluator. Stake authored a matrix of statements and data to be collected by the evaluator of an educational program as shown in Figure 1.[1]

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[1]Robert E. Stake, "The Countenance of Education Evaluation," Teachers College Record, Vol. 68, No. 7, (April 1967).

Figure 1

A LAYOUT OF STATEMENTS AND DATA TO BE COLLECTED BY THE E
OF AN EDUCATIONAL PROGRAM

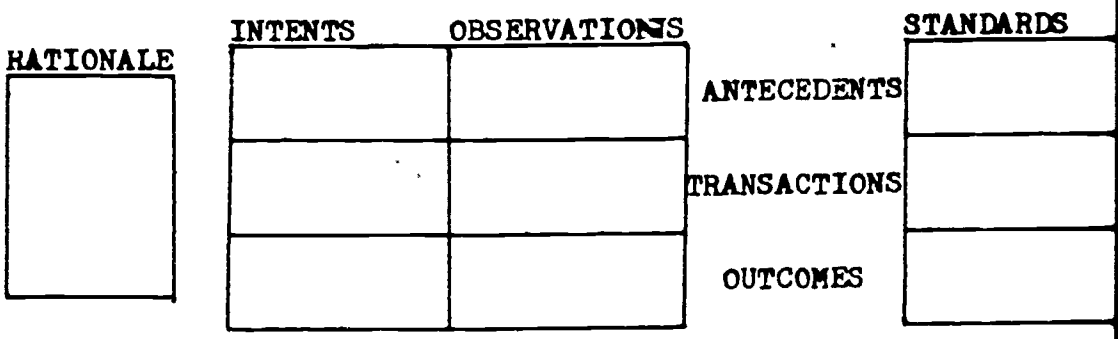


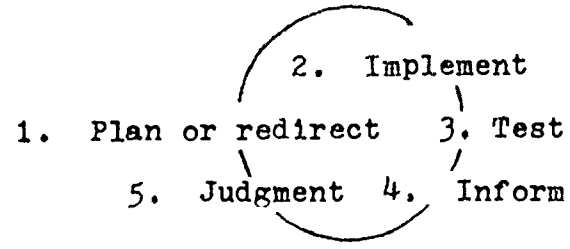
Figure 1

A LAYOUT OF STATEMENTS AND DATA TO BE COLLECTED BY THE EVALUATOR OF AN EDUCATIONAL PROGRAM

TIONALE	INTENTS	OBSERVATIONS		STANDARDS	JUDGMENTS
			ANTECEDENTS		
			TRANSACTIONS		
			OUTCOMES		

Stake's matrix served as an illustrative device to assist project staff in conceptualizing the type of variables to be assessed. Evaluation, by the nature of the project's expressed objectives, was involved in both formative and summative judgments covering processes and products, operations and outcomes, plans and executions, etc. A time-line guiding the completion of the overall evaluation plan is illustrated in Figure 2 on the following page.

Evaluation for the CEP program was a continuous proposition and there existed an on-going cycle of information feedback to the project's staff. In a sense, a discrepancy evaluation format was utilized which afforded staff the opportunity to redirect and improve the project as a result of an on-going formative evaluation process. The intent of a discrepancy evaluation has been illustrated in the literature by Malcolm Provus.[2] Figure 3 illustrates the sequential plan of events utilized in the CEP discrepancy evaluation format.



From the above, it should be apparent that there were multiple expectations insofar as the evaluation process was concerned. In addition to providing data illustrating the overall project's worth, the evaluation schema was intended to assist program developers (project staff) in continually redirecting and improving their efforts of curriculum design and implementation. As it has been mentioned previously, an additional expectation concerned answering the research questions implicit in the project's objectives and to determine whether or not the project had indeed produced significant changes in student behavior and knowledge related to the world of work and career education in general.

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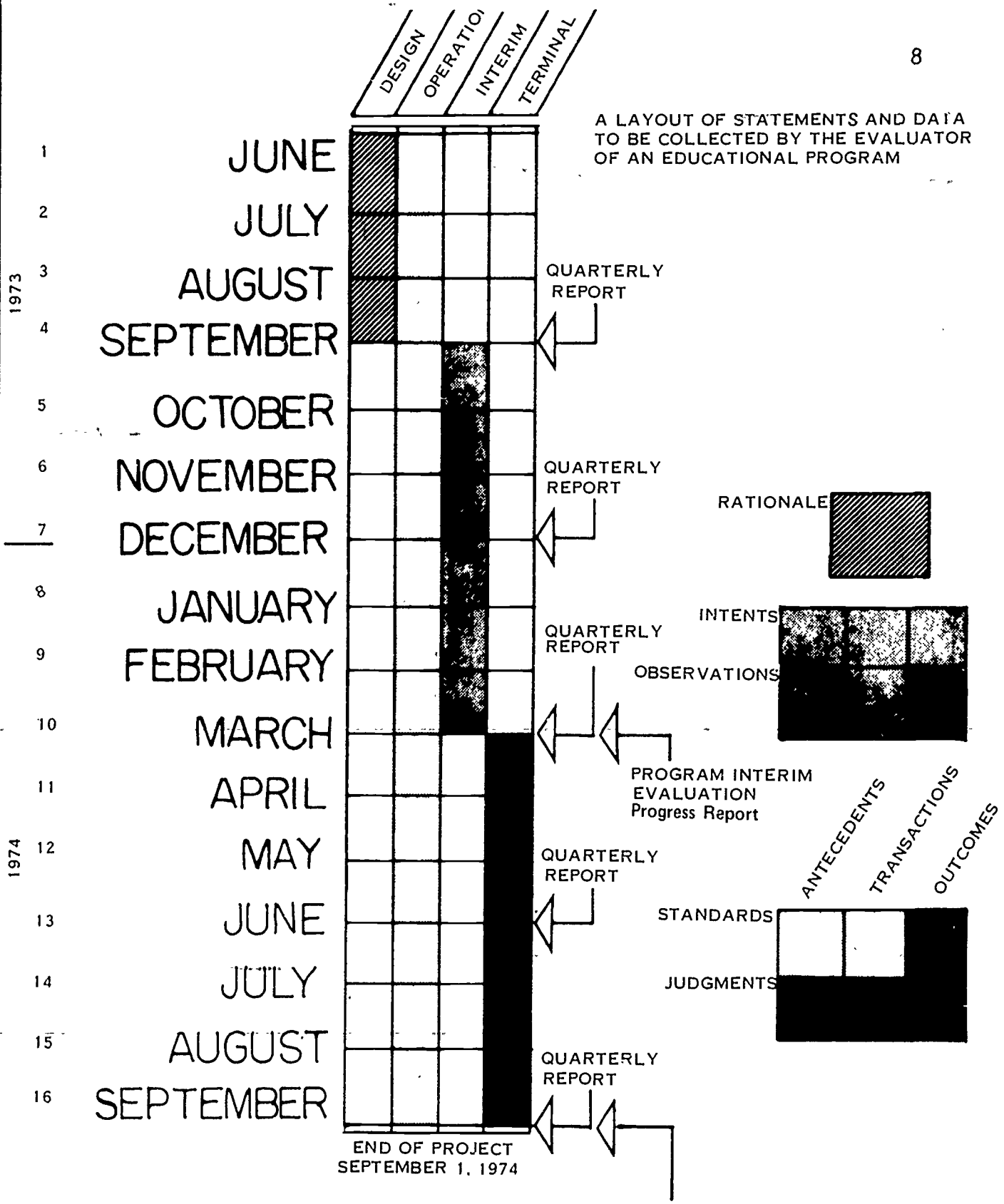
[2]Malcolm Provus, The Discrepancy Evaluation Model: An Approach to Local Program Improvement and Development, Pittsburgh Public Schools, E.S.E.A. Title I Project, 1969, pp 1-124.

A LAYOUT OF STATEMENTS AND DATA TO BE COLLECTED BY THE EVALUATOR OF AN EDUCATIONAL PROGRAM



II. SPECIFICATIONS OF THE PROGRAM

A. Rationale and Philosophy Behind the Program. Cashmere, Peshastin, and Dryden are three communities located in a rural, geographically isolated region in the state of Washington. The area is nationally known for its main agricultural product, Washington Delicious apples. The nearest community of size is Wenatchee, Washington, with a population of 20,000. The communities are approximately 150 miles from Seattle, Washington, and are bounded on all sides by Cascade mountains and forests. The location of the three communities in question represented a major factor to local educators in their desire to seek Federal funds so that a comprehensive career education program might be undertaken. Additional rationale for the CEP program came from the following problems unique to the Cashmere, Peshastin and Dryden communities:

1. Most local employment opportunities are confined to agriculture and to related fields.

2. A high rate of migrant labor is utilized due to seasonal occupational opportunities.

3. The unemployment rate for 1971 in the area was 12.2 percent and for 1972 was 12.7 percent.

4. Students attending schools in the Cashmere, Peshastin-Dryden schools were previously not exposed to career education opportunities.

5. A limited view of the "world of work" could be afforded in the local communities due to their isolated location, depressed economy, and small size.

6. Approximately 70 percent of graduating seniors leave the area to seek employment upon completing school. According to follow-up survey information, in past years most felt they were unprepared to make wise occupational choices.

The school boards of the two districts were committed to the inclusion of career education concepts into the curriculum. Administrative support for the concept was extremely evident. As a result of the very apparent need mentioned above, staff members of the Cashmere, Peshastin-Dryden school districts developed a program proposal for a research and development project in career education conducted under Public Law 90-576 Title I, Part C. The proposal was submitted to the Washington State Coordinating Council for Occupational Education and on

January 2, 1973, a demonstration, testing, and development site was established within the Cashmere School District No. 222 and Peshastin-Dryden School District No. 200. The project involved the two school districts cooperatively because both districts were served by a single superintendent and both districts were in the process of considering steps to implement a school district consolidation.

The educational philosophy behind the CEP program is essentially pragmatic in nature in that it seeks to directly respond to apparent needs through a comprehensive developmental career education program. A key to understanding the rationale behind the CEP program is found through an examination of the project's objectives as contained in the approved proposal and also in the project's amended goals and objectives. Although much of the rationale and philosophical background of the CEP project is implicit it is of critical importance to understand that the rationale for the project is based upon wide-ranging needs and the resulting program offers a fairly complex design in response to those needs.

The goals of the project were essentially derived from the guidelines provided by the U. S. Office of Education and the Washington State Coordinating Council for Occupational Education as expressed in application material sent interested parties wishing to apply for funds under Part C of Public Law 90-576. As a result, the CEP program was designed to meet the needs of all children serviced by the LEA relevant to career awareness, orientation, exploration, work experience, preparation, and placement. Additionally, the project provides a transportable model which has had impact throughout the state of Washington. From the foregoing, it could be deduced that the project had a rather global intent with both short-range and long-range outcomes desired.

B. Subject Matter. An interdisciplinary approach was utilized by project developers as they designed programs for grades K-12. Subject matter delineation, scope, and sequence are to be found in each of the several curriculum guides prepared at the project's completion. Figure 4 depicts an emphasis chart showing career clusters and the grade level at which that subject matter would be found.

Figure 4

CASHMERE, PESHASTIN-DRYDEN
CAREER EDUCATION PROJECT

CAREER EDUCATION CLUSTER--EMPHASIS CHART

CAREER CLUSTER	K	1	2	3	4	5	6	7
BUSINESS AND OFFICE				X	X			X
MARKETING AND DISTRIBUTION	X		X	X	X	X		X
COMMUNICATIONS MEDIA		X						
CONSTRUCTION					X			
MANUFACTURING					X	X		
TRANSPORTATION	X			X				X
AGRI-BUSINESS & NATURAL RESOURCES	X	X	X	X	X	X		
MARINE SCIENCE						X		
ENVIRONMENTAL CONTROL			X		X	X	X	
PUBLIC SERVICES	X	X	X		X	X	X	

Figure 4

CASHMERE, PESHASTIN-DRYDEN
CAREER EDUCATION PROJECT

CAREER EDUCATION CLUSTER--EMPHASIS CHART

REER CLUSTER	K	1	2	3	4	5	6	7	8	9	10	11	12
ND OFFICE				X	X			X	X		X	X	X
AND DISTRIBUTION	X		X	X	X	X		X	X			X	X
IONS MEDIA		X									X	X	X
ON					X					X	X	X	X
ING					X	X			X	X			
TION	X			X				X					
ESS & NATURAL RESOURCES	X	X	X	X	X	X			X		X	X	X
ENCE						X							
TAL CONTROL			X		X	X	X					X	
VICES	X	X	X		X	X	X					X	X

Figure 4 (Continued)

CASHMERE, PESHASTIN-DRYDEN
CAREER EDUCATION PROJECT

CAREER EDUCATION CLUSTER--EMPHASIS CHART

CAREER CLUSTER	K	1	2	3	4	5	6	7	8
HEALTH					X	X			
HOSPITALITY AND RECREATION		X	X		X			X	X
PERSONAL SERVICES		X			X				
FINE ARTS AND HUMANITIES			X	X		X	X	X	X
CONSUMER AND HOMEMAKING	X	X	X		X				

Figure 4 (Continued)

CASHMERE, PESHASTIN-DRYDEN
CAREER EDUCATION PROJECT

CAREER EDUCATION CLUSTER--EMPHASIS CHART

ER CLUSTER	K	1	2	3	4	5	6	7	8	9	10	11	12
					X	X					X		
ND RECREATION		X	X		X			X	X	X	X	X	X
ICES		X			X								
HUMANITIES			X	X		X	X	X	X	X	X	X	X
HOMEMAKING	X	X	X		X					X	X	X	X

Curriculum guides were organized according to unit titles and these are listed as follows:

KINDERGARTEN UNIT TITLES:

- Home and School Jobs
- Rights and Responsibilities
- Self Awareness
- Transportation
- Individual Responsibilities
- I Am Unique
- Who Handles the Milk Before You Do?
- Accepting Responsibility
- Community Workers
- The Grocery Store
- I Can Cook (Thanksgiving feast)
- The Family Unit
- School Personnel
- The Grocery Store
- What Do Fathers and Mothers Do?
- Sharing

GRADE ONE UNIT TITLES:

- My Father's Job
- The Postman
- Self Awareness
- School Workers
- Public Service Occupations
- Self Awareness--Physical, Emotional, Social, Intellectual
- VIP (very important person) Of The Week
- Public Service Occupations
- First Grade Olympics
- Janitorial Services
- Milk and Its By-Products

GRADE TWO UNIT TITLES:

- Jobs In A Community
- Holland
- The Post Office and Its Employees
- Goods and Services
- Food and Its Origin
- Math Skills and Occupations
- Sometimes Our Hobby Becomes Our Job
- Relating Academic Subjects to Occupations
- Energy
- Developing Food Service Skills--A Luncheon
- The Community
- Barter Day
- Communications Skills
- Making and Selling A Food Product
- Understanding Self and Others

GRADE THREE UNIT TITLES:

- The Apple Industry
- Our Community
- The Money I Know
- Transportation
- Alphabetical Filing
- Rocks and Minerals Classification
- Counting Money
- Transportation--Take Off Through the Clouds
- Investigating Different Careers
- Making a Corsage
- Costume Design
- Marketing and Distribution
- Write to Communicating

GRADE FOUR UNIT TITLES:

- Student Exchange Program
- The Family Unit and the World of Work
- Business and Office Occupations
- Occupations in Construction
- Ecology--Man and His Environment
- A Restaurant
- Health Services
- Consumer and Homemaking Occupations
- Personal Services
- Understanding Self and Others
- The Selective Consumer
- Student Oriented Career Fair

GRADE FIVE UNIT TITLES:

- Law Appreciation
- Play Store
- Cooperation Among Workers
- Manufacturing Process
- Careers Based on Interests and/or Abilities
- Stage Play Production
- Water, the Fountain of Life
- The Salmon Industry
- Why Rules Are Necessary
- Candy Sale
- Good Grooming and the Job
- The Assembly Line
- Washington State
- Jobs of the 80's
- Opportunities in Health Services
- Agencies of Employment and Employee Needs

GRADE SIX UNIT TITLES:

- You and Your Environment
- Library Research Skills
- The Role of Mathematics in Business
- Library Workers
- Careers Related to Fine Arts and the Humanities
- Outdoor Education Camp

GRADE SEVEN AND EIGHT UNIT TITLES:

- Personal and Social Growth
- Exploring Occupations Which Interest Me
- Understanding Myself
- Continental Land Survey System
- Matching Interests With Careers
- Occupations Related to Music
- Math and Transportation
- Eighth Grade Corporation
- How Come I Gotta (take math) etc.
- Jobs
- Bowling: Occupation or Leisure Time Activity?
- Careers Related to the Riding Horse

HIGH SCHOOL UNIT TITLES:

Art:

- Careers In Art

Biology:

- Careers Related to Biological Science

HIGH SCHOOL UNIT TITLES: (Continued)

Business and Office:

- Let's Use the Telephone
- The Job Search
- What Its Really Like In An Office
- New State Abbreviations and ZIP Codes

Career Education:

- Career Exploration

Clubs and Organizations:

- Girls' Club Mothers' Tea
- Producing a Mock Yearbook

Distributive Education:

- Job Interview
- Human Relations
- Mathematics of Distribution
- Search for Values
- Five Steps of a Sale

English:

- Advertising and Its Careers
- Gaining Information About Careers that Match Individual Interests and Abilities
- Choosing A Career

History:

- Functional Democracy In The Classroom

Home Economics:

- Exploring Careers In Home Economics
- Career Day
- Exploring Job Opportunities in the Clothing and Textile Field

Humanities:

- Your Environment
- Job Visitations
- Christmas In America (Sr. citizen party)

Industrial Arts:

- Exploring Industrial Careers
- A Career In Architecture
- Construction of Comfort Stations for Orchard Use
- Working With Bricks and Mortar

Journalism:

- Publishing Career Classroom News

Library:
Preparing Catalog Cards

Mathematics:
Mathematics Requirements Related to Certain Careers
Consumer Math
Mathematics of Indirect Linear Measure

Music:
Career Possibilities in Music and Related Fields

Photography:
Photographic Occupational Opportunities

Vocational Agriculture:
Agricultural Occupations and You
Metal Working (Taps and Dies)
Small Gas Engines
Electrical Soldering

Apart from career clusters and unit titles, subject matter included a number of other elements of career education. These elements are illustrated in Figure 5, Elements of Career Education--Emphasis Chart.

C. Project Objectives and Instructional Aims. The Project's goals and objectives as found in the original proposal and amended goals and objectives are as follows:

Purpose

The purpose of this project is to establish a comprehensive program of career education (K-14) in three small economically disadvantaged communities. The objectives of the project are intended to meet the needs of all children serviced by the local education agencies (LEA) relevant to career education and orientation, vocational work experience and cooperative education, and vocational guidance and counseling. Further, the intent of this project is to provide a model with salient features that have both transportability and impact throughout the state of Washington.

Project Amended Objectives

The broad objectives of the project as stated in the approved research proposal and as contained in the project's amended objectives are as follows:

1. To establish a comprehensive program of career education (K-14) in three small economically disadvantaged communities.

Figure 5

CASHMERE, PESHASTIN-DRYDEN
CAREER EDUCATION PROJECT

ELEMENTS OF CAREER EDUCATION--EMPHASIS CHART

ELEMENTS OF CAREER EDUCATION	K	1	2	3	4	5	6	7
APPRECIATIONS AND ATTITUDES	X	X	X	X	X	X	X	
SELF AWARENESS	X	X	X	X	X	X	X	X
DECISION-MAKING	X		X	X	X			
EDUCATIONAL AWARENESS		X	X	X	X	X	X	X
CAREER AWARENESS	X	X	X	X	X	X	X	X
ECONOMIC AWARENESS	X	X	X	X	X	X		
SKILL AWARENESS, BEGINNING	X	X	X	X	X	X	X	
EMPLOYABILITY SKILLS	X	X	X	X	X	X	X	

Figure 5

CASHMERE, PESHASTIN-DRYDEN
CAREER EDUCATION PROJECT

ELEMENTS OF CAREER EDUCATION--EMPHASIS CHART

OF CAREER EDUCATION	K	1	2	3	4	5	6	7	8	9	10	11	12
ONS AND ATTITUDES	X	X	X	X	X	X	X		X	X	X	X	X
NESS	X	X	X	X	X	X	X	X	X	X	X	X	X
AKING	X		X	X	X				X	X	X	X	X
L AWARENESS		X	X	X	X	X	X	X		X	X	X	X
RENESS	X	X	X	X	X	X	X	X	X	X	X	X	X
WARENESS	X	X	X	X	X	X			X			X	X
ENESS, BEGINNING	X	X	X	X	X	X	X		X	X	X	X	X
LITY SKILLS	X	X	X	X	X	X	X		X	X	X	X	X

A. The program will involve every student serviced by the LEA in a program designed to increase awareness of the world of work--the kinds of work people do, the tools they use, and the skills involved, and to formulate favorable attitudes regarding the dignity and status of all work.

(1) The program at the elementary, middle, and high school levels will increase student awareness of the range of options open to them today in the world of work and to probable future changes caused by continued technological advancements.

(2) The program will, at the elementary level, stress increased career awareness of students in terms of the broad range of options open to them in the world of work.

(3) The program will, at the junior high or middle school level, provide career orientation and meaningful exploratory experiences for students.

(4) The program will, at grade levels 10 through 14, provide job preparations in a wide variety of occupational areas, with special emphasis on the utilization of work experience and cooperative education opportunities for all students.

(5) To expose students to a variety of occupations, to inform them of occupational requirements, and, where possible, to involve students in cooperative occupational programs and/or laboratory experiences. Also, where possible, to enable students to observe on the job performance.

B. The program will develop techniques, procedures, and materials which complement rather than supplant the existing school curriculum. These processes and products will be carefully evaluated as to both appropriateness and efficiency.

C. The program will collect and utilize experiences, data and materials from existing career awareness programs throughout the State and the nation. These techniques, procedures, and materials will be chosen so that they complement rather than

supplant the existing school curriculum. These processes and products will be carefully evaluated as to both appropriateness and efficiency.

D. The program will involve the entire LEA staff in an intensive in-service program designed specifically to carry impact to every student in every classroom. The in-service experience will involve each staff member with materials and experiences designed to increase awareness of the world of work, to formulate favorable attitudes regarding the dignity and status of all work; to garner commitment to the program; to facilitate the instructional role of each staff member; and to facilitate the counseling and evaluative functions of each staff member.

II. To counsel students in cooperative training experiences, job placement opportunities, post-secondary occupational programs, and/or baccalaureate programs.

A. The program will provide intensive vocational guidance and counseling assistance designed to insure the placement of secondary and post-secondary students in either: (a) cooperative training experiences; (b) a job; (c) a post-secondary occupational program; or (d) a baccalaureate program. This assistance will be availed to every student serviced by the LEA throughout the duration of the program.

III. To disseminate program information, materials, and evaluative findings to agencies throughout the state of Washington.

A. The program shall be a model program which can in effect be a clearing house for any community or agency wishing to garner information and assistance in preparing a total program for career education (K-14).

In addition to the above broad intents and purposes, specific goal statements will continue to be developed as a function of the project's operation from staff input and from assessed educational needs as delineated in the intent of the project's research proposal. As such statements are incorporated into the project's operational phase, they will be subject to the appropriate evaluative standards as adjudged necessary by the third-party evaluator and as specified in the Third Party Evaluation Plan.

Beyond its broad goals and objectives, the project utilized progressional goal statements found in the National Standard Career Education Model. These goal statements are found in Figure 6.[4]

It is important to note that project staff provided minimal restraints and limitations to individual teachers in the development of specific program activities and various interpretations of the project's goals and objectives. Project staff instead provided resource assistance and consultation to the teaching staff. The result is that the project contained an extreme amount of diversity in its curriculum aims and objectives. A great deal of teacher involvement and a variety of interpretations concerning the direction of the project resulted. Simply put, the CEP program involved a massive effort by the staff of two school districts to incorporate career education as a focal point in their day-to-day teaching. Rather than clarity and simplicity in design, the CEP program involved a multi-faceted approach wherein grade level specialists were free to interpret the relevancy of career education to their specific grade level and subject area speciality. It was the continual domain of project staff to assist individual teachers with their efforts and provide overall resource assistance and continuity to program development.

D. Instructional Procedures, Tactics, Materials. Once the CEP staff had been selected, assignments were divided into the areas of administration, curriculum, and guidance. Responsibility for the total program was that of the project director, Dr. Ronald Frye. The CEP staff began by collecting and evaluating data and materials from available state and national sources concerned with career education. From this material, techniques and procedures were selected which showed promise of being applicable to a small school situation. In-service workshops were conducted in three sections in the early stages of the project. The workshops involved 98 percent of all certified teaching staff in the two districts and had as its purpose the preparation of staff members for developing units and infusing career education concepts into the classroom.

As a curriculum development project, minimal reliance was placed upon the purchase of equipment and materials to augment the CEP program. Instead, emphasis was placed upon

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[4]The goals chart was printed with permission from Educational Properties Inc., P. O. Box DX, Irvine, CA 92664.

GOAL STATEMENTS

ELEMENTS OF CAREER EDUCATION		APPRECIATIONS AND ATTITUDES	SELF AWARENESS	DECISION-MAKING	EDUCATIONAL AWARENESS	CAREER AWARENESS
AWARENESS / ORIENTATION / EXPLORATION / PREPARATION / WORK EXPERIENCE / PLACEMENT	K	Understand the importance of each individual in the function of the home unit	Understand the rights and responsibilities of the individual at home and school	Become aware of cause and effect in making decisions	Be aware of roles in the home and similar roles in the school	Know the jobs of home members and school personnel.
	1	Learn to appreciate all individuals in the school setting	Know the importance of self as an individual and as a worthy member of groups	Be aware of the consequences of personal decision making	Understand the similarities and differences between home roles and school roles	Relate home and school jobs to community functions.
	2	Be aware of the importance of getting along with other people	Be aware of the capabilities and limitations of individuals	Analyze alternatives to problems and be able to express them verbally and in written form	Relate basic skill development to life roles within the community.	Gain a knowledge of job necessary to maintain community and their dependency on each ot
	3	Realize the contributions of community members to the student and others	Recognize attitudes toward learning tools and their value in achieving individual goals	Identify components of decision-making process	Understand the similarities and differences between life roles and learned skills	Compare local jobs to j in general
	4	Be aware of the wage earner's job and how it affects the home unit	Relate the mastery of educational skills to individual success	Realize the need for goals in life style decisions	Be aware of individual strengths and weaknesses as related to peer groups	Group cluster jobs according to similarity job performances.
	5	Analyze working roles as to advantages and disadvantages	Be aware of the individual's rights and responsibilities as a worker	Apply decision making process to school related problems	Understand the relationships between the role of the individual his environment and the roles of selected adults	Understand the impact of career clusters on life styles
	6	Understand the relationship between occupations and their growth and development	Select career clusters as related to individual strengths and weaknesses	Apply the decision making process to home and social related problems	Understand the relationships between people and their effect on the accomplishment of tasks	Recognize abilities and skills required for vario career clusters
	7	Appreciate all forms of human endeavor and work.	Choose career clusters as related to interests and abilities.	Weigh long and short range effects of different alternatives to specific problems.	Identify and understand values as they relate to life style.	Understand the relation ships between attitudes and values and career clusters.
	8	Understand the impact of work in one's life and resulting need to make a meaningful career choice.	Develop self perception of abilities and interests as related to actual career requirements.	Apply decision making process to study of careers.	Identify present life-style and conditions deter mining that style.	Understand the relation ships between interests and abilities and career clusters.
	9	Relate attitudes and awareness to specific or related job clusters.	Build reality awareness perception of "where I am compared to where I want to be."	Analyze and refine previous career decisions based on counseling, work experience and all available information.	Determine a tentative personal schedule to acquire necessary and desired special skills.	Based on understanding interests, values and abilities, study career clusters. Survey courses in career clusters.
	10	Understand the importance of all careers and their contribution to society.	Relate personal values and influence of other's values on career choice.	Select a career cluster for in-depth analysis.	Acquire special skills needed for predicted or desired life-style.	Explore the career clust in depth based on interests, values and abilitie Gain planned work experience.

GOAL STATEMENTS

CIATIONS TTITUDES	SELF AWARENESS	DECISION-MAKING	EDUCATIONAL AWARENESS	CAREER AWARENESS	ECONOMIC AWARENESS	SKILL AWARENESS, BEGINNING COMPETENCE	EMPLOYABILITY SKILLS
the impor th individual in n of the home	Understand the rights and responsibilities of the individual at home and school	Become aware of cause and effect in making decisions	Be aware of roles in the home and similar roles in the school	Know the jobs of home members and school personnel	Identify within the home unit What is available needed wanted luxury	Identify different tools for different careers	Understand the need to share and cooperate to complete tasks
preciate all in the school	Know the importance of self as an individual and as a worthy member of groups	Be aware of the consequences of personal decision making	Understand the similarities and differences between home roles and school roles	Relate home and school jobs to community functions	Be aware of the exchange of goods and services	Be aware that school is a job that requires mastery of basic skills for success	Acquire the ability to develop roles with others, accept direction and take responsibility
the importance long with other	Be aware of the capabilities and limitations of individuals	Analyze alternatives to problems and be able to express them verbally and in written form	Relate basic skill development to life roles within the community	Gain a knowledge of jobs necessary to maintain the community and their dependency on each other.	Understand the money exchange system vs the barter system	Understand the use of various communication tools and the effect on life style and future career choice	Identify styles of interaction that contribute to individual and group goals
contributions ty members to and others	Recognize attitudes toward learning tools and their value in achieving individual goals	Identify components of decision making process	Understand the similarities and differences between life roles and learned skills	Compare local jobs to jobs in general	Understand our monetary system	Understand the use of additional tools and their effect on life style and future career choice	Understand how to resolve personal conflict between individual and group goals
the wage and how it ome unit	Relate the mastery of educational skills to individual success	Realize the need for goals in life style decisions	Be aware of individual strengths and weaknesses as related to peer groups	Group cluster jobs according to similarity of job performances	Understand the process of production and distribution of goods and services	Understand and master the use of tools for measurement and extension of energy in simple machines.	Participate in active groups in order to develop individual and group goals.
king roles as to and es.	Be aware of the individual's rights and responsibilities as a worker	Apply decision making process to school related problems	Understand the relationships between the role of the individual his environment and the roles of selected adults	Understand the impact of career clusters on life styles	Be aware of the law of supply and demand	Participate in and understand the processes of mass production Mastery of several measurement tools	Understand how to relate the school environment to society at large and the need for structure and order
the relation n occupations with and t.	Select career clusters as related to individual strengths and weaknesses	Apply the decision making process to home and social related problems	Understand the relationships between people and their effect on the accomplishment of tasks	Recognize abilities and skills required for various career clusters	Understand that specialization creates an interdependent society	Understand tools and processes used in research Simple machines combined to produce complex machinery.	Identify the individual's role in society and its effect on increased personal satisfaction and improved group achievement and morale
ll forms of ver and work.	Choose career clusters as related to interests and abilities.	Weigh long and short range effects of different alternatives to specific problems.	Identify and understand values as they relate to life style.	Understand the relationships between attitudes and values and career clusters.	Develop the concept of management of finances (earning, spending, borrowing, savings).	Master the use of tools and processes used in research in the physical and social sciences Understand use of tools in selected career clusters	Understand the social and personal relationship and their effect on employment
the impact of life and d to make a areer choice.	Develop self perception of abilities and interests as related to actual career requirements.	Apply decision making process to study of careers	Identify present life style and conditions determining that style.	Understand the relationships between interests and abilities and career clusters.	Understand economic potential as related to career clusters, i.e., relate cost of entering a field to future expected income.	Use basic tools found in career clusters.	Relate personal and social interaction skills to career clusters
udes and specific or sters.	Build reality awareness perception of "where I am compared to where I want to be."	Analyze and refine previous career decisions based on counseling, work experience and all available information.	Determine a tentative personal schedule to acquire necessary and desired special skills.	Based on understanding of interests, values and abilities, study career clusters. Survey courses in career clusters.	Understand the Tools of Business Read and interpret tables, graphs, and charts used as a consumer.	Match necessary skills and processes with selected career clusters	Understand the skills necessary to acquire, maintain and progress in employment.
the impor- areers and ation to	Relate personal values and influence of other's values on career choice.	Select a career cluster for in-depth analysis.	Acquire special skills needed for predicted or desired life-style.	Explore the career clusters in depth based on interests, values and abilities. Gain planned work experience.	Relate legal and financial considerations to career clusters in general.	Match individual abilities and interests with skills and processes needed in career clusters.	Develop personal and social interaction skills related to in depth study of one career cluster

teacher ideas and utilization of available community resources. Throughout the 1973-74 school year, staff was involved with preparation of materials, procedures, and practices which would incorporate the concept of career education into the existing school curriculum. Additionally, much attention was given to ways in which teachers might expand career awarenss beyond the experiential offerings of the local community.

A detailed discussion of instructional procedures, tactics, and materials can be found in each of the project's curriculum guides. More information concerning this topic will be found in the results of the formative evaluation described later in this report.

By way of description, it is the opinion of the evaluator that the project was typified by many rich and varied instructional procedures and methods. From the unit listings in the previous section, it is apparent that the scope of offerings were highly imaginative and indeed varied. So, too, appeared the types of activities and instructional procedures utilized throughout the course of the project.

Perhaps the best illustration of the nature of instructional procedures, tactics, and materials could be found in the "awareness" component of the CEP program. A major emphasis was placed by staff on fostering increased career awareness on the part of elementary students. This was attempted by allowing students an opportunity to become aware of occupations and the people involved in them. Particularly at the elementary school level, extensive use of community resource persons was evident. Such persons were not simply chosen at random, but, rather, were a highly organized cadre' representative of the various occupational clusters in or around the Chelan County area (including resource persons from Wenatchee).

Also illustrative of the type and nature of instructional activities were the following types of activities: individual student projects, commercial films, commercial filmstrips, teacher-made slide-tape presentations, cassette recordings, field trips (individual and group), classroom visitors, role playing, games, simulations, student readings, child-parent discussions, class reports, individual job exploration, etc. One unique program was the community exchange program whereby a number of elementary students had "guests" from urban Seattle for one week and then, in turn, were themselves guests while visiting Seattle at a later date.

E. Students and Community Characterisitics. In accordance with the funding guidelines, it was the intent from the project's onset to involve all students of the Cashmere, Peshastin-Dryden school districts in the CEP program. Assessment of this intent will be found both in the formative and summative evaluation sections of this report.

The reader should understand that the communities in question feature homogeniety in population that would not be found in most urban or suburban settings. The Cashmere School District has approximately 1100 students and, as a community, has traditionally supported its public schools quite favorably through passage of annual school levy measures and occasional bonds for capital improvements. The curriculum of the Cashmere School District is as varied as the district's limited enrollment and resources will allow. The Cashmere School District has excellent school facilities both at the elementary and senior high school levels, however, facilities at the junior high school are less than ideal by any measure. The district's senior high school curriculum is notably strong in its vocational curriculum for a district of such small size.

The Dryden community is located approximately eight miles from Cashmere and, together with the community of Peshastin (six miles beyond), operates a joint school district with a student enrollment of 450 students. The Peshastin-Dryden School District has limited resources and, therefore, its facilities and curricular program cannot help but reflect such limitations. Curricular offerings at the high school are quite narrow by comparison to Cashmere High School. In most instances, teachers at the high school level in Peshastin-Dryden are faced with teaching subjects in several unrelated areas.

During the 1973-74 school year, voters of the Peshastin-Dryden district twice turned down a consolidation measure which would have incorporated all three communities into a single school district. The consolidation failure caused an immediate problem for the CEP program in that both districts had operated under a single superintendent and the staff of both districts had highly favored the idea of consolidation. Despite any negative consequences of consolidation failure, the CEP program remained as a central focus whereby continued cooperation and partnership remained between the two school districts. That the events of consolidation failure served as a handicap to the CEP program seems incontrovertible, however, there appears no way which one could measure such contingencies. In fact, several staff members seemed quite defensive about the suggestion that events in any way had adversely affected the CEP effort.

F. Standards, Basis for Judging Quality. In establishing criteria by which to judge the CEP program several possible avenues for making one's judgment exist. As in traditional research, formal evaluation may deal with the measurement of specific objectives contained in a project

proposal. An example of such evaluative information may be found in Chapters 3 and 4 of this report.

Generally, objectives when they deal with student outcomes in reference to cognitive abilities and/or attitudes and behaviors are specified in the form of operational hypotheses. In order for statistical computation to be meaningfully interpreted, such operational hypotheses are then formulated as null hypotheses by the researcher so that measurement of specific outcomes can be adjudged against a standard, in this case the "accept" or "reject" logic of the null hypothesis. This report, indeed, contains such procedures, but clearly there exists a need for additional standards beyond that of simply measuring whether or not the project achieved its objectives.

Stake[5] summarized the dilemma as follows:

> Informal evaluation tends to leave criteria unspecified. Formal evaluation is more specific. But it seems the more careful the evaluation, the fewer the criteria; and the more carefully the criteria are specified, the less the concern given to standards of acceptability. It is a great misfortune that the best trained evaluators have been looking at education with a microscope rather than with a panoramic viewfinder.

Stake goes on to say that research and evaluation today is incapable of fully measuring the effect of any school or curriculum project because the methodology of processing judgments is inadequate. Not only is the methodology inadequate, but valid measurement is made extremely difficult due to the lack of other comparative standards.

A further limitation in utilizing measurement techniques to determine the accomplishment of stated project objectives (as a determiner of quality) is the method in which such objectives were arrived at in the first place. Perhaps education indeed is quite removed from being a science. For in a scientific endeavor the formulation of operational constructs such as hypotheses would have been an extremely careful process with perhaps a single hypothesis measured for each separate experiment. In the educational context, however, as in the case of the CEP project, numerous goals and objectives exist ranging from stated project objectives to "borrowed" goal statements elucidated in the National Standards for Career Education.[6]

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[5]Stake, loc. cit.

[6]National Standards for Career Education, loc. cit.

Earlier, when describing the project's goals and objectives (see Part C of this chapter) it was observed that the CEP program had a rather global intent in that goal statements were merely arrived at by restating guideline requirements given to those wishing to make project application under Part C of Public Law 90-576. Beyond this, the CEP staff merely "adapted," in a rather pragmatic way, goal statements as contained in the literature. Additional goals and objectives emerged as the CEP staff worked with individual teachers who, in turn, had interpreted the project in their own way. All of this, of course, demonstrates a lack of specificity and clarity in the establishment of goals and objectives for the CEP program. It is apparent that were this to be a scientific experiment, one would need to greatly criticize the above process and those involved in the formulation of directions for the CEP program. It is the evaluator's opinion, however, that to do so would be merely an expression of frustration for a lack of sophistication and methodology available to the researcher in assessing a program's overall worth.

Increasingly, evaluators of educational programs today are more concerned with results of formative assessment as an indicator of standards by which a program should be adjudged. Such information on the inner workings of a program are meant to describe and assess processes and outcomes as they relate to the conduct of an educational program. Unfortunately, when this is the only technique utilized for evaluation, it is entirely inadequate. In many project reports utilizing only formative assessment, this type of evaluation is merely a "smoke screen" intended to obfuscate any meaningful overall judgment of worth.

A step further in establishing standards and a basis for judging quality would be the comparative information of what is being done in other school districts and/or projects with similar parameters. If a project could indeed by compared with counterpart projects through useful comparative criteria, then one would have an additional dimension whereby congruent standards of worth would be available. Since career education is a relatively new concept and since no such data collecting vehicle is available to the CEP program, other than a close look at several counterpart programs existing in the state of Washington, the reader must necessarily note this as an additional limitation in determining standards and the basis for judging quality.

A final part of the evaluation process and one which in the final analysis is perhaps just as valid as other indicators, is the overall judgment of the various persons involved in the project as to the overall worth of the effort. Persons

in state offices of education often find efforts generated through Federal programs languishing a year or two after Federal funds have expired. One criteria for judging the worth of a program, therefore, might be whether or not the effort is continued beyond Federal funding. Other criterion extant to this type of logic would be whether or not the local community feels the program was of significant merit and worth for the youngsters of the community. Additionally, one might well be concerned whether or not the students, teaching staff, administrative staff, and resource persons utilized in the conduct of the project feel that the overall effort was of value. Judgmental criteria already exists at the state level with the Coordinating Council for Occupational Education which has decided to support a continuance of the CEP program for yet another year by other financial sources. Obviously, in deciding to continue elements of the project, the Coordinating Council had high regard for the Cashmere, Peshastin-Dryden Career Education Project.

Beyond this and to those to whom salient features of the project have been disseminated through conferences, publications, and visitations, rests an impression of overall worth based upon numerous but immeasurable standards. Last, but by no means least, are such impressions held by the evaluator who through adherence to the protocol of professionalism strives to be as objective as possible, but who, nevertheless, must have an overall impression as to the worth of the project. As one reads the pages that follow in this report, he or she must recognize that the standard or perspective from which one adjudges a program clearly predicates what will be seen. Although clearly not feasible, perhaps the best approach for determining the overall quality of a program would be a consideration of all of the above.

III. FORMATIVE ASSESSMENT

For some time now, practitioners of educational research and development have used the term "formative assessment" to denote evaluation of that which is done during a project's development. This type of evaluation is useful for those who are planning similar types of efforts and who are interested in choosing the best ingredients or salient features from an already existing project. Significantly, curriculum developers, administrators, and teachers are often interested only in information of this type when planning to implement programs of their own. Formative assessment is also useful in a program to be repeated in subsequent years. Formative evaluation, in effect, is intended to answer the question, "What influenced the results of the project?"

A. Internal Evaluation. In the case of the CEP program, the approved project proposal states that "internal evaluation would be the responsibility of the project director." In this capacity, the project director prepared quarterly reports for the Washington State Coordinating Council for Occupational Education. In the very early stages of the project, the evaluator was asked to assist the project director in devising a discrepancy evaluation model which would become an integral and on-going part of the program (this is discussed in Chapter I of this report). Discrepancy evaluation procedures, then, were incorporated early in the project and it became a weekly part of staff meetings to continually assess and update staff members relative to the project's operational progress. Such a system is highly pragmatic in that it enables response to identified needs in a fairly rapid time frame as opposed to the amount of time needed in other more formal types of formative evaluation.

B. Interim Evaluation. In addition to implementing on-going discrepancy evaluation techniques, the project director also asked the third-party evaluator that an independently-prepared interim evaluation report be prepared as an indication of progress at the project's mid-point. As a result of this request, the "Program Interim Evaluation: Progress Report" was prepared and presented by the evaluator to cover the period beginning June 1, 1973, and ending February 28, 1974.

The Interim Evaluation Report dealt with a summary of formative data concerning program design (intents) and

program operation (observations, antecedents, transactions). Also included in the report was an analysis of the progress of the evaluation design and an analysis of the technical quality of the project's goals and objectives. Techniques used in the preparation of this report were varied and included recorded interviews, interrogatories, questionnaires, and site visitations. The report enumerated several substantive problem areas needing immediate attention. Among such areas addressed in the interim report were: the lack of specificity in goals and objectives, possible different focal points existing in the project due to differences in the two participating districts, the need to better monitor the accomplishment of objectives, and additionally a number of staff concerns related to the program's operation.

In all, the interim report indicated most aspects of the CEP program as progressing nicely and, where problems were indicated, staff showed a minimum of defensiveness. In virtually every problem area noted in the interim report the project has responded to evaluation findings and notable improvement resulted in all identified problem areas. The project is to be commended for such response. The interim report is not being replicated in the appendix of this report in that it was intended to be used by staff members only and was not to "pull any punches" but, rather, address significant areas of need as they existed at the project's mid-point. Granted, the actual interim evaluation might be interesting to the reader, but the confidentiality ascribed to the interim evaluation process does not permit such indulgence.

C. Staff Questionnaire. One essential way in which formative evaluation was conducted was through the use of a staff questionnaire administered June 3, 1974. The questionnaire was administered to all certificated staff members of the Cashmere and Peshastin-Dryden school districts and was conducted solely and independently by the third-party evaluator. Staff members were requested to return the questionnaire to the school secretary who then, in turn, checked the name off an accounting list and placed the completed questionnaire in a sealed envelope. In this manner, the questionnaire was kept completely confidential from district administrators and to project personnel.

Answers to a number of questions were sought through use of the staff questionnaire. A number of the important concerns were as follows:

To what degree did staff participate in the CEP program?
Was career education infused into the existing curriculum or was it treated as a separate subject area?

What were staff perceptions concerning student needs in regard to career education?
What was the role of counseling in the CEP program?
How effective has the project's inservice program been?
How well did the CEP program meet the expectations of teaching staff?
How effective did the staff feel the CEP program has been this year?
Does staff plan to continue career education efforts beyond funding?
How well have students responded to career education?
What specific suggestions and comments did staff have concerning the effectiveness of the career education project for the 1973-74 school year?

Table 1 lists the items used in the staff questionnaire along with the results obtained. A questionnaire was returned by each staff member in both districts.

Discussion. As can be seen from the responses to the first three questionnaire items, the degree of involvement by staff varied as did the method of presenting subject matter dealing with career education. Despite the hope by CEP staff that "all teaching staff would participate in career education," it was apparent that for one reason or another several staff members chose to participate only to a limited extent and in the case of two staff members, not to participate at all.

Question #2 tested an important project objective concerning the intent to "infuse career education into the existing curriculum plan." The majority of staff (56 percent) did indicate that career education was presented correlated with other existing classroom subjects, still others (18 percent) stated they used social science as the main vehicle for integrating career education into the curriculum. Thirteen staff members (13 percent) stated they presented career education as a separate subject of major importance. From item #2 it is apparent that there were a variety of approaches to career education and that contrary to the intent of project planners, only a slight majority of teachers presented career education correlated with other subject areas.

The third questionnaire item dealt with whether or not local schools should be doing more or less with career education. Response to this question showed that no staff member felt that the district should be doing less in career education. Conversely, 50 percent of staff felt that the district should be doing more in career education while

Table 1

STAFF QUESTIONNAIRE

1. To what degree did you participate this past school year in the Cashmere, Peshastin-Dryden Career Education Project (the degree in which you were involved and, as a result, offered instruction in career education)?

To a very significant degree throughout the year		At times, I was quite involved		Moderate participation whenever it seemed to be appropriate		Not very much (some, but really not often)		Not at all (I really did not participate this year)	
N	%	N	%	N	%	N	%	N	%
15	17	39	43	21	23	13	15	2	2

2. What best describes your curricular plan for dealing with career education this past year?

I presented it as a separate subject of major importance		I used Social Science to integrate career education into the curriculum		I presented it correlated with our existing classroom subjects and materials		We had occasional discussions about career education outside the context of our subject area		I did not participate	
N	%	N	%	N	%	N	%	N	%
13	13	17	18	55	56	10	10	3	3

3. Should your school be doing more or less in career education?

Much more		Some more		The same		Less		Nothing	
N	%	N	%	N	%	N	%	N	%
9	11	32	39	42	50	-	-	-	-

4. Career education has several different aims. Which of these were of the most concern to you? (Check those with which you were concerned)

Awareness of careers and their effects on our lives		Orientation to the world of work		Exploration of possible alternatives which each student might have		Preparation through direct acquisition of employable skills		Work experience allowing first-hand knowledge of employable skills	
N	%	N	%	N	%	N	%	N	%
54	65	39	47	32	39	25	30	19	23

5. Which students need more of this kind of education (career education) than normally given in the public school classroom?

All students		Academically-talented students		Poor ability students, mostly		Economically deprived, mostly (can incorporate any of the above categories)	
N	%	N	%	N	%	N	%
70	85	2	02	7	08	4	05

6. Do you feel you school is now doing enough to make the student aware of his own abilities, likes, dislikes, and potential for earning a living?

Yes		For most		Only for some		No		I don't know	
N	%	N	%	N	%	N	%	N	%
6	07	41	51	25	31	7	09	2	02

7. Is it possible to identify potential dropouts before they physically leave school?

Yes		No		I don't know	
N	%	N	%	N	%
73	89	1	01	8	10

8. To your knowledge, does your school attempt to identify potential dropouts for special help by the teaching and counseling staff?

Yes		No		I don't know	
N	%	N	%	N	%
43	55	17	22	18	23

9. Should schools arrange for secondary students to receive work experience:

	Yes		No		I don't know	
	N	%	N	%	N	%
During school hours: (for credit)	53	77	7	10	9	13
Outside School hours: (for credit)	53	83	4	06	7	11
During vacation:	49	74	6	09	11	17

10. How necessary is it for you to be informed by counselors and others of potential job opportunities and changes in the world of work?

Important		Nice but not too important		Not important		Does not apply to my grade or subject		I don't know	
N	%	N	%	N	%	N	%	N	%
49	60	16	20	4	05	8	10	4	05

11. Counseling is often listed as a part of career education. Who do you think has the primary role for career education counseling?

Counselors		Teachers		Principal		None of these	
N	%	N	%	N	%	N	%
36	32	64	48	10	09	2	01

12. How important would you rate the role of counselors in career education?

Extremely Important		Somewhat Important		Of Average Importance		Not too Important		Not important at all	
N	%	N	%	N	%	N	%	N	%
45	53	30	35	6	07	4	05	-	-

13. How would you rate the quality of help you have received to assist you with the counseling role <u>you</u> have assumed in your classroom?

Extremely helpful		Somewhat helpful		Not too Helpful		No help at all	
N	%	N	%	N	%	N	%
16	21	36	46	11	14	15	19

14. How much does the school staff know about the world of work, manpower needs, and career guidance?

Excellent knowledge		A sufficient amount of knowledge		An adequate amount of knowledge		A marginal amount of knowledge		Very little knowledge	
N	%	N	%	N	%	N	%	N	%
-	-	31	36	34	39	22	25	-	-

15. How would you rate <u>your own</u> knowledge about the world of work, manpower needs, and career guidance?

Excellent Knowledge		A sufficient amount of knowledge		An adequate amount of knowledge		A marginal amount of knowledge		Very little knowledge	
N	%	N	%	N	%	N	%	N	%
4	05	23	28	42	51	13	15	1	01

16. Do your schools do enough in teaching necessary skills to youngsters for entry into the world of work?

Yes, definitely		Probably		Perhaps		Probably not		No, not at all	
N	%	N	%	N	%	N	%	N	%
1	01	27	34	26	33	19	24	6	08

17. Do vocational education and career education have complementary roles?

Yes		No		I don't know	
N	%	N	%	N	%
77	95	-	-	4	05

18. How adequate would you rate the inservice assistance you have received for career education since the project began?

Excellent		Good		Fair		Poor		I have not participated in any career education inservice program since the project began	
N	%	N	%	N	%	N	%	N	%
18	22	30	37	17	21	7	09	10	12

19. In your estimation, how effective has the project's career education staff been this past year in facilitating the overall program?

Excellent		Good		Fair		Poor		Insufficient information to comment	
N	%	N	%	N	%	N	%	N	%
25	31	36	44	12	15	-	-	8	10

20. How effective, in your estimation, has the building administration been this past year in facilitating the overall career education program at your school?

Excellent		Good		Fair		Poor		Insufficient information to comment	
N	%	N	%	N	%	N	%	N	%
23	28	32	39	14	17	7	09	6	07

21. How would you rate the district's commitment to career education (school board, superintendent, others)?

Excellent		Good		Fair		Poor		Insufficient information to comment	
N	%	N	%	N	%	N	%	N	%
39	48	31	38	3	04	1	01	7	09

22. Should career education be required for all students?

Yes		No		I don't know	
N	%	N	%	N	%
54	68	13	16	13	16

23. Do colleges presently do an adequate job of preparing teachers for career education?

Yes, definitely		Probably		To some degree		Not really		I don't know	
N	%	N	%	N	%	N	%	N	%
2	02	4	05	13	15	29	35	36	43

24. Does your school library have sufficient print and non-print materials to support your instructional efforts in career education?

Yes, very adequate		Some, but more are needed		Marginal		No, not at all		I haven't attempted to use any such materials	
N	%	N	%	N	%	N	%	N	%
10	12	46	57	17	21	2	03	6	07

25. Do you feel that the community favors the career education effort of the past year?

Yes, very much		Most favor, but some have reservations		split sentiments		Most are not in favor		No	
N	%	N	%	N	%	N	%	N	%
21	29	40	55	12	16	-	-	-	-

26. Do you feel that the career education program this year has complemented or detracted from the overall school program?

Complemented greatly		Somewhat Complementary		No difference		Somewhat detracting		Detracted greatly	
N	%	N	%	N	%	N	%	N	%
29	37	36	45	6	08	7	09	1	01

27. Do you plan to continue your present efforts in career education next year?

Yes, to an even greater extent		Yes, the same		To a lesser extent		No, I do not plan to repeat		I don't know	
N	%	N	%	N	%	N	%	N	%
39	50	31	40	-	-	2	03	6	07

28. How coordinated and systematic has the career education effort been this year?

Excellent		Good		Pair		Poor		I don't know	
N	%	N	%	N	%	N	%	N	%
8	10	45	56	12	15	5	06	10	13

29. How have the students responded to your instruction in the area of career education?

Better response than with other subjects		Same as other subjects		Uninterested		I don't know	
N	%	N	%	N	%	N	%
31	42	33	45	3	04	7	09

30. In your evaluation of the students you teach, have they shown a great deal of growth this year in career education?

Yes, definitely		Probably		Uncertain		Disappointingly little		I have not collected this type of information	
N	%	N	%	N	%	N	%	N	%
13	17	31	40	11	14	2	03	20	26

31. Overall, has the adequacy of facilities and materials been a significant factor in the success of the project?

Yes, adequate facilities and materials have aided the project		No more effect than usual		Poor facilities and materials have detracted from the project's success	
N	%	N	%	N	%
54	68	17	22	8	10

the remaining 50 percent felt that the present CEP effort was adequate.

Interestingly, item #5 showed that 85 percent of staff members felt that career education is needed by all students rather than by any specialized category. From this item it is apparent that local staff felt the goals and objectives of career education sufficiently broad to encompass the needs of all students.

The next several questions dealt with the needs of youngsters. Staff response was varied with the exception of item #7 wherein most staff (89 percent) felt strongly that they were able to identify potential dropouts before they physically leave school. Despite this, only 55 percent of staff indicated they had knowledge that their school was presently making an effort to identify potential dropouts for special help (see item #8).

While item #12 demonstrated that staff opined counselors to be an important element in career education, several other items demonstrated that staff had mixed views as to the effectiveness and nature of the counseling component related to the CEP project. Item #11 did show that most frequently staff saw the primary role for counseling as belonging to the classroom teacher.

Item #16 questioned whether schools do enough in teaching necessary skills to youngsters for entry into the world of work. Staff response was mixed with only one staff member feeling that the school presently does a sufficient job of teaching such skills. The importance of vocational education and career education in having complementary roles was stressed with the response to item #17 as 95 percent of staff indicated they do have complementary roles.

Items #18, #19, and #20 went directly to the issue of the project's effectiveness in the eyes of teachers of the three school districts. Response was varied to the question concerning the effectiveness of inservice assistance (item #18) Item #19 showed that the preponderant majority of staff gave positive marks to the career education staff in facilitating the overall program during the past school year.

Item #25 shows that staff feels the local community as being essentially positive in regard to career education. Item #26 represented an important item in that it questioned whether career education has complemented or detracted from the overall school program this year. Notably, 37 percent indicated that it had complemented greatly the existing program while 45 percent found the CEP program somewhat

complementary. Only 9 percent found the program somewhat detracting and one staff member thought that the CEP program had greatly detracted from the school program.

The question of whether staff would continue career education without Federal funding was asked in question #27 and 50 percent of staff indicated that they would carry on to an even greater extent next year, while 40 percent indicated that they would give the same amount of effort next year. Only 3 percent indicated they would not repeat and 7 percent indicated that they had not yet made up their minds.

Staff had mixed views as to the effectiveness of coordination for the career education effort this past year (item #28). Item #29 illustrated that 42 percent of the staff felt they had better student response with career education than with other subjects. Forty-five percent of the staff felt the response was the same as with other subjects. Only 4 percent of staff felt that students were uninterested in career education. Staff seemed quite uncertain as to student performance in career education as illustrated through their own classroom evaluation. Perhaps item #30 does nothing but show that teachers did relatively little formal evaluation of their career education effort this past year.

Additional comments or concerns were solicited in the remainder of the questionnaire and a number of staff responded with some of the concerns indicated in the paraphrased statements as follows:

-Career education should not be judged by an evaluator this year because this year has been merely a foundation. Future efforts will be much better.

-Our goals for career education have been too broad. We had too little time and I am generally not satisfied with what I have done.

-There has been too little planning time.

-The inservice program could have had considerable improvement.

-This program has been a terrific asset to the local community and we only wish we had started this much earlier.

-I didn't participate very much because no one asked me to.

-The project could have had better coordination.

-Teachers spent too much on career education and neglected writing and reading skills.

-I am unhappy about the salaries paid to CEP staff members and would have liked to have that money for my classroom.

-Career education will fade just as soon as the project is over.

-I won't make up my mind until I have read this year's evaluation report.

In an earlier section of this report, it was stated that each person who evaluates sees a problem from a different perspective. It is apparent from the foregoing that staff does not speak with a single voice regarding career education, but that essentially the majority of staff did find career education to be a highly profitable and worthwhile effort and that most viewed the CEP program with a high degree of support and positive regard.

D. "Strengths and Weaknesses" Questionnaire. An additional formative questionnaire was administered during the spring of the 1973-74 school year by the project director. The questionnaire consisted simply of two open-ended questions concerning staff perceptions relative to career education's strengths and weaknesses. Approximately 80 percent of staff members returned the questionnaire.

When asked to indicate problem areas seen by staff in implementing career education, the following represented some of the more common concerns:

Impetus for career education must come from staff rather than from administration if it is to be successful.

Special staff orientation sessions and inservice programs are needed to update staff in career education.

There is just simply too much to cover in career education and better definition of scope and sequence is needed.

Planning time must be made available to teachers in order for career education to work.

The community must be informed as to the purpose of career education.

Career education is made more difficult by large classes.

Career education is more action oriented than other programs and must overcome teacher inertia since it does not depend upon textbooks.

The cost of such a program is too high.

Project funds have little effect at the classroom level.

Career education needs to establish priorities rather than attempting to be "all things to all people."

The other side of the coin was seen when staff was asked to relate the strengths of career education. They responded as follows:

There is a high student interest in career education.

There is a great deal of relevancy in career education.

A high level of motivation can be generated with this approach.

The program fosters improved attitudes concerning all work.

It develops a feeling of pride on the part of a youngster.

It is an enjoyable area for teachers and students alike.

Career education creates very good public relations with the community.

It may be the only means by which schools can keep up with a rapidly changing society.

It shows students that there are more options open to them other than college.

It can unite a staff and provide continuity to a curriculum.

It fosters mastery of economic concepts which have heretofore been difficult to teach.

It provides kids with alternatives.

It helps students realize that they are in charge of their own destiny.

It allows students to comprehend skill and training requirements for various types of work.

It creates a strong sense of cooperation between the school and resource persons who participate in the project.

It can be the focal point around which an entire school district can be redirected and a new purpose for education can result.

Students learn that there is dignity in all work and that people are more similar than they are different.

It will allow life decision to be made in a more considered manner than in the past.

E. Assessment of Community Involvement. Certainly one of the key elements in the CEP program was the degree of citizen involvement found in the three communities of Cashmere, Peshastin, and Dryden. The best indication of this is simply the number of local persons who served as resource to the CEP program. Virtually every local occupation was represented from the agricultural, business, labor industry, and governmental sectors. Nearly 100 citizens from the local communities were involved as "resource persons" representing some of the following occupations and businesses:

Meat packer
Helicopter pilot
Dept. of Health & Welfare employee
Druggist
Military representatives
Home economist
Tree grower
Clergy
Ecologist
College professor
Highway patrolman
State legislator
Highway construction worker
Home upholstery shop owner
Professional musician
Local sales clerks
Tractor equipment operator
Forest Service employee
Employment agency official
Fruit packers
Radio announcer
Orchardists
Artist
Sewage treatment employee
Karate and martial arts teacher
Fireman
Family planning counselor
Landscape architect
Beauty salon operator
Stock broker
Candy manufacturer
Instrument repairman
Grocer
Banker
Police
and others . . .

In many other ways, the CEP program depended upon community involvement. Many activities of the project were held out of the classroom and in the community. Although the communities in question were small by any standards, it is obvious that in even small communities there are tremendous resources when one considers the collective backgrounds and experiences of citizens residing in the local community.

Other aspects of community involvement occurred throughout the project and should be noted. Notable example of this involvement was the Citizen Lay Advisory Committee for the career education project. Information regarding the formation of this committee was circulated to service clubs, labor groups, civic organizations, agricultural associations, etc. From the resulting applications, nine persons were selected to represent a broad scope of the community: male and female, labor, agricultural, housewife, businessman, governmental employees, etc. The advisory committee was formed and the first meeting was held on August 29, 1973. Meetings were then held monthly thereafter and will continue next year during the 1974-75 school year. The general function of the committee was to act in an advisory capacity for the development of the career education program. Specifically, the committee served the following functions: (1) assisted in public understanding of the career education concept by acting as a liaison between school and community, (2) assisted staff by suggesting ways in which career education could be included into the established curriculum, (3) suggested places of employment where students could observe first-hand on-the-job performance, (4) suggested persons to be used as resource persons for classroom presentation. Information and guidelines for the Citizen Lay Advisory Committee were reproduced in a booklet which received notoriety in the McGraw-Hill publication, Career Education News.

Community involvement extended beyond the Advisory Committee into such groups as Cashmere Senior Citizens, Chamber of Commerce, private business, city and county government, local service clubs, and other groups including patrons of numerous junior business projects, spaghetti feeds, and class projects. The support of the community for the concept of career education has been excellent in the case of the CEP program. The community sees the value of career education as aiding the existing educational program and thereby as being of benefit to youngsters. Apart from the degree to which community involvement occurred, assessment of the quality of this involvement was the domain of the project director. It should be noted that as the third-party evaluator has interviewed a number of local persons relative to community involvement, the positive outcome of this aspect

of the program seemed well substantiated and indeed community involvement has been a highly favorable aspect of the CEP program.

F. Assessment of Dissemination. Objective III of the project proposal indicated that the project was "to disseminate program information, materials, and evaluative findings to agencies throughout the State of Washington." The CEP staff has made a total of 54 presentations to school systems, colleges, universities, workshops, and civic groups outside the Cashmere, Peshastin-Dryden area. These presentations have directly reached over 2400 persons. Additionally, the project has entertained visitors from 45 school districts from the State of Washington and numerous other persons from other educational agencies. To date, there have been several hunderd educators visit the project during the past school year.

The project has seven publications which have been made available to the public. Among publications are the following: Advisory Committee for Career Education; Career Education, What It Is, Who It Is For, Why It Is Important; The Community College and Career Education; Career Education Curriculum Guide K-5; Career Education Curriculum Guide 6-8; Career Education Curriculum Guide Senior High School, 9-12; Evaluation Report for the Cashmere, Peshastin-Dryden Career Education Project.

As was noted previously, the first publication, Advisory Committee for Career Education, has received national exposure through publication. The community college booklet mentioned above has been distributed to every community college campus in the State and the career education pamphlet (the second publication listed above) has been sent to every first-class school district in the State.

Beyond this, preliminary curricular materials have been requested and sent to approximately 200 school districts in the United States. Other handout materials have also been sent or presented to persons visiting the project or handed out at presentations made to groups away from the project.

In addition to the above, CEP staff members this past year participated in six WAVE workshops held around the State of Washington. Workshops were sponsored by the Washington State Coordinating Council for Occupational Education and were evaluated by CCOE's state guidance director, Mr. Ron Berg. The WAVE workshops (What About Vocational Educaltion?) were held throughout the year and provided a format through which various state career education projects could be disseminated to workshop participants. Each

workshop had approximately 30 persons in attendance and various State projects and ideas were presented as the content of each workshop. The following, then, is a summary of the evaluation conducted by the Washington State Coordinating Council for Occupational Education. Participants were asked to rate each project in terms of what had been most helpful to them. Figure 7 shows the mean score of grading as to which program presented in WAVE had been most effective in terms of presentation as viewed by conference participants.

From Figure 7, it is apparent that the project very satisfactorily conducted a dissemination effort this past year in accordance with the expectations enumerated in the project's proposal.

G. Costs. In determining the costs of transporting a curricular program such as the CEP program only rough approximations can be made in that this type of estimation is highly subjective and would, of course, depend upon the particular situation of each district wishing to implement career education. With an enrollment of approximately 1550 students, the average cost per pupil for the CEP program was $89.49. Since the program was also a research and development project, however, it would be more meaningful to look at the various program components in determining an approximation of cost for transporting various operational elements.

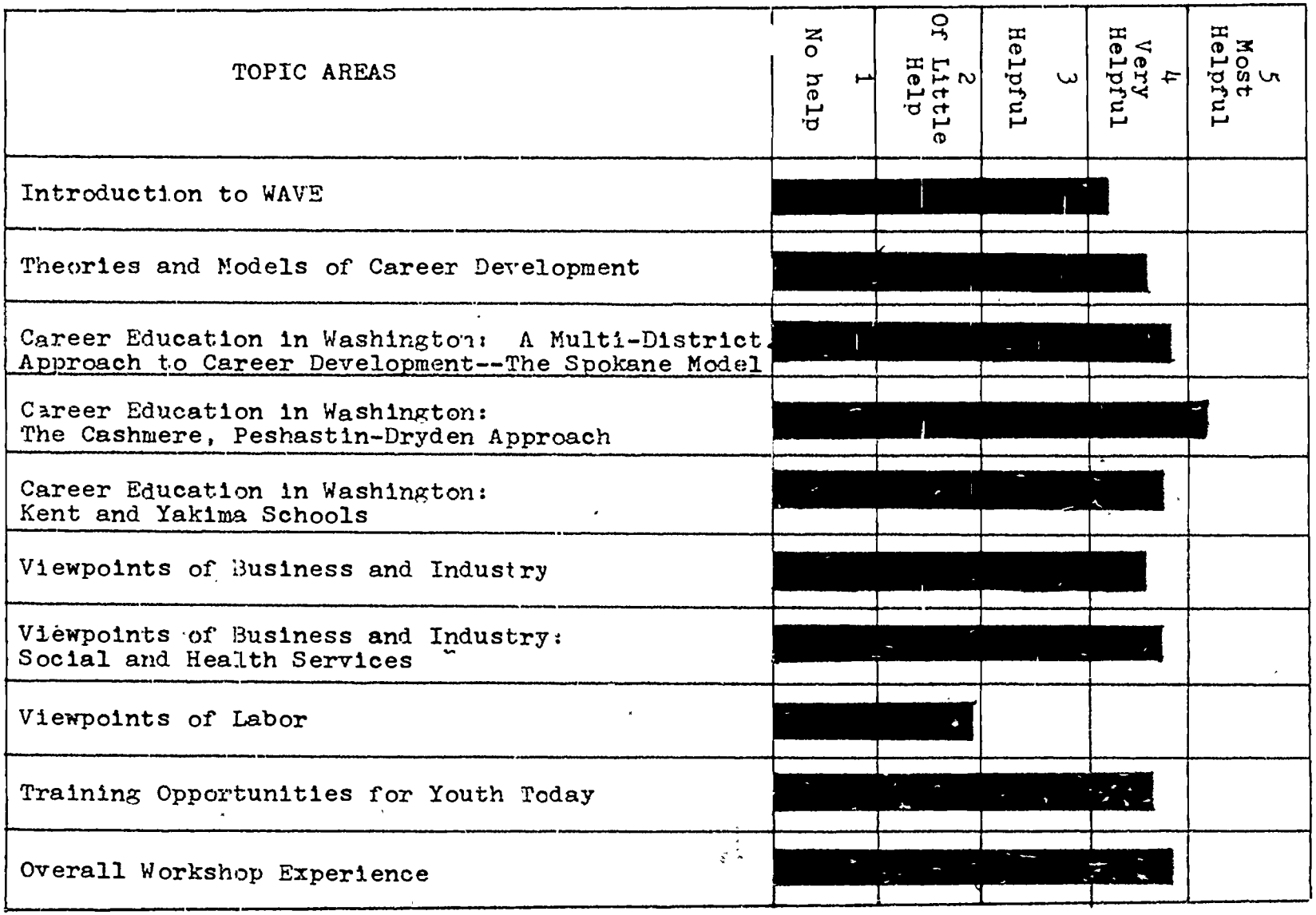
The project's curriculum component was budgeted to include personnel costs, travel costs, supplies and equipment, communication costs, and services such as the inservice program. Total cost for this component was budgeted at $44,562.00 and figured to an average per-pupil expenditure of $28.75. Of this, however, personnel costs provided for approximately half of the expenditure. In looking at the problem of transportability, one would definitely need to determine his or her personnel needs and only then could the cost of a career education program be approximated.

Component B of the CEP program was the guidance and counseling component and budgeted under this were counseling personnel, travel, supplies and materials, communications, and services. The total budgeted for this component was $32,742.00 which represented a per-pupil expenditure of $21.12. Again, roughly half of the expenditure for the guidance and counseling component was for personnel.

Component C was project administration. This budget item included personnel, travel, supplies and materials, communications, and services. Total cost for this component was $54,498.00 which represented a per-pupil expenditure of $35.16. Of this amount, 89 percent went to project personnel.

Figure 7

MEAN SCORE OF EACH TOPIC AREA AS RATED BY PARTICIPANTS



The administration of the CEP program was necessarily a heavy cost item in that the project was a developmental program with responsibilities and purposes at all levels of the project and beyond to the State level. It also should be noted that project administrators were contracted for a 16-month period including a planning period which took place prior to the beginning of the 1973-74 school year. As the district sought to implement career education, it would be problematical as to whether or not such a proportion of funds should be allocated for administration. Many localities might perhaps choose to implement such a program with their existing administration or by hiring only minimal assistance. Again, estimation of cost in transportability would be contingent upon the needs of the implementing school district.

Component D was the evaluation component budgeted at $6,906.00 which represented a per-pupil expenditure of $4.46. Evaluation was contracted to a third-party evaluator and the budget provided for services, benefits, and travel.

It should also be noted that "in-kind" services were budgeted by the local school district for such services as space rental, office furniture, release time for local district employees, employee benefits, administration coordinator, ISD consultant, ISD migrant education specialist, etc. Local "in-kind" contributions were $22,085.00 for a total per-pupil expenditure of $14.25. It should also be stated that "in-kind" contributions are usually approximated.

A final note on cost is that each of the five schools participating in the CEP program were given discretionary judgment over the budget for supplies for each of the buildings. Figure 8 below shows the amount budgeted for supplies along with the percent of students housed at each school location and the amount budgeted for building use.

Figure 8
BUDGET FOR SUPPLIES

SCHOOL:			
Vale	459	28.7%	$ 3,157.00
Middle School	282	17.6%	1,936.00
High School	367	23.0%	2,530.00
High School (PD)	170	10.7%	1,177.00
Peshastin-Dryden K-8	320	20.0%	2,200.00
			$11,000.00

IV. SUMMATIVE ASSESSMENT

The previous chapter dealt with "what influenced the results of the project?" The term "summative assessment" refers then to "what was accomplished in the project?" The most useful criteria in looking at what was intended, what influenced the results, and what were the results, is the congruence between a project's intents and outcomes. More in keeping with traditional research and development, summative assessment seeks to measure student attitudes and knowledge relative to the project's intents.

One important limitation should be noted at the onset in that as was mentioned earlier in this report, the project was late in developing its final curricular materials and concomitantly had a variety of diverse objectives with rather global intents. Despite the fact that these may be acceptable for a developmental program's first year of operation, it nevertheless poses a serious evaluation limitation. Due to the lack of specificity in both intent and design for the CEP program, evaluation of the attainment of specific objectives must be by approximation. In other words, rather than measuring specific behaviors delineated in the project's goals and objectives, the evaluation process seeks to establish broad trends and behaviors as an approximation of the degree to which project objectives were attained.

Since the project's broad goals and objectives as delineated in the project proposal call for growth in various areas of cognitive and affective development, a testing program was designed the the evaluator to establish various trend lines and indicators of accomplishment. Another design limitation had to do with the fact that since the project was developmental and funded for only a single year's operation, use of pre-test measures was made impossible as the program was yet to be developed. Instead, comparative measures used in the summative portion of the study were necessarily of a post-hoc design utilizing randomly selected experimental and control groups.

For the purposes of the study, the control group was comprised of students from the Selah School District in Selah, Washington. The Selah School District, located near Yakima, has several characteristics in common with the Cashmere, Peshastin-Dryden area. The Selah schools service an agricultural community which is heavily involved with the fruit industry and is noted for its apples, pears, and various other agricultural commodities. As in Cashmere, the Selah community has several fruit packing plants and has

various small businesses in the community of a comparable nature to those found in Cashmere. Apart from the similarities, one notable difference exists between the communities in question in that Selah is situated adjacent to Yakima, Washington, which has a population of approximately 50,000 people. The Selah community has approximately twice as many students as does the Cashmere community and it is definitely less isolated in location.

One final limitation in the summative portion of the study pertains to the lack of standardized criterion measures available to the researcher as an indicator of career education attainment. As a consequence of this limitation, the evaluator designed most of the instrumentation which follows. In each instance, various measures of reliability were obtained and reliability was sufficiently high with each instrument to warrant use. Additionally, construct validity should be notably strong in that for every grade level tested, consultation between the evaluator and project staff was made prior to the testing program and whenever possible project materials served as the base of construct for specific instrumentation.

Testing was conducted at each level from K-12 and the chapter is organized according to the types of questions asked and the instrumentation used. This format roughly follows grade levels sequencing from K-12.

A. Career Awareness at the Primary Grades. In designing instrumentation for use at the primary grades, the evaluator sought a methodology which would not contain the disadvantages of a paper-and-pencil format. Obviously, the lack of mastery of reading skills with pupils of this age group is a serious if not insurmountable burden to the researcher in designing a paper-and-pencil test.

Instead of a paper-and-pencil format, then, a pictoral depiction of concepts in an individual test instrument utilizing an interview technique was designed. It should be added that the evaluator presented a paper on this technique at the American Educational Research Association Convention at New Orleans in 1973. The technique involved construction of a career awareness pictoral inventory comprised of five sections including the following:

Part A: Recognizing Occupations (all levels)
Part B: Expanded Awareness (all levels)
Part C: Parents' Occupations (all levels)
Part D: Family, Home, and School (Kindergarten and first grade)
Part D: Matching Tools and Symbols With Occupations (Second and Third Grade)
Part E: Family, Home, and School (Second and Third Grade)

For each grade level, items were chosen from objectives contained in the National Standards for Career Education[7] and endorsed by the CEP program.

Tests were administered on an individual basis by a teams comprised of two persons. Each testing team consisted of the "questioner," whose job was to ask the questions contained in the examiner's booklet. The second member of the team was the "recorder," whose job was to record the responses of primary grade students on a provided score sheet. In all, six testing teams were used. Teams were selected from college seniors majoring in elementary education at Central Washington State College. Prior to test administration, each team conducted trial sessions at the Hebeler campus laboratory school at Central Washington State College. At this time, inter-rater reliability coefficients were established for the various teams over common observations. In each instance, an inter-rater reliability coefficient of .85 or greater was obtained for those selected to do the necessary recording.

There was a separate testing package prepared for each of the four primary grades (kindergarten through third grade). Pictoral depictions of various occupations were drawn by a professional artist. Depictions were simple and concepts associated with each occupation provided strong inferential clues to respondents. The same testing teams were used in both school districts so that those who tested kindergarten students at Cashmere and Peshastin-Dryden also tested kindergarten students at Selah. In this way, reliability in test presentations was intended.

A sample of 30 students at each grade level at each location (experimental group and control group) was used for test purposes. Subjects were selected at random from class rosters through the use of a table of random numbers. Each child was tested individually. One member of the examining team walked to the student's room and asked the teacher for permission to take that child. Each child was then escorted to a suitable room provided at each school location for test purposes. In kindergarten and first grade usually the child held hands with the member of the test team until they reached the testing room. In all instances, rooms were completely turned over for test purposes and no distractions, noise, or interference occurred during the testing session. The examiner introduced herself and attempted to put each child at ease with a friendly question or two about what the child was wearing or the type of activity he or she was doing in school that day. As soon as the child was at ease, the

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[7] Ibid.

test session was begun and the standardized instructions as contained in the examiner's booklet were followed as consistently as possible.

KINDERGARTEN LEVEL RESULTS

Part A. Part A of the kindergarten test consisted of a pictoral depiction of various school workers. The following occupations were depicted: teacher, janitor, principal, secretary, counselor, cook, bus driver, nurse, and housewife or homemaker. All items depicted various school occupations with the exception of item #9 which depicted a homemaker. Each child was questioned by the examiner as follows:

> "This is a picture of a woman doing a job at a school. What are people called who do this job?"
>
> (if paraphrase is needed)
>
> "What is the name of the job?"
>
> . . . If response is correct, say, "Yes, (child's name), that's right. The woman is a teacher."
>
> . . . If response is not correct, say, "(Child's name), this person is a teacher."

This technique was repeated for each item.

Table 2 shows the results of Part A: Identification of Occupational Roles for the Kindergarten Level. Note that the sample at each school district was selected at random and consisted of 30 kindergarteners. Test administrations were conducted for the experimental and control groups during the same week in the spring of 1974. Analysis consisted of a Chi Square contingency table based upon the frequency of response for three categories, "Yes," "I don't know," and "Other." A Chi Square of 5.99 indicates significance at the .05 level of significance with two degrees of freedom. Only in the instance of item #6 (cook) was there a significant difference in the obtained Chi Square between the experimental and control groups. Inferentially, however, there was a difference in the pattern of response between the experimental and control groups as can be seen upon examining Table 2.

Part B. The second portion of the kindergarten test sought to measure expanded awareness on the part of the child relative to selected occupational depictions. Rather than laboriously replicate results in their entirety, this

Table 2

RESULTS OF THE CAREER AWARENESS PICTORAL INVENTORY: A TEST OF OCCUPATIONAL AWARENESS FOR THE PRIMARY GRADES

Chi Square and Frequency of Response
Part A: Identification of Occupational Roles

Kindergarten

	Yes	I don't know	Other	
Item 1 (Teacher)				
Cashmere, Peshastin-Dryden (N=30)	19	5	6	$x^2 = 3.14$
Selah (N=30)	19	9	2	
Item 2 (Janitor)				
Cashmere, Peshastin-Dryden	12	7	11	$x^2 = 4.27$
Selah	7	4	19	
Item 3 (Principal)				
Cashmere, Peshastin-Dryden	11	12	7	$x^2 = 2.17$
Selah	11	16	3	
Item 4 (Secretary)				
Cashmere, Peshastin-Dryden	8	13	9	$x^2 = 2.46$
Selah	4	12	14	
Item 5 (Counselor)				
Cashmere, Peshastin-Dryden	0	15	15	$x^2 = \phi$
Selah	0	15	15	

x^2 computed at 2 degrees of freedom
x^2 of 4.60 significant at the .10 level of significance
x^2 of 5.99 significant at the .05 level of significance

	Yes	I don't know	Other	
Item 6 (Cook)				
Cashmere, Peshastin-Dryden	21	1	8	x^2=13.14
Selah	7	3	20	
Item 7 (Bus Driver)				
Cashmere, Peshastin-Dryden	22	0	8	x^2= 1.34
Selah	16	1	13	
Item 8 (Nurse)				
Cashmere, Peshastin-Dryden	22	0	8	x^2= 2.28
Selah	22	2	6	
Item 9 (Mother, housewife, homemaker)				
Cashmere, Peshastin-Dryden	5	0	25	x^2= 1.88
Selah	9	5	16	

report will highlight only those instances where a substantial difference was observed between performance of the experimental and control group.

Under expanded awareness, item #5 asked, "How does the teacher know if she does a good job?" Fifty-three percent of the Selah kindergarteners responded by saying, "I don't know." In all, there were five ways cited by Selah kindergarteners in which teachers know whether they had done a good job or not. Considerably more awareness was demonstrated on this item by the Cashmere, Peshastin-Dryden youngsters as only three pupils responded by stating "I don't know" (10 percent). Additionally, youngsters from the experimental group cited 11 different ways in which teachers would know whether they had done a good job.

Because of a desire to hold down the length of time needed to test each child, it was decided that questions concerning expanded awareness would be only asked concerning the job of teachers, rather than to seek answers to expanded awareness on each of the occupations depicted in Part A. It should be noted that those wishing to do further research in this area would perhaps find fertile ground in pursuing this investigation in that there does appear conceptual differences in favor of those who have received instruction in career awareness regarding indicators of task satisfaction in the adult working world. This represents a subject area which apparently has been well covered in the CEP program at the kindergarten level.

Part C: Parents' Occupations. Part C consisted of a number of questions pertaining to awareness of parental occupations. Item #1 in this section asked, "Do you know what your father does in his job?" Fifty-six percent of the children in the control group (Selah) did not know their father's occupation, whereas only 13 percent of the experimental group could not correctly answer this question.

Incidentally, children were asked to specify the jobs done by their fathers. The answer was counted incorrect if the child was unable to give any details. An example of this scoring decision was when a child would respond by saying, "My father works in Yakima." Upon further questioning, it would be determined that the child could give no specifics about the job, only that his "father works in Yakima." Thus, this response would be counted as an incorrect answer.

Item #3 questioned whether or not kindergarteners could tell whether their father's job helped people. Eighty percent of the children in the control group could not say

how their father's job helped people. Subjects in the experimental group, however, showed considerable awareness pertaining to this item as only 27 percent failed to respond to this question. Children from the Cashmere, Peshastin-Dryden schools cited numerous ways in which jobs were helping and, thus responding, they related many different aspects of job performance, job satisfaction, economic awareness, and aesthetic virtues. All of the aforementioned concepts represent abstractions which children in the control group were unable to cite.

Item #7 queried as to whether or not the children knew what their mothers do in their jobs. Again, considerable difference in awareness was demonstrated between the experimental and control groups as 80 percent of the control group responded by saying, "I don't know" or "My mother doesn't work!" In contrast, kindergarteners in the experimental group demonstrated considerably more awareness in this area as only 23 percent of the sample responded by saying "I don't know" or "My mother doesn't work!"

Item #9 asked, "How does your mother's job help people?" It was noted responses of the experimental group were more given to listing specific details than duties of a mother's job, while subjects in the control group (Selah) dealt more with generalizations and affective statements such as "she cares for people" or "she loves us." Item #10 asked, "Why is her job an important job?" Again, responses of the experimental group indicated more variety in answers as ten different types of reasons were given while with the control group only two types of answers were received.

Although the experimental group usually had many more reasons or specific details when pressed for answers, some responses were quite humorous. An example of this was frequently found in response to item #12 which asked, "Why does your mother work?" Frequently, answers were such as the following: "We would all die if she didn't!" "We would all starve to death!" etc.

Part D. Related to the child's family, home and school, item #1 was centered around a picture of a family. Children were asked hypothetically, "How do members of this family help each other?" Again, only 37 percent of the control group could cite ways in which a family such as this would help one another. This is contrasted to only 13 percent of the experimental group who responded by stating "I don't know." Answers for the experimental group were more varied and they were specific in citing types of tasks done at home. It was apparent that members of the experimental group viewed such tasks as "work."

Item #3 in this section asked, "What jobs do you have at home?" Eighty percent of the control group said they had jobs, while 100 percent of the experimental group indicated that they had jobs at home. Apparently a different definition was in operation between both groups as to what constitutes a "job." Finally, item #6 in this section asked, "What jobs would you like to have some day when you are older?" Children in the control group cited ten occupational categories. Five children, however, indicated they planned sports careers and several gave impractical occupations such as "ride a bike" or "play records." Kindergarteners in the experimental group, however, cited 13 occupational categories with only child listing a sports career. Notably, occupations given by the experimental group were much more practical than those cited by a control group.

In summary, certainly results of kindergarten level testing would have to be termed inconclusive. There were several strong indications, however, that children in the experimental group (Cashmere and Peshastin-Dryden) had benefited from the CEP program as obviously they possessed more awareness relative to certain areas of career awareness. Although this was demonstrated in some portions of the test to a greater degree than in others, it remains notable that in no area did children in the control group surpass the experimental group in response to any item. If nothing else, results of the kindergarten level test show that teachers did emphasize a number of points in the conduct of the career education program that are apparently not emphasized in a traditional or standard kindergarten classroom.

FIRST GRADE LEVEL RESULTS

Part A. The format and method of administration for the first grade level test was identical to that previously described for the kindergarten level, part A. Occupations depicted were as follows: teacher, janitor, principal, secretary, counselor, cook, bus driver, nurse, mother (housewife), fireman, baker, dentist, policeman and truck driver. Items 1 through 8 depicted school workers while items 9 through 13 depicted several common occupations from the community.

Table 3 shows the results of Part A: Identification of Occupational Roles for the First Grade Level. Again, testing consisted of randomly selected students in both the experimental group (Cashmere, Peshastin-Dryden) and the control group (Selah). The N of each group was 30 and testing took place the same week in the spring of 1974. Analysis utilized a Chi Square Contingency Table based upon the frequency of response for three categories, "Yes," "I don't know," and "Other."

Table 3

RESULTS OF THE CAREER AWARENESS PICTORAL INVENTORY: A TEST OF OCCUPATIONAL AWARENESS FOR THE PRIMARY GRADES

Chi Square and Frequency of Response

Part A: Identification of Occupational Roles

First Grade

	Yes	I don't know	Other	
Item 1 (Teacher)				
Cashmere, Peshastin-Dryden (N=30)	24	3	3	x^2= 0.16
Selah (N=30)	23	4	3	
Item 2 (Janitor)				
Cashmere, Peshastin-Dryden	23	5	2	x^2= 4.48
Selah	19	3	8	
Item 3 (Principal)				
Cashmere, Peshastin-Dryden	16	11	3	x^2= 0.37
Selah	17	9	4	
Item 4 (Secretary)				
Cashmere, Peshastin-Dryden	16	10	4	x^2= 8.73
Selah	6	12	12	
Item 5 (Counselor)				
Cashmere, Peshastin-Dryden	0	20	10	x^2= 1.36
Selah	0	24	6	

x^2 computed at 2 degrees of freedom
x^2 of 4.60 significant at the .10 level of significance
x^2 of 5.99 significant at the .05 level of significance

	Yes	I don't know	Other	
Item 6 (Cook)				
Cashmere, Peshastin-Dryden	20	1	9	$x^2 = 6.91$
Selah	11	6	13	
Item 7 (Bus Driver)				
Cashmere, Peshastin-Dryden	28	0	2	$x^2 = 6.93$
Selah	20	2	8	
Item 8 (Nurse)				
Cashmere, Peshastin-Dryden	24	1	5	$x^2 = 0.85$
Selah	25	2	3	
Item 9 (Mother, housewife, homemaker)				
Cashmere, Peshastin-Dryden	8	6	16	$x^2 = 3.61$
Selah	15	5	10	
Item 10 (Fireman)				
Cashmere, Peshastin-Dryden	30	0	0	$x^2 = 4.28$
Selah	26	1	3	
Item 11 (Baker)				
Cashmere, Peshastin-Dryden	16	1	13	$x^2 = 10.45$
Selah	11	11	8	
Item 12 (Dentist)				
Cashmere, Peshastin-Dryden	29	0	1	$x^2 = 4.27$
Selah	24	2	4	
Item 13Policeman and Truck Driver)				
Cashmere, Peshastin-Dryden	24	1	5	$x^2 = 7.85$
Selah	15	8	7	

A Chi Square value of 5.99 is significant at the .05 level of significance with 2 degrees of freedom. As can be observed in Table 3, a significant difference between the experimental and control groups were found on several items as follows: item 4, secretary (Chi Square =8.73); Item 6, cook (Chi Square =6.91); item 7, Bus Driver (Chi Square = 6.93); item 11, Baker (Chi Square = 10.45); and item 13, Policeman and Truck Driver (Chi Square = 7.85). There exists a significant difference in the pattern of response between the experimental and control groups. It is assumed, therefore, that the CEP program, in dealing with various aspects of career awareness, contributed to this difference. In each instance of a significant Chi Square, it was the experimental group (Cashmere, Peshastin-Dryden) who out-performed the control group.

Part B. Technique and methodology for Part B: Expanded Awareness was identical to that described under Part B of the kindergarten test. A measure of student awareness relative to the occupation of teaching was sought with six types of questions. Only those questions will be reported here that yielded a substantial difference in the experimental and control groups. Item #1 asked, "When you see teachers working on their jobs, what kinds of things do you see them doing?" Responses by subjects in the experimental group indicated considerably more awareness of the various tasks necessary in doing the job of teaching. The experimental group described eleven different types of tasks including several that were done without children present, such as correcting homework and planning lessons. Children in the control group, however, cited only six different types of activities constituting the job of teaching. All activities cited were those directly visible by children rather than those occurring after school hours or those preparatory to classroom instruction.

Item #2 asked, "Can you tell me how this job helps our school?" Eighty-three percent of those in the experimental group could describe in some detail how teaching is a helping role, whereas only 66 percent of those in the control group could respond in a similar manner.

Item #5 dealt with how a teacher would know if she is doing a good job. Answers by children in the experimental group seemed more descriptive as 11 different types of indicators were mentioned, while only four types of indicators were mentioned by children in the control group. While only 13 percent of the experimental group could not answer this question, 33 percent of the control group failed to respond.

Item #6 asked, "Would you like to do the teacher's job?" Interestingly, only 20 percent of the control group indicated that "no" they would not like to do the teacher's job, whereas, exactly 50 percent of the experimental group (Cashmere, Peshastin-Dryden) indicated they would not like to do the teacher's job. It is merely subjective to try to explain why such a difference in attitude was found relative to the teacher's job, except for the possibility that children in the experimental group seemed much more aware of job frustrations as well as positive aspects of an occupation.

Part C: Parents' Occupations. As with the kindergarten test, Part C consisted of a number of questions pertaining to awareness of parental occupations. Item #1 sought to measure how many of the children knew what their father's occupation happened to be. Again, responses were counted correct only when the child could give details of the job rather than allowing a correct answer to such a response as "my father works in Wenatchee." Interviewers sought to expand such a response into more information, but when such information was lacking, an incorrect response was marked on the score sheet. Fifty-seven percent of the children in the control group responded with "no" or "I don't know" while children in the experimental group fared somewhat better as only 40 percent responded by saying "no" or "I don't know."

Item #3 asked for specifics on how the father's job would help people. Out of the 13 children who knew their father's occupation from the control group (see previous paragraph), only seven could elaborate as to how their father's job helps people. This was in marked contrast to the pattern for the experimental group, as out of the 18 children who knew their father's occupations, 16 could go on to elaborate how their father's job was of help to people. Item #5 in this series asked children, "Does your father like his job." Approximately one half of the children in the control group didn't know the answer to this question, while all of the children in the experimental group indicated "yes" their father indeed did like his job.

Question #6 asked "why does your father work?" Response to this question was quite similar for both groups as, of course, "money" was cited as the most common answer. However, a number of children in the experimental group also cited more abstract reasons in their responses.

Item #7 pursued the previous line of questioning except that questions pertained to the mother rather than to the father. Response to item #7 indicated that 40 percent of the children in the control group did not consider their mother to have a job, while only 23 percent of the children in the

experimental group considered their mother not to have a job. Response to item #8 again showed considerably more awareness on the part of the children who had received career awareness instruction. The question asked, "What does your mother do on her job?" Responses were much more extensive as children in the experimental group cited 30 types of tasks while children in the control group only cited 19 different types of tasks.

Part D. Part D of the first grade test pertained to family, home, and school. Responses pertained to a pictoral depiction of a hypothetical family in which children were asked to tell how members of the family helped each other. Forty percent of the control group responded by saying, "I don't know," while only ten percent of the experimental group responded in a like manner. Item #6 asked, "What jobs would you like to have some day when you are older?" Children in the experimental group cited 15 different types of occupations while children in the control group cited 12 different types of occupations. Less disparity was seen on this item than had been indicated in response to the same question for the kindergarten level.

Although the first grade test indicated significant differences in a number of areas between the responses of children in the experimental group versus those in the control group, there also appeared a difference in response from grade level to grade level as answers to some of the same questions yielded entirely different types of answers and response patterns between kindergarteners and first graders as exemplified in the last item of Part D. Certainly the most fertile area of this aspect of the investigation pertained to the identification of pictoral depictions as found in Part A. The number of instances in which a significant difference existed between the experimental and control group in Part A should be noted by the reader. The evaluator must conclude that since all differences were in favor of the CEP project, credit again must be given to the instructional component of "career awareness" which sought to deal with a subject area not traditionally covered in the first grade curriculum.

SECOND GRADE LEVEL RESULTS

Part A. Again, similar to the format discussed in the previous two tests (kindergarten and first grade levels), a like format was employed in testing career awareness for the second grade. Part A tested the following occupations: nurse, postman or mailman, store clerk, cashier or checker, secretary, carpenter, scientist, janitor or custodian, drug-

gist or pharmacist, telephone lineman or repairman, mechanic or auto mechanic, and baker. Table 4 indicates the obtained Chi Square for the experimental and control groups. All subjects were randomly selected and testing occurred during the same week during the spring of 1974. From Table 4, it can be seen that the following occupations yielded a significant difference between the experimental and control group: item #1, nurse (Chi Square = 6.67); item #8, janitor or cusotdian (Chi Square = 19.95); and item #10, telephone lineman (Chi Square = 6.69). Were one to utilize the .10 level of significance, several additional items would be included as having yielded a difference between the experimental and control groups.

Part B. Part B sought to measure expanded awareness on a single chosen occupation (secretary). In contrast to differences found in this area at the kindergarten and first grade levels, this area of questioning represented an unfertile line of inquiry as there failed to emerge a single item in which a substantial difference was found between the experimental and control groups.

Part C. Part C consisted of a number of questions concerning parental occupations. Again, very little substantive difference was found between the experimental and control groups in this area. Item #6 asked, "Why does your father work?" It was noted that children from the experimental group cited more economic concepts in their responses. Additionally, some 17 percent of the control group responded by saying, "I don't know," while only three percent of the experimental group failed to respond to this item.

Item #7 questioned whether or not second graders perceived mother's work as being a job. Again, little difference was seen between the two groups except that 20 percent of the Selah group responded by saying "no" or "I don't know," while only three percent of the children from the experimental group responded by saying "no" or "I don't know."

Item #10 asked, "Why is her job an important job?" A slight reversal in expected differences was seen in this item as 17 percent of the experimental group responded by saying "I don't know," while only 10 percent of the control group answered in a like manner. Item #11, however, demonstrated a more familiar type of pattern as children were asked to indicate whether or not their mother liked her job. Only 37 percent of the children from the control group indicated that they knew their mother liked her job, while 70 percent of the experimental group indicated that they knew their mothers liked their jobs.

Table 4

RESULTS OF THE CAREER AWARENESS PICTORAL INVENTORY: A TEST OF OCCUPATIONAL AWARENESS FOR THE PRIMARY GRADES

Chi Square and Frequency of Response

Part A: Identification of Occupational Roles

Second Grade

	Yes	I don't know	Other	
Item 1 (Nurse)				
Cashmere, Peshastin-Dryden (N=30)	30	0	0	$x^2 = 6.67$
Selah (N=30)	24	2	4	
Item 2 (Postman or mailman)				
Cashmere, Peshastin-Dryden	27	2	1	$x^2 = 0.22$
Selah	26	3	1	
Item 3 (Farmer)				
Cashmere, Peshastin-Dryden	30	0	0	$x^2 = 2.07$
Selah	28	0	2	
Item 4 (Store Clerk, Cashier, or Checker)				
Cashmere, Peshastin-Dryden	13	7	10	$x^2 = 2.87$
Selah	7	11	12	
Item 5 (Secretary)				
Cashmere, Peshastin-Dryden	10	7	13	$x^2 = 1.62$
Selah	10	11	9	

x^2 computed at 2 degrees of freedom
x^2 of 4.60 significant at the .10 level of significance
x^2 of 5.99 significant at the .05 level of significance

	Yes	I don't know	Other	
Item 6 (Carpenter)				
Cashmere, Peshastin-Dryden	9	5	16	$x^2 = 1.93$
Selah	5	4	21	
Item 7 (Scientist)				
Cashmere, Peshastin-Dryden	16	10	4	$x^2 = 4.58$
Selah	9	11	10	
Item 8 (Janitor or Custodian)				
Cashmere, Peshastin-Dryden	24	4	2	$x^2 = 19.95$
Selah	8	5	17	
Item 9 (Druggist or Pharmacist)				
Cashmere, Peshastin-Dryden	5	11	14	$x^2 = 5.65$
Selah	0	15	15	
Item 10 (Telephone Lineman or Repairman, Lineman, or Power Company worker)				
Cashmere, Peshastin-Dryden	12	7	11	$x^2 = 6.69$
Selah	4	6	20	
Item 11 (Mechanic or Auto Mechanic)				
Cashmere, Peshastin-Dryden	7	9	14	$x^2 = 5.31$
Selah	1	10	19	
Item 12 (Baker)				
Cashmere, Peshastin-Dryden	18	0	12	$x^2 = 3.54$
Selah	14	3	13	

Part D. Part D dealt with matching tools and symbols with occupations. In administering this test, the occupational clusters used in Part A were again replicated along with a separate set of randomly arrayed depictions of tools or symbols of the various represented occupations. Pictoral depictions were presented in a semi-circle and children were to match the tool or symbol with the depicted occupation by placing both pictures together. Table 5 presents results of this portion of the investigation. As can be noted in Table 5, the method of analysis consisted of a univariate t test of significance. A null hypothesis of no significant difference was tested at the .05 level of significance (with 29 degrees of freedom an obtained t of 1.699 is needed for rejection of the null hypothesis). As can be seen the obtained t was 2.159 and, therefore, the null hypothesis is rejected. From this can be seen that there is indeed a difference between the experimental and control groups in their ability to match tools and symbols with occupations. This line of investigation represents a promising area for future research and should clearly suggest that instruction in career awareness leads to significant gain in knowledge and skill relative to career awareness.

Part E. The final section dealt with questions concerning the family, home, and school and utilized a similar methodology as was described in parallel kindergarten and first grade level tests. Unfortunately, however, this area represented a less fertile area than expected and very little difference was seen in the responses between the experimental and control groups. One notable difference, however, was found in the response to item #7 which asked in reference to a hypothetical depiction of a family and home, "Who works harder in this family--the mother or the father?" A major difference was seen in that only 13 percent of the control group (Selah) indicated that the mother worked the harder, while for the experimental group 43 percent of the sample indicated that the mother worked harder. An interesting variance is seen in this item although the evaluator is not altogether sure what interpretation should be placed upon this response. Item #10 asked, "What jobs would you like to have some day when you are older?" While children from Selah listed 12 different types of job categories, some were quite unrealistic, such as "I want to drive a submarine" or "When I grow up I want to be a bag boy." This was contrasted to 17 different types of job categories being cited by the children in the experimental group combined with the fact that seemingly no unreasonable job categories were listed by these children. Whether a valid question or not, it remains that children who have benefited by career education seem to cite more varied occupational choices and at the same time are less prone to cite unrealistic occupations.

Table 5
FREQUENCY DISTRIBUTION AND UNIVARIATE t TEST OF SIGNIFICANCE FOR PART D: MATCHING TOOLS AND SYMBOLS WITH OCCUPATIONS

Second Grade

Occupations Depicted: Nurse, Postman, Farmer, Cashier, Secretary, Carpenter, Scientist, Custodian, Druggist, Phone Repairman, Auto Mechanic, Baker.

Number of Correct Responses	Cashmere, Peshastin-Dryden	Selah
12	19	14
11	2	-
10	6	6
9	1	2
8	1	1
7	-	-
6	-	2
5	-	-
4	-	1
3	-	1
2	-	1
1	-	-
0	1	2
	N=30	N=30

t=2.159

(t at 1.699 at the .05 level of significance needed for rejection)

Fate: reject null hypothesis of no significant difference between means

THIRD GRADE LEVEL RESULTS

Part A. Again, the methodology was similar to the technique described previously. Part A sought to measure the identification of occupational roles. Table 6 shows several items as having a significant Chi Square. These items are as follows: item #4, store clerk (Chi Square = 7.54); item #9, druggist or pharmacist (Chi Square = 6.69); and item #12, baker (Chi Square = 8.32).

Part B. Little difference in response for this line of questioning was observed between the experimental and control groups with the exception of item #2 which asks, "Can you tell me how this job (secretary) helps people?" Sixty percent of the control group responded by saying "I don't know," while 47 percent of the experimental group responded in a like manner.

Part C. Part C dealt with parents occupations and, again, this line of questioning was unfertile as there appeared no difference in the types of responses between the experimental and control groups. The role of maturation seems very much operant with the third grade youngsters and the type of differences noted with previous grades simply appeared less often.

Part D. Part D measured matching tools and symbols with occupations (identical to the procedure used in the second grade test). Again, a univariate t test of significance was utilized in measuring differences between the experimental and control groups. As can be seen in Table 7, the obtained t was insufficient to reject the null hypothesis of no significant difference between means. Therefore, there appears to be no difference in the ability of third graders to match tools and symbols with occupations.

Part E. Part E also yielded little difference between the experimental and control groups with the exception of the response to item #2 which saw third graders in the experimental group listing 14 different types of responsibilities held by children in the home, whereas subjects in the control group cited only seven different types of responsibilities in answering the same question.

SUMMARY

Overall, the evaluator was quite satisfied with the method of testing employed at the primary level. It should be noted that the purpose for this line of investigation was more of a "shotgun approach" in that it seemed impossible to determine from the project's goals and objectives with

Table 6

RESULTS OF THE CAREER AWARENESS PICTORAL INVENTORY: A TEST OF OCCUPATIONAL AWARENESS FOR THE PRIMARY GRADES

Chi Square and Frequency of Response

Part A: Identification of Occupational Roles

Third Grade

	Yes	I don't know	Other	
Item 1 (Nurse)				
Cashmere, Peshastin-Dryden (N=30)	27	0	3	$x^2 = 3.18$
Selah (N=30)	24	3	3	
Item 2 (Postman or Mailman)				
Cashmere, Peshastin-Dryden	29	0	1	$x^2 = 3.02$
Selah	28	2	0	
Item 3 (Farmer)				
Cashmere, Peshastin-Dryden	30	0	0	$x^2 = \emptyset$
Selah	30	0	0	
Item 4 (Store Clerk, Cashier, or Checker)				
Cashmere, Peshastin-Dryden	17	3	10	$x^2 = 7.54$
Selah	17	10	3	
Item 5 (Secretary)				
Cashmere, Peshastin-Dryden	11	3	16	$x^2 = 5.83$
Selah	13	9	8	

x^2 computed at 2 degrees of freedom
x^2 of 4.60 significant at the .10 level of significance
x^2 of 5.99 significant at the .05 level of significance

	Yes	I don't know	Other	
Item 6 (Carpenter)				
Cashmere, Peshastin-Dryden	17	4	9	$x^2 = 2.25$
Selah	12	8	10	
Item 7 (Scientist)				
Cashmere, Peshastin-Dryden	17	7	6	$x^2 = 1.06$
Selah	20	4	6	
Item 8 (Janitor or Custodian)				
Cashmere, Peshastin-Dryden	23	4	3	$x^2 = 1.28$
Selah	19	6	5	
Item 9 (Druggist or Pharmacist)				
Cashmere, Peshastin-Dryden	4	4	22	$x^2 = 6.69$
Selah	3	13	14	
Item 10 (Telephone Lineman or Repairman, Lineman, or Power Company Worker)				
Cashmere, Peshastin-Dryden	14	5	11	$x^2 = 3.14$
Selah	14	10	6	
Item 11 (Mechanic or Auto Mechanic)				
Cashmere, Peshastin-Dryden	8	4	18	$x^2 = 4.68$
Selah	11	9	10	
Item 12 (Baker)				
Cashmere, Peshastin-Dryden	14	0	16	$x^2 = 8.32$
Selah	22	2	6	

Table 7
FREQUENCY DISTRIBUTION AND UNIVARIATE t TEST OF SIGNIFICANCE FOR PART D: MATCHING TOOLS AND SYMBOLS WITH OCCUPATIONS

Third Grade

Occupations Depicted: Nurse, Postman, Farmer, Cashier, Secretary, Carpenter, Scientist, Custodian, Druggist, Phone Repairman, Auto Mechanic, Baker.

Number of Correct Responses	Cashmere, Peshastin-Dryden	Selah
12	20	15
11	1	1
10	2	7
9	3	1
8	3	2
7	-	2
6	-	1
5	-	-
4	-	1
3	-	-
2	1	-
1	-	-
0	-	-
	N=30	N=30

t=1.066

(t at 1.699 at the .05 level of significance needed for rejection)

Fate: accept null hypothesis of no significant difference between means

any degree of certainty what specific skills and knowledges should have accrued to those experiencing career education. In seeking to establish various trends and indicators, it was apparent to the evaluator that the CEP project succeeded in numerous ways in establishing supremacy over traditional instruction relative to career awareness. Several conclusions seem warranted as follows: There is a statistically significant difference in favor of career education on several indicators of career awareness; expanded questioning yielded a number of notable differences in the types of responses with examiners concluding that children benefiting by instruction in career education do, indeed, show more awareness in a number of aspects concerning the world of work; and a final conclusion was that readiness appears to be a factor as observed differences occurred between responses by the experimental and control groups and also between the various grade levels. Certainly as the grade level increases, there appears naturally to be more career awareness. Perhaps the most significant gain to be found between the CEP program and a traditional program is found in the early grades.

B. Project Questionnaire for Fourth Graders. Insofar as much of the evaluation was aimed at establishing broad trends and indicators, it was not the purpose of the evaluator to create a questionnaire for every grade, K-12. The project staff, however, felt that they would like to have all grades involved to some degree in the testing program and so, therefore, a questionnaire for fourth graders was designed and administered by the CEP staff. The questionnaire was administered June 10, 1974, and was given to each fourth grader in the Cashmere and Peshastin-Dryden school districts. The questionnaire was constructed from a similar instrument used in the 1973 Evaluation Report for the Helena Montana Career Education Program. Prior to summarizing some of the results, the evaluator should point out that the test appears to have serious construct validity weaknesses. Additionally, the advanced language and terminology used in the questionnaire leads one to doubt whether fourth graders could fully understand what was being asked. Another limitation is that the test is quite lengthy as it contains 38 items of a multiple choice and completion type.

It would seem from the above that this test is of little or no value in aiding an understanding of the dimensions of the CEP program. Despite such limitations, the evaluator tabulated all questionnaires and the following represents some of the selected items along with the answers and percentages of response:

Item #1: Do you know what you want to do when you graduate from high school? Yes, 73%; No, 27%.

Item #2: Do you have to go to college to get a good job? Yes, 71%; No, 29%.

Item #3: Do you know what a trade school is? Yes, 21%; No, 79%.

Item #16: Where would it be best to learn how to be a plumber?
- At a university, 18%
- At a trade school, 18%
- At a business school, 23%
- Working with a plumber, 41%

Item #17: Where would it be best to learn how to be a doctor:
- At a university, 37%
- At a trade school, 8%
- At a business school, 21%
- Working with a doctor, 34%

Item #19: Where would it be best to learn how to be a barber?
- At a university, 15%
- At a trade school, 23%
- At a business school, 24%
- Working with a barber, 38%

Item #20: Where would it be best to learn how to be a store clerk?
- At a university, 13%
- At a trade school, 21%
- At a business school, 25%
- Working with a store clerk, 41%

Item #23: Who or what would help you the most in deciding what job you might like to do?
- Your parents, 38%
- Your teacher, 16%
- A book you read, 8%
- Your hobbies, 38%

Item #28: Is it more important to earn a lot of money or to be happy working in a job?
- Earn a lot of money, 15%
- Be happy working, 85%

N=98

There were also several completion type items in which students indicated job preferences, avocations, and community awareness. Results of the complete questionnaire were presented in detail to project staff for their consideration. From the data available, no overall conclusions concerning attainment of project objectives for the fourth grade level should be attempted. It does appear, however, that if one were to accept the face validity of the fourth grade questionnaire, then serious doubts as to the conceptual attainment of fourth graders would have to be raised (see above responses). The reader is to be cautioned, however, from making such an interpretation due to the aforementioned severe limitations of the fourth grade instrument.

C. Ohio Work Values Inventory, Grades Five, Eight, and Eleven. Since one of the goals of the project was to shape attitudes and values concerning the world of work, the evaluator sought to establish trends and indicators concerning possible differences between value orientations of the experimental group (Cashmere and Peshastin-Dryden) and the control group (Selah). Since the intent of this dimension of the project was not clearly delineated in the project objectives, it seemed appropriate that a standardized measure be employed. For this purpose, the Ohio Work Values Inventory (OWVI), authored by Bradford J. Fenner and Loyde W. Hales, was utilized.

The OWVI has an easy-to-use unfolding booklet and consists of 77 multiple choice questions. According to the Spache Readability Formula, the OWVI has a reading level difficulty of grade 2.8 for comprehension. The test consists of 11 different measures as follows: Altruism, Object Orientation, Security, Control, Self Realization, Independence, Money, Task Satisfaction, Solitude, Ideas-Data, and Prestige. Test-retest reliability (alpha) of the Ohio Work Values Inventory range from the lowest grade level coefficient .77 to a coefficient of .93. In addition, normative data is available for purposes of comparisons. There exists separate normative data and reliability figures for each grade level ranging from grade 5 through 12.

In taking the test, each student assesses his or her intensity of valuing for each item by selecting one of five possible answers. Responses are arranged on a Likert-type scale with response choices being: Not Much, A Little, Fairly Much, A Lot, and Very Much. Each of the 77 items is designed to have a logical relationship with one of eleven value constructs.

All subjects for both the experimental and control groups were randomly selected with the use of a table of random numbers. A sample size for each grade level consisted of 100 subjects (50 subjects each for the experimental and control groups). All inventories were administered during the last week in May 1974. Subjects were provided with two pencils, and tests were administered by the evaluator and an assistant in a separate testing room at each school location.

Figures 8, 9, and 10 illustrate a comparison between the experimental and control group for each of the three grades involved in testing. Scales represented in the three figures are plotted according to the attained mean scores for each group. The results of individual students were reported to each of the school, as The Work Values Inventory is intended for use by various high school counselors, teachers, and career education staff members in assisting the students to explore their work values and to better integrate their preferences into considerations of occupational possibilities.

The reader should be cautioned that although an attitude scale such as the OWVI does yield a score, it should not be interpreted in the manner one would interpret a test which has "right" and "wrong" answers. In other words, high scores should not be interpreted as good and low scores as bad. What is intended in this evaluation report, however, is a determination of whether or not the pattern of response to the OWVI varied from the experimental group (which had received instruction in career education) to the control group (which received no formal instructional program in career education).

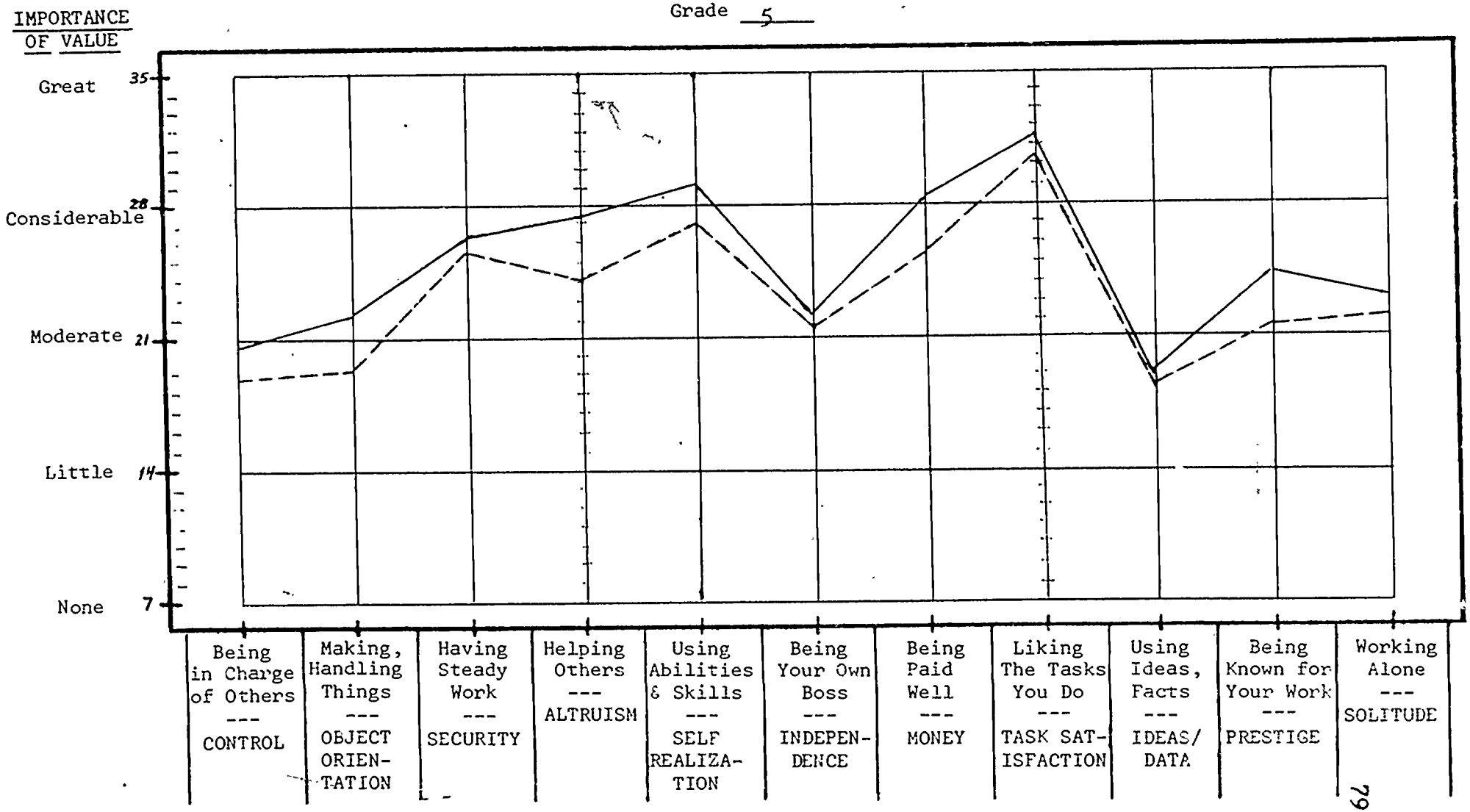
Conclusion. As can be deduced from an examination of the fifth grade and eleventh grade scores (see figures 8 and 10) there does appear to be a noticeable difference on each frequency polygon for several of the categories in question. For one thing, both figures show students in the experimental group giving a higher ranking in each of the eleven categories. In a sense, it might be said that values were more positively oriented for this group. Although differences were not dramatic, it does appear that a notable difference can be seen on Object Orientation, Altruism, Money, and Prestige for the fifth grade sample and on Independence for the eleventh grade sample. Whether or not one should attribute these differences to the CEP program remains circumspect, however, it is evident that there is a consistent difference between the experimental and control group and that subjects in the experimental group tended to value aspects of the OWVI higher than did subjects in the control group.

Figure 8
Ohio Work Values Inventory

PROFILE OF WORK VALUES

Cashmere and Peshastin-Dryden ——— (solid line)
Selah - - - - (broken line)

Grade 5



40, 41

Figure 9
Ohio Work Values Inventory

PROFILE OF WORK VALUES

Cashmere and Peshastin-Dryden ———— (solid line)
Selah - - - - - (broken line)

Grade 8

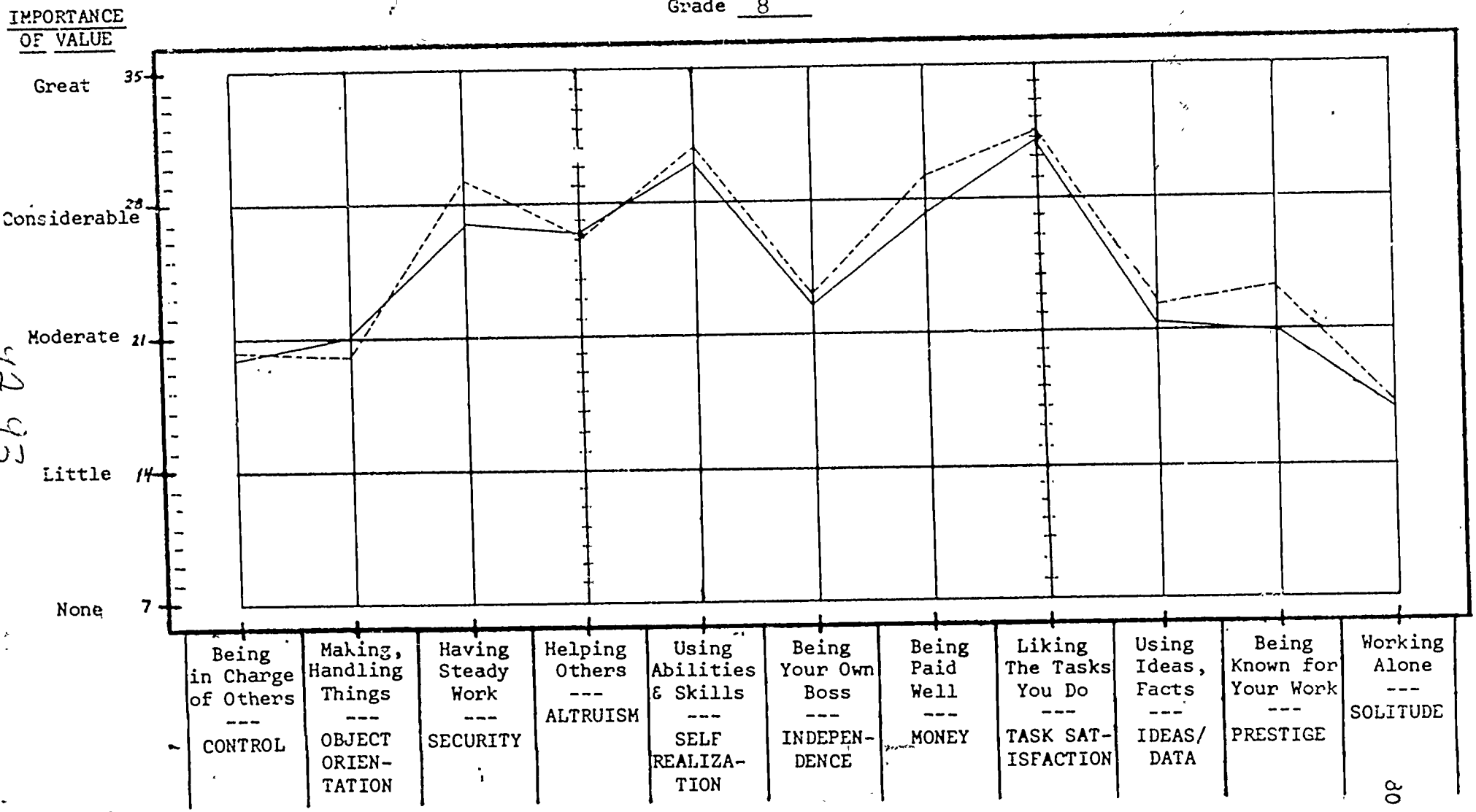
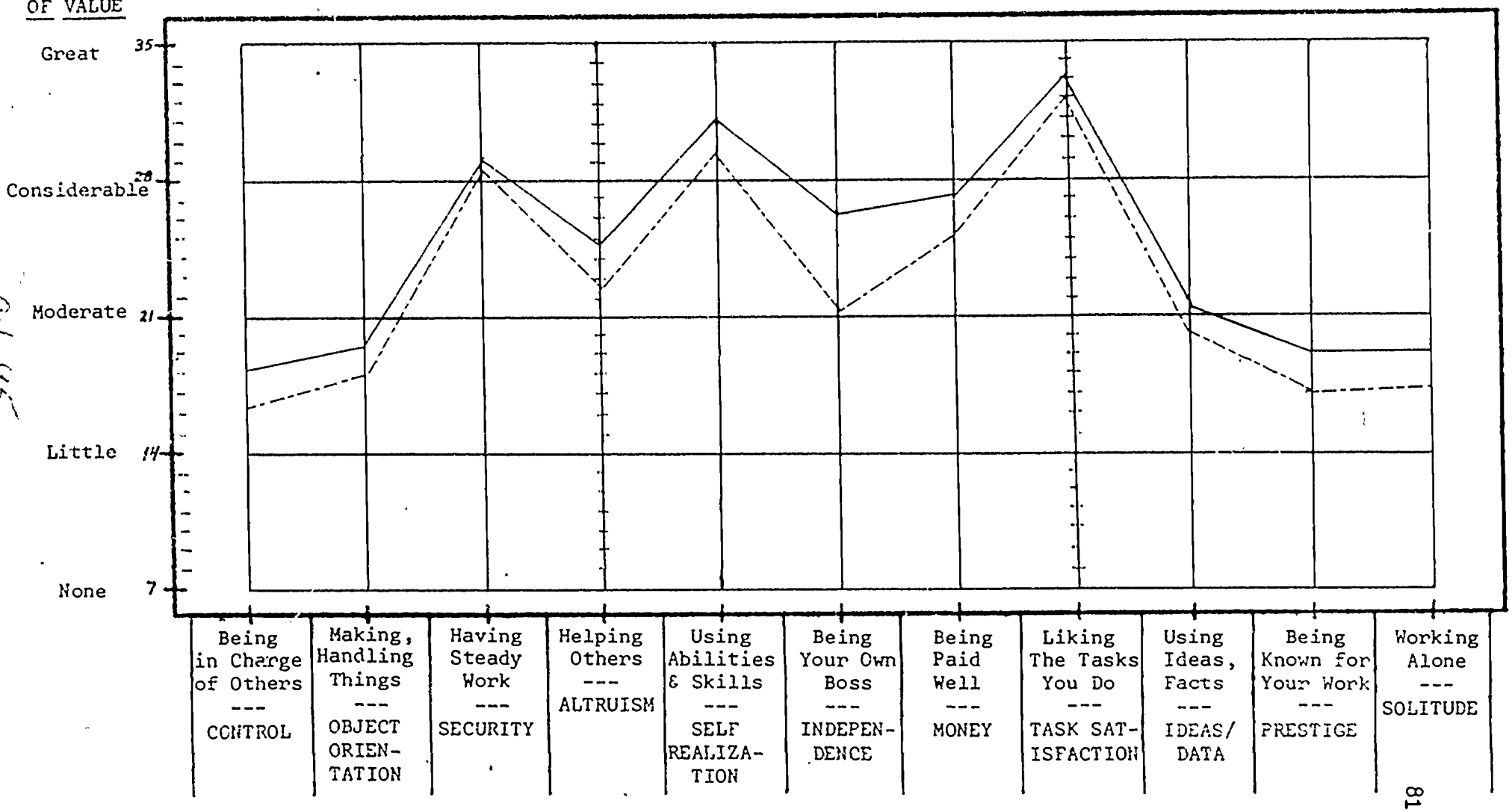


Figure 10
Ohio Work Values Inventory

PROFILE OF WORK VALUES

Cashmere and Peshastin-Dryden ——— (solid line)
Selah - - - - (broken line)

Grade 11



From this line of investigation, the evaluator must conclude that results are less than conclusive regarding the significance of difference between value orientation for the experimental and control groups. It does appear that subjects in the fifth and eleventh grade participating in the CEP program were more positively oriented than were their counterparts in Selah concerning the eleven categories tested in the OWVI, but results with the eighth grade appear to contradict any statement of differences between subjects.

D. Supplemental Questionnaire to the Ohio Work Values Inventory, Grade 11. A supplemental questionnaire was administered to eleventh graders from the experimental and control group taking the Ohio Work Values Inventory. The purpose of this questionnaire was to determine possible differences between the experimental and control group concerning plans juniors might have relative to their future in the world of work. For purposes of reporting, only those items which yielded a difference are presented.

Discussion. Results to item #2 of the supplemental questionnaire indicates slightly more positive orientation on the part of the experimental group concerning whether or not one could really expect the types of advantages preferred in the world or work. Item #3, again, showed a slightly more positive orientation on the part of experimental subjects relative to whether or not most adults are happy with the jobs they have.

The fourth item concerned the relationship of a person being happy in his or her work and whether or not she is happy in life. Differences in response are subtle for this particular item with the most notable difference occurring with the second and third alternative answers. Item #5 asked what career students plan to pursue after school graduation. Forty-five percent of the experimental sample listed the job they intended to pursue after graduation, whereas 39 percent of the control group did the same. No major differences in listing occupations was noted. Apparently a slightly greater percentage of students from the experimental group had an idea of job plans after schooling is finished.

The next several items dealt with student expectations concerning income, job skills, and training required for specific jobs. No notable difference was observed between the experimental and control group. Item #11 questioned whether or not students felt the school was doing an adequate job of helping them to prepare for the world of work. Again, a subtle difference was noted between the experimental and control group with a slightly greater percentage of subjects

Table 8

RESULTS OF SUPPLEMENTAL QUESTIONNAIRE TO
OHIO WORK VALUES INVENTORY

Item #2: Do you <u>really</u> think that you will be able to have the type of job that has all of the advantages you like?

Response Choices	C, P-D		Selah	
	f	%	f	%
Yes	6	.12	4	.08
Probably	21	.41	12	.24
Uncertain	12	.24	14	.29
Probably Not	11	.22	17	.35
No	1	.02	2	.04

Item #3: Are most adults happy with the jobs they have?

Yes	8	.16	4	.08
Probably	16	.31	11	.22
Uncertain	13	.25	13	.27
Probably Not	11	.22	15	.31
No	3	.06	6	.12

Item #4: How important would you rate the relationship of a person being happy in his or her work to whether or not he or she is happy in life?

The most important, outside of good health	27	.53	23	.47
Somewhat important, but other things are more important, such as earning a good living	11	.22	15	.31
Only average in importance, who you <u>are</u> is really the important thing	12	.24	7	.14
Really not too important, having a good time and avoiding hassles is really more important	1	.02	4	.08
Not important at all	0	.00	0	.00

Table 8 (continued)

Item #5: What career do you plan for yourself after your schooling is finished?

Response Choices	C, P-D		Selah	
	f	%	f	%
I really don't have any idea yet	23	.45	19	.39

Item #11: Is school doing an adequate job of helping you to prepare for the world of work?

Yes, it is helping quite a bit!	11	.22	11	.22
It has helped some!	13	.27	12	.24
I'm not sure!	7	.14	3	.06
I don't think it is helping enough!	8	.16	17	.35
No, it hasn't helped at all!	8	.16	6	.12

from the experimental group feeling more positive concerning the efforts of the school.

E. Results of the Career Questionnaire for Grades Six, Seven, Nine, and Ten. As with other summative measures, the Career Questionnaire was administered in the spring of 1974 to all students in the sixth, seventh, ninth, and tenth grades at the Cashmere and Peshastin-Dryden school districts. No inter-group comparisons were intended and, therefore, no detailed analysis will be presented. The questionnaire was adapted from similar instrument utilized in the Helena Montana Career Education Evaluation Report, 1973-74. The questionnaire was administered at the suggestion of the project director in order to give project staff a reference to the Helena project. This type of comparison of results between projects is a technique often suggested in the literature. Persons wishing to make a rough comparison concerning student response to the line of questioning contained in the "Career Questionnaire" are advised to obtain a copy of the Helena Montana Career Education Project Final Report. Table 9 illustrates the questions asked along with the frequency of response and percentages for each item.

In judging responses, information should be given concerning several items. Item #3 asks whether or not Washington State has a state income tax. The reader should be advised that Washington does not have such a tax and, instead, assesses revenue on a property tax and sales tax basis. Item #6 refers to a vita useful for job placement and item #9 assumes that students have thought of a career to follow. Item #9, therefore, is a rather spurious item considering results from previous questionnaires already discussed in this chapter.

As meritorious as the project intent was in using the Career Questionnaire as a base of referencing results with those of the Helena project, it should be pointed out that this particular questionnaire suffers from a complete lack of construct validity. Insofar as the evaluator has determined, very little, if any, of the subject matter covered in the Career Questionnaire had actually been presented in classroom instruction for the CEP program. It also should be mentioned again that the evaluator placed very little credence in this particular instrument in judging the accomplishment of specific objectives. Certainly the limitation discussed previously pertaining to the fourth grade questionnaire are also applicable to the Career Questionnaire.

Table 9

RESULTS OF SIXTH GRADE CAREER QUESTIONNAIRE
FREQUENCY OF RESPONSE AND PERCENTAGES

Item #1: Do you have to go to college to get a satisfying job?

Grade	Yes		No	
	N	%	N	%
6	22	.44	28	.56
7	15	.31	34	.69
9	25	.53	22	.47
10	12	.33	24	.67

Item #2: Do you have to have a social security number in order to work?

6	36	.72	14	.28
7	36	.75	12	.25
9	43	.91	4	.09
10	30	.81	7	.19

Item #3: Does your state have a state income tax?

Grade	Yes		No	
	N	%	N	%
6	40	.82	9	.18
7	43	.93	3	.07
9	39	.93	3	.07
10	36	.87	6	.13

Item #4: Do you know what you want to do as a career?

6	30	.58	22	.42
7	23	.46	27	.54
9	28	.60	19	.40
10	20	.54	17	.46

Item #5: Would job training be more helpful to your job choice than going to college?

Grade	Yes		No	
	N	%	N	%
6	21	.44	27	.56
7	26	.54	22	.46
9	27	.59	19	.41
10	24	.65	13	.35

Item #6: Do you know how to make up a personal data sheet?

					I don't know	
6	4	.08	24	.47	23	.45
7	22	.58	7	.18	9	.24
9	5	.11	16	.35	25	.54
10	5	.10	15	.30	30	.60

Item #7: Would you know what to do during a job interview?

Grade	Yes		No	
	N	%	N	%
6	31	.61	20	.39
7	28	.58	21	.42
9	33	.72	13	.18
10	29	.78	8	.22

Item #8: Do you know which jobs are most related to your best abilities?

6	30	.59	21	.41
7	25	.50	25	.50
9	35	.74	12	.26
10	28	.74	10	.26

Item #9: Are you aware of the demand there is (or will be) for the career you have been thinking of following?

Grade	Yes		No	
	N	%	N	%
6	23	.46	27	.54
7	24	.50	24	.50
9	26	.57	20	.43
10	24	.63	14	.37

Item #10: Is there someone in your school who could help you find a job?

6	31	.66	16	.34
7	19	.40	28	.60
9	33	.75	11	.25
10	29	.76	9	.24

Item #11: Is it important for you to decide upon a career right now?

Grade	Yes		No	
	N	%	N	%
6	17	.33	35	.67
7	25	.53	22	.47
9	29	.63	17	.37
10	23	.64	13	.36

Item #12: Must you file an income tax return at your age?

					It depends on how much money I earn	
6	1	.02	31	.61	19	.37
7	0	.00	28	.61	18	.39
9	3	.06	11	.24	33	.70
10	3	.09	9	.23	26	.68

Item #13: If you dropped out of school today, could you find a job to support yourself?

Grade	Yes		No	
	N	%	N	%
6	7	.13	45	.87
7	9	.20	37	.80
9	15	.33	31	.67
10	15	.43	20	.57

Item #14: Should school courses you have taken appear on your personal data sheet?

					I don't know what a personal data sheet is	
6	26	.50	6	.12	20	.38
7	10	.20	5	.10	34	.70
9	20	.43	4	.08	23	.49
10	22	.58	7	.18	9	.24

Item #15: Is it a good idea to take a friend with you on a job interview

Grade	Yes		No	
	N	%	N	%
6	5	.10	46	.90
7	14	.29	35	.71
9	4	.09	43	.91
10	2	.05	36	.95

Item #16: Is a hobby the same thing as a career?

6	9	.18	41	.82
7	8	.16	42	.84
9	7	.17	35	.83
10	13	.43	17	.57

Item #17: Where would you go if you wanted to get a social security number?

Grade	Correct Answer		I don't know	
	N	%	N	%
6	15	.29	37	.71
7	21	.42	29	.58
9	24	.52	22	.48
10	32	.84	6	.16

Item #18: How much money can you earn without having to file a Federal income tax return?

Grade	Correct Answer		I don't know	
	N	%	N	%
6	1	.02	51	.98
7	0	.00	50	1.00
9	0	.00	46	1.00
10	8	.21	30	.79

Item #19: If you have decided to go to (check one):

Grade	business school		trade school		college		none of these	
	N	%	N	%	N	%	N	%
6	1	.02	4	.08	33	.66	12	.24
7	2	.05	2	.05	27	.63	12	.28
9	4	.09	7	.16	28	.62	6	.13
10	4	.11	7	.19	15	.42	10	.28

F. Senior Questionnaire. A senior questionnaire was prepared and administered by the CEP counselor concerning senior class member perceptions relative to future plans. The questionnaire was administered to all seniors in the Cashmere and Peshastin-Dryden schools (N=107). Item A asked, "What are your plans for the summer?" Of students indicating their summer plans, the following types of activities were listed (shown with frequency of response):

Just work (10)	Clerk (9)
Orchard work (23)	Nursery (1)
Dry wall (1)	Fruit warehouse (3)
Candy factory (1)	Nursing home (2)
Radio station (2)	Painting (1)
Waitress (4)	Drive-in restaurant (2)
Summer school (1)	Cannery (1)
Alcoa (1)	City Hall (1)
Mill (4)	Frozen food warehouse (2)
Computer programmer (1)	School maintenance (6)
Office work (5)	Carpentry (2)
Housewife (1)	Travel (1)
Seamstress (2)	Medical office (2)
Power company (1)	Fishing boat (1)
Tree Fruit Research Center (1)	Logging (2)
	Forestry (1)
Construction (2)	Furniture store (1)
Fire fighting (1)	Not sure (6)

Item B asked, "Do you plan to work in the fall?" Fifty-five percent responded by indicating "yes," 29 percent indicated "no," and 15 percent indicated they were undecided. Of those planning fall employment, 47 percent planned full-time employment and 53 percent part-time employment. Intended for the use of the counselor, this item also asked for details about specific work and job locations. Also incorporated in the item was the question, "To what degree did each of the following influence your decision to do this work?" The following are the alternatives offered and the frequency of response obtained:

	NONE	SOME	A LOT
Parents or relative(s)		47	25
Teacher(s)		20	3
Counselor		9	5
Other students		38	9
Guest speakers		17	2
Field trips		4	3
TV, newspapers, magazines		10	6
Class subjects		21	5
Classroom career study unit(s)		16	6
Other		4	24

Item C asked for long-range career goals and the following types of answers were obtained along with the frequency of response:

General contractor (1)
Lineman (1)
Apparel designer (1)
Electronic technician (2)
A trade (1)
Salesman (1)
Commercial pilot (1)
Business management (2)
Journalism (1)
Elementary music tchr.(2)
Teacher & coach (1)
Law enforcement (1)
Teacher (2)
Not sure (9)
Biologist (1)
Registered nurse (6)
Dancer (1)
Veterinarian (2)
Medical field (3)
None (3)
Office work (4)
Teach college P. E. (1)
Coach girls' sports (1)
Electrician (2)
Banking (1)
To be independent (1)
Housewife (11)
Christian worker (1)
Cook (1)
Science teacher (1)
Mechanic (2)
Stewardess (2)
Horticulturist (2)
Public defender (1)
X-ray technician (1)
Military (1)
College teaching (1)
Electrical engineering (1)
Marine biologist (1)
Ag teacher (2)
Industrial arts teacher (1)
Civil Service (1)
Teacher of Deaf and Mute (1)
Public relations (1)
Real estate work (1)
Bio-medical engineer (1)
Science field (1)
Machinist (3)
Business field (1)
P. E. teacher and coach (1)
C. P. A. (3)
Lawyer (1)
Architect (1)
Physical therapy (2)
Elementary teacher (1)
Dental hygienist (1)
Pilot (2)
Construction management (1)
Forestry (2)

Item D asked, "What are your educational plans after high school?" Response to this item, along with frequency of response, is offered as follows:

NEI (1)
Air Force training (2)
E.W.S.C. (3)
Wenatchee Valley College (40)
British Columbia Bible Institute (1)
Olympic C. C. (1)
Baptist Institute (1)
W.W.S.C. (2)
Portland School of Electronics (1)
Navy training (1)
Harding College (1)
Yakima Valley College (1)
Big Bend C. C. (1)
Not sure (6)
J. M. Perry Institute (1)
Grays Harbor C. C. (1)
W.S.U. (9)
Spokane Falls C. C. (1)
C.W.S.C. (3)
University of Washington (4)
Columbia Basin C. C. (3)
B.Y.U. (2)
Letness Aviation School (1)
Trade school (1)
College (2)
None (5)

V. CONCLUSION

As a result of the preceding comprehensive evaluation, a number of conclusions concerning the CEP program can be forwarded. These conclusions are as follows:

FORMATIVE JUDGMENTS

1. The CEP program demonstrated merit in a number of aspects emphasized in the formative assessment. The program ably incorporated a discrepancy evaluation format which allowed staff to continually assess and update the program in response to identified needs.

2. An interim evaluation report was conducted by the independent evaluator and a number of technical concerns were enumerated. The project is to be credited for responding to each of the concerns identified in the interim report.

3. Formative evaluation also incorporated use of a staff questionnaire which, in general, found the majority of staff holding the opinion that the career education project was a highly profitable and worthwhile effort and that most viewed the CEP program with a high degree of support and positive regard. Additional measures seeking to determine staff input were also discussed in the chapter on formative assessment.

4. One measure of the strength of the CEP program was the community involvement in the project. Not only was there significant participation by community resource persons, but there also existed rich and varied activities throughout the project. Community involvement was exemplified by the citizens' advisory committee and beyond to such groups as local service clubs, businessmen, senior citizens, and other patrons of the local school district.

5. Formative assessment results highlighted the role of dissemination in the CEP program. This aspect of the project was perhaps one of the strongest in the entire program as impact of CEP reached throughout the state of Washington and beyond. Six publications resulted from dissemination efforts with several receiving national distribution and notoriety.

6. The CEP program was well received throughout the state as evaluation of state-sponsored WAVE workshops showed the project to be the most helpful to those who attended these sessions.

7. Costs of transporting the CEP program were estimated. Apart from funds spent for staff salaries and administration, the CEP program would be of marginal expense to implement elsewhere.

SUMMATIVE JUDGMENTS

8. Results of summative assessment indicated that career awareness at the primary grades (K-3) was a very strong element in the overall project. In conducting the summative assessment at the primary level, a post-hoc design utilizing a randomly selected experimental and control group was utilized. In a number of instances, a statistically significant difference in favor of the CEP program was reported. Since procedures utilized careful research methodology, results seemed encouraging. It did appear, however, that as the grade level increased, differences between the experimental and control group seemed less apparent, raising the possibility that "career awareness" might be a consequence of maturation and readiness even without instructional efforts such as the CEP program.

9. Summative instrumentation sought to determine differences in value orientation between students from the experimental and control group populations. For two of the three grades tested, notable differences in value orientations were observed with the experimental subjects showing a more positive value orientation.

10. Eleventh graders were questioned concerning specific plans they had concerning the world of work. Only subtle differences in attitudes between the experimental and control group emerged at this age level.

11. A number of additional summative measures were administered as a part of the project's evaluation. Results for most of these instruments proved inconclusive.

JUDGMENTS OF WORTH

The project's intents and their outcomes were as follows:

A. To increase student awareness of the range of options open to them and to probable future changes in the world of work.

Result: Indeterminant. Summative assessment failed to demonstrate clearly that CEP students had any more awareness regarding the range of options open to them today and to probable future changes in the world of work.

B. To increase the self-awareness of each student, modify attitudes about personal, social, and economic significance of work and to assist students in developing appropriate decision-making skills.

Result: Indeterminant. Aspects of this intent were probably accomplished, particularly in reference to awareness of students at the primary level. Additionally, the value orientation of older students also seemed significantly influenced by career education. Whether or not decision-making skills were significantly altered as a result of the project was nowhere demonstrated.

C. Stress career awareness at the elementary level.

Result: Successful. Results of both formative and summative assessment support the conclusion that this intent of the project was accomplished, particularly in reference to primary grades.

D. Provide at the junior high or middle school level career orientation and exploratory experiences.

Result: Successful. Formative and summative assessment measures both tend to corroborate that orientation and exploratory experiences were a successful component of the project. It should be noted that there was perhaps just as many successful orientation and exploratory experiences with earlier grades as with middle school youngsters.

E. To expose students to a variety of occupations, to inform them of occupational requirements and, where possible, involve students in cooperative occupational programs and/or laboratory experiences. Also, where possible, to enable students to observe on-the-job performance.

Result: Successful. The degree of community involvement and the types of activities undertaken in pursuit of this intent were highlighted in both the formative and the summative assessments. Utilization of community resources was perhaps the strongest aspect of this intent while involvement of students in cooperative occupational programs and/or laboratory experiences was perhaps the least successful element.

F. Develop techniques, procedures, and materials which complement existing curriculum.

Result: Successful. Project materials were rich and varied and emphasized staff ideas and talents. Most staff felt that the CEP program complemented the existing curriculum as discussed in the chapter on formative assessment.

G. Collect and utilize experiences, data, and materials from existing curriculum.

Result: Successful. Formative assessment tended to corroborate accomplishment of this intent.

H. Involve all staff members in an in-service training program aimed toward career education.

Result: Successful. Staff was deeply involved in in-service training with only a few exceptions.

I. To counsel students toward opportunities available to them after completion of high school.

Result: Indeterminant. The counseling component was of considerable concern to project staff throughout the conduct of the project in that the original intent was that the counseling component would work directly with students in a manner similar to traditional vocational and academic counseling. In reality, however, little of this type of counseling was done by the CEP staff despite there being a very competent counselor on the CEP team. Instead, the counseling component operated as a part of the curriculum effort and the intent was to upgrade the skills of individual teachers concerning the counseling function. A lack of coordination between the CEP program and existing counselors at the two school districts was a decided weakness in reference to the intent of the project.

J. To disseminate information and materials to educational agencies within the state and nation.

Result: Successful. Results of formative assessment tends to corroborate that this was a highly successful part of the CEP program.

Conclusion. The reader is cautioned against a casual reading of this document and, in particular, of this chapter. The evaluation effort involved a concerted effort to assess the overall worth of the program throughout the duration of the project's operation. It is the opinion of the independent evaluator that the CEP program was exemplary in many regards and that it accomplished a number of stated intents as well as having resulted in numerous unanticipated benefits. The program was well managed and was quite fortunate in having available the services of a competent and enthusiastic staff. Perhaps most significant in the CEP effort is that a project of such quality could emerge from three rural disadvantaged communities having marginal resources from which to draw. Undoubtedly a very significant positive impact resulted from Federal funding.