DOCUMENT RESUME

ED 119 014 95 CE 006 612

AUTHOR Struck, John W.; Curtis, Carroll A.
TITLE Research and Development Project in Career Education. [Pennsylvania]. Final Report.
INSTITUTION Pennsylvania Research Coordinating Unit for Vocational Education, Harrisburg.; Pennsylvania State Dept. of Education, Harrisburg. Bureau of Vocational, Technical, and Continuing Education.
SPONS AGENCY Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.
BUREAU NO V261055L
PUB DATE Nov 73
GRANT OEG-0-72-0808
NOTE 205p.; For second year evaluations, see CE 006 614

EDRS PRICE MF-$0.83 HC-$11.37 Plus Postage
DESCRIPTORS Area Vocational Schools; Career Awareness; *Career Education; Career Exploration; Computer Programs; Curriculum Development; *Elementary Secondary Education; Evaluation Methods; Job Placement; Occupational Information; Post Secondary Education; *Program Descriptions; *Program Evaluation; Questionnaires; *State Programs; Teacher Workshops; Testing; Vocational Development
IDENTIFIERS *Pennsylvania; Project TIMES; Temporally Individualized Modular Educ Scheduling

ABSTRACT

The report covers career education activities at four Pennsylvania project sites (Ebensberg, Crawford County, Philadelphia, and McKeesport): an elementary, a junior high, a K-12, and a 10-14 component. Project TIMES (Temporally Individualized Modular Education Scheduling) was incorporated in the 10-14 component at an area vocational-technical school. The computerized program included the identification of 20 career areas and the development of required skills; evaluation consisted of student/staff interviews, observation scales to assess the instructional environement, and teacher/student morale scales. The elementary component focused on the development and implementation of a model computer resource, career-oriented curriculum. Evaluation included student assessment in an experimental and two control groups in addition to staff questionnaires. The junior high component, which focused on career awareness/exploratory experiences, sponsored a one-month staff development workshop and the development of a resource center. Evaluation included workshop assessment and program evaluation by faculty and a randomly selected group of students. The K-12 component centered on self- and career awareness, career exploration, and career preparation/placement. Evaluation instruments were a self-appraisal inventory, attitude scales, and occupational information tests. Approximately one-fourth of the document consists of appendixes containing copies of various evaluative instruments. (EA)

FINAL REPORT

Project No. V261055L
Grant No. OEG-0-72-0808

Research and Development Project in Career Education

Conducted Under
Part C of Public Law 90-576

John W. Struck
Bureau of Vocational Education
and
Carroll A. Curtis
Research Coordinating Unit
Commonwealth of Pennsylvania
Department of Education
Box 911
Harrisburg, Pennsylvania 17126

NOVEMBER 1973

FINAL REPORT

Project No. V261055L
Grant No. OEG-0-72-0808

Research and Development Project in Career Education

Conducted Under
Part C of Public Law 90-576

The project reported herein was performed pursuant to a grant from the Bureau of Occupational and Adult Education, Office of Education, U.S. Department of Health, Education, and Welfare. Grantees undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

John W. Struck
Bureau of Vocational Education
and
Carroll A. Curtis
Research Coordinating Unit
Commonwealth of Pennsylvania
Department of Education
Box 911
Harrisburg, Pennsylvania 17126

NOVEMBER 1973

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

LIST OF TABLES

LIST OF ILLUSTRATIONS

SUMMARY

January 17, 1972 through July 16, 1973

INTRODUCTION

Pennsylvania's career education pilot activities were developed in four sites; that is, Ebensburg, Crawford County, Philadelphia and McKeesport. The activities at each site were approved and coordinated through the Research Coordinating Unit in the Pennsylvania Department of Education. Dr. John W. Struck, State Director of Vocational Education in Pennsylvania, was the project director. Specific programmatic segments of career education were developed at each project site. Thus, each site's activities are treated separately in this summary and the subsequent annual report.

GOALS AND OBJECTIVES

Ebensburg (Admiral Peary AVTS): 10-14 Component

- Expand TIME scheduling model into the business education departments of sending high schools.
- Provide career education in-service activities for faculty and counselors.
- Develop appropriate guidance materials using DOT as a focal point.
- Refine placement procedures.
- Refine and expand DOT Program of Study sheets.

Crawford County: Elementary Component

- Integrate career and self-awareness with the basic academic materials of the K-6 grade levels.
- Expose each student to a range of career clusters within the context of his maturity level.
- Individualize the learning program for each student to meet his interests and concerns.
- Use computer facilities for storage and retrieval of career-oriented curricula.

Philadelphia: Junior High Component

- Provide career orientation and meaningful exploratory experiences for all students at Jay Cooke Junior High School.
- Develop program activities to increase self- and career awareness of each student.

McKeesport: K-12 Component

- Provide self- and career awareness activities in the elementary grades.
- Provide career exploratory experiences in the junior high grades.
- Provide career preparation and placement in the senior high grades.

PROCEDURES

Ebensburg (Admiral Peary AVTS)

The project utilized the TIME scheduling concept (Temporally Individualized Modular Education), a flexible scheduling arrangement. TIME scheduling is based on an educational module approach wherein a student's chosen curriculum is synthesized from various modules. The student is allowed to proceed through the modules at his own rate. Thus, a student completing a module early may proceed to another module. Conversely, a student requiring more than the allotted time for a module will be rescheduled to finish the module at his own rate.

Practicum modules for the academically-oriented students were provided in areas where existing learning experiences did not suffice. Job- or work-experience modules were provided wherever available and appropriate. For the vocational-technical student, beginning modules in all programs were basic skill modules teaching preliminary occupational skills for specific career areas.

Crawford County

The project focused on the elementary component of career education. It stressed the process of increasing the career awareness of elementary students in terms of the broad range of options open to them in the world of work. The project concentrated on the continuation, expansion and diffusion of a model computer resource, career-oriented curriculum at the K-6 level. The curriculum was developed around occupational clusters by teams comprised of teachers and guidance counselors with input from consultants and an advisory committee.

The primary goal of this project is to continue to develop and implement a model computer resource, career-oriented curriculum for use at the K-6 level. This curriculum will focus on the following needs of elementary level students: (1) career awareness, (2) self-awareness and (3) personal, social and economic significance of work.

Philadelphia

Field orientation and exploration constituted a significant part of the Philadelphia program. Students were given first-hand opportunities to learn about the world of work. The program included basic information regarding the "ABCs" (15 job clusters) of the world of work, walking and motor tours to business and industry as well as hands-on experience in supporting business offices and industrial shops. Career education specialists were employed to arrange for exposure tours, career discussant representatives of supporting business and industry.

Attempts were made to operate academic-support programs in English, language arts, foreign languages, social studies, mathematics, science, art, music and physical education in the career education context.

The use of career implications throughout the basic education program helped children by enabling them to achieve mastery of academic skills and provided them with more accurate information concerning a wide range of career development opportunities.

The teachers, counseling staff and career development specialist were given in-service training on the concepts involved in the project. Consequently, the program featured a strong career counseling and guidance component.

McKeesport

The McKeesport project focused upon the development, operation, testing, expansion and diffusion of a comprehensive career education program K-12. Emphasis was placed upon developing a model that was adaptable by other school districts.

The following elements were included in the project: (1) occupational orientation, (2) manipulative "hands-on" activity, (3) roleplaying, (4) field trips, (5) resource persons and (6) subject matter tie-in. At all grade levels these elements were concurrent, overlapping and followed no specific sequence within the unit activities. However, emphasis shifts occurred as the program progressed from the elementary to the junior high to the senior high levels.

EVALUATIVE RESULTS

Ebensburg (Admiral Peary AVTS)

- Students

  Students--(1) had a very positive attitude toward the TIMES system, (2) had a good understanding of the system, (3) preferred TIMES to traditional methods of instruction, (4) perceived TIMES as an aid to career planning and vocational preparation and (5) mastered its (TIMES) use.

- Teachers

  Teachers felt involved in the TIMES concept and evaluated the inherent curricular implications as good. The teachers perceived the concept as having a positive effect on student behavior. In-service training workshops were rated as Good to Very Good.

- Teacher-Learning Environment

  The teacher-learning environment was conducive to healthy student development. While the number of students receiving an industry-related experience was fewer than desirable, 83 per cent of those participating were rated Good to Very Good by supervisors. After slightly over one year's operation, the students were involved in numerous school clubs and outside activities. The participation reflected a favorable "espirit de corps" among students as well as good student morale.

Crawford County

- Progress Toward the Career Integration Objective

  A panel of experts and teacher-participants concluded that above average progress had been made toward integrating career and self-awareness concepts into academic subject matter (K-6).

- Progress Toward the Cluster Exposure Objective

  With respect to the accomplishment of the objective of exposing each student to a range of career clusters within his own maturity level, the panel of experts assigned an overall average rating. On the other hand, in a somewhat stronger endorsement, 75 per cent of the teachers queried on this same point felt that most of the career cluster units were being developed with the student's maturity level in mind. Further, 98 per cent of the teachers indicated (on a questionnaire) that a good job was being done to include growth and development patterns in the formulation of career cluster units.

- Progress Toward the Individualization of the Student-Learning Objective

  Of all the objectives evaluated, "individualizing" the learning program in terms of students' interests and concerns received the highest rating from the panel of experts. Since much of the literature in education presently deals with the individualization process, this may have accounted in part for the high rating assigned the objective. However, teachers' responses, as determined by both the Developer and User Questionnaires, indicated strong support toward including concepts about careers as a viable part of the individualization process.

- Progress Toward the Feasibility of Utilizing Existing Computer Facilities Objective

  The computer has apparently facilitated Project CAREER for these reasons: (1) the computer offerred an unlimited number of individualized learning experiences; (2) teachers developed their own program with little or no training in computer science; (3) the computer afforded speedy service to both teachers and pupils and delivered printouts which accommodated different reading levels; (4) the computer acted as an efficient delivery system and enabled teachers to retrieve whatever units, or parts of units, deemed necessary; (5) the computer completed many data collection tasks, thus giving teachers more time to interact with students; and (6) the computer served as an efficient classroom management technique which enabled teachers to group students on the basis of their own interests, needs and abilities.

Philadelphia

The initial implementation efforts of the CCEM Program were not appropriately documented, nor were formalized procedures and/or techniques developed to evaluate both the product and process aspects of the CCEM Program. However, an analysis of existing information and interviews with the career education program staff appeared to support the contention that the project personnel and students generally supported the CCEM Program. Lack of documentation and appropriate techniques precluded making of more exacting process interpretations. It is obvious, however, that a process has been developed and that the ingredients are conducive to effective program development.

Further, the CCEM Program objectives were approached but not fully achieved. Of the four stated objectives, the development of a career education resource center was accomplished best, whereas the development of a viable counseling and guidance component was accomplished least. Two major teachers' strikes (nearly three months in duration) may have had a limiting effect on the achievement of higher level program goals.

McKeesport

- The traditional educational program (K-12) was enhanced through the integration of career development themes and occupationally-oriented activities.
- The traditional educational program (K-12) was enhanced through activities which emphasized the affective domain.
- Students (K-12) were introduced to a variety of occupational roles.
- Students (7-12) were provided with activities to help them explore in-depth the functions, skills and requirements of various careers and training opportunities.
- Students (K-12) were provided with activities relating the traditional educational program to real world activities.
- The traditional program (K-12) was enhanced by involving community resources in the educational process.
- A job placement center was established to expand the school's (10-12) responsibility to help each student make a positive transition from school to work.

CONCLUSIONS

Ebensburg (Admiral Peary AVTS)

- The Admiral Peary AVTS has implemented the TIMES concept with considerable success.
- Twenty career areas were identified with a corresponding sequence of units, modules and tasks.
- Over 1,000 task sheets were developed.
- The TIMES concept has produced a very flexible classroom teaching program.
- Summer in-service training activities were considered to be effective by most participating teachers.
- Computer hardware did not function satisfactorily but the software was quite effective.
- Students engaged in clinical experiences received above average ratings from their host supervisors.

Crawford County

- Project CAREER has made good progress toward integrating career and self-awareness concepts into the various academic subject areas.
- Most teacher-participants believe that the career cluster units are being developed with the student's maturity level in mind.
- The use of the computer and subsequent printouts can accommodate differences in reading levels and thus facilitate learning.
- The methodology of Project CAREER is sound and sufficiently flexible to meet changing students' needs, interests and abilities.

Philadelphia

- Over one-half of the 90 member project school's staff were involved in the career education program.
- A dynamic interaction process evolved between school personnel and the community to cooperatively develop a viable career education program at the project site.
- The career education resource center proved to be a valuable assess to the overall success of the program.
- An extended teachers' strike was a major constraint to the complete achievement of the project's goals.

McKeesport

- After one year of operation, the McKeesport activities evolved into an excellent program.
- Much of the program's success can be attributed to the Board of Education's and administrative support and superior leadership from the program's director.
- The career education staff exhibited a willingness to adapt, improve and integrate the program's activities into the ongoing school program.

RECOMMENDATIONS

Ebensburg (Admiral Peary AVTS)

- Computer-related problems detrimental to the project's activities should be resolved by the equipment vendor.

- A concentrated orientation program about the TIMES concept should be given to home school counselors.
- Additional faculty in-service training should be provided in adolescent psychology, classroom management, task sheet development and infusion-implementation strategies.

Crawford County

- The disparity between computer-listed resources and materials and those actually available should be corrected.
- Teachers should receive more in-service training to gain an understanding of the career clusters and their subsequent integration into the curriculum.
- Computer printouts should be shortened without sacrificing effectiveness.
- An interdisciplinary career core should be developed for integration into the basic academic skills.
- Career-oriented units should permeate the art, music and early childhood education curriculum.

Philadelphia

- A more formal procedure for documenting program activities should be established.
- A formal evaluation design should be developed to measure the process and product components of the career education program.
- The facilities of the career education staff and the career education resource center should be expanded as soon as possible.
- A career-oriented counseling and guidance program should be developed.
- Continued emphasis should be placed on the "tour development" phase of the program.
- More in-school and out-of-school hands-on experiences should be provided.

McKeesport

- Vertical articulation of the program should be clarified and rigorously practiced.

- A joint planning session should occur in the near future involving the program staff, teachers, principals and central office staff.
- A documentation system of successful curricular units should be conceptualized and implemented as soon as possible.
- The McKeesport Area School Board should be encouraged to make an onsite review of program activities.
- The desired involvement of the senior high school teachers and support personnel should be delineated and implemented.
- More involvement by the regular vocational staff members is urgently needed.
- A career education curriculum guide should be developed which is complementary to the McKeesport School District guide.
- An attempt should be made to completely centralize the placement function.
- The career education program should be articulated with other innovative programs within the district.

CHAPTER I

CAREER EDUCATION AT ADMIRAL PEARY AREA VOCATIONAL-TECHNICAL SCHOOL

A. Introduction.

The Admiral Peary Area Vocational-Technical School officially opened its doors during the fall of 1972. Located in Ebensburg, Pennsylvania, the Admiral Peary AVTS serves five of the 12 Cambria County School Districts which together account for a land area of 372.7 square miles, a population of 59,834 people, and a real property market value of approximately $120.8 million.

The Borough of Ebensburg, Pennsylvania, also the County Seat for Cambria County, is located close to the cities of Johnstown and Altoona, the two major urban centers of the Southern Pennsylvania Alleghenies Region. Many residents of Ebensburg work in Johnstown where the two largest employers are Bethlehem Steel and United States Steel Corporation. For the non-commuters, a major employer in the Ebensburg Area is Bethlehem Mines Corporation, a supplier of bituminous coal used in the manufacturing of steel.

Essentially, then, Admiral Peary's attendance area is comprised of people who commute to work beyond the borders of the attendance area and who typically live in population

clusters of less than 5,000 people. Although the 15 townships and 16 boroughs in the Admiral Peary service area are primarily residential centers, it is important to note that four of the five sending school districts have been classified as "low income" areas by the Federal Government.

Enrolled at the Admiral Peary Area Vocational-Technical School are approximately 800 students who attend the school on a half-time schedule. The sending schools, which include five public schools and one parochial high school, also have students for a half-day session, thus articulating the academic with the vocational. Participating schools include the following: Blacklick Valley High School, Nanty Glo, Pennsylvania; Cambria Heights High School, Patton, Pennsylvania; Central Cambria High School, Ebensburg, Pennsylvania; Penn Cambria High School, Cresson, Pennsylvania; Portage Area High School, Portage, Pennsylvania; and Bishop Carroll High School, Ebensburg, Pennsylvania.

Prior to the opening of the Admiral Peary Area Vocational-Technical School in the fall of 1972, a needs assessment was conducted by the school's officials to determine the kinds of curricula to be offered by Admiral Peary. Included in the needs assessment were data acquired from the Labor Market as well as

from the following sources: the Student-Parent Occupational Interest Survey; the Business and Industry Survey; the School Administrators/Guidance Counselors Survey; and the General Advisory Committee Survey.

Based on data from the surveys just mentioned, as well as on Labor Market needs and trends, the following twenty curriculum areas were identified as being the most appropriate for the Admiral Peary Area Vocational Technical School:

A. Agriculture Careers
   1. Agriculture Technology
   2. Horticulture and Floriculture

B. Automotive Careers
   1. Automotive Body Repair
   2. Automotive Mechanical Repair

C. Building Construction Careers
   1. Carpentry
   2. Electricity
   3. Masonry
   4. Plumbing and Pipefitting

D. Metal and Material Careers
   1. Machining
   2. Modern Methods Mining
   3. Welding

E. Service Careers

1. Cosmetology
2. Health Services
3. Marketing Technology
4. Personal Services and Transportation
5. Quantity Food Services

F. Technical Careers

1. Electronics Technology
2. Engineering Related Technology
3. Mechanical Drafting and Design Technology
4. Scientific Data Processing

All of the above curriculum areas are included in Project TIMES (Temporally Individualized Modular Education Scheduling) and serve as the content base for not only individualizing instruction, but also for the facilitation of instruction through the individualization of both students' and teachers' schedules. It is this focus, then - the individualization of both instruction and scheduling in an area vocational-technical school - that led to the receipt of an implementation and evaluation grant entitled: "Implementation of a Flexible Scheduling Program (TIMES Scheduling) Built Around the Career Aspirations of Each Student: A School-Based Career Education Model."

Funded by the Research Coordinating Unit of the Pennsylvania Department of Education, the TIMES Project will have covered, upon the expiration of the first year's funding, the time period March 1, 1972, through June 30, 1973. What follows now is a synthesized evaluation of Project TIMES' first year of operation. (Data Sources: Pennsylvania's Regions, Harrisburg, Pa.: Pennsylvania State Planning Board, 1967; Final Report: A Modular Scheduling Program for Vocational-Technical Schools, Admiral Peary Area Vocational-Technical School, Ebensburg, Pa., June, 1972).

B. The Project's Major Aspects.

The major aspects of the Admiral Peary Area Vocational-Technical School Project have been identified as follows:

1. identification of twenty career areas;
2. use of the Dictionary of Occupational Titles as a system for numbering and classifying the various occupations within a given area;
3. identification of the behaviorally-described skills required for the various occupations;
4. development of the required skills through the use of tasks, modules and units; and
5. management of the system through the use of computer hardware and software.

C. Evaluative Procedures.

This report is based on data which were collected utilizing the following evaluative procedures:

1. Appropriate conferences were held on a regular basis with Dr. Brian Fluck, the Project Director, and Dr. Edward Lareau, the Director of Research.

2. Task sheets were randomly sampled to determine their appropriateness for the Program being developed.

3. Hardware was examined for a determination of input-output efficiency.

4. Computer software was analyzed to assess its effectiveness in monitoring student activities and in providing useful information to counselors and teachers.

5. Interviews were held with 10% of the morning and afternoon students attending Admiral Peary.

6. Interviews were held with the teaching staff at Admiral Peary.

7. Observation scales were used to assess the instructional environment.

8. Reactions of employers were obtained relative to the behavior of students involved in the clinical experiences.

9. Interviews were held with the chief school officers representing the six sending schools.

10. Interviews were held with the home school counselors who were primarily responsible for student selection.

11. The School Morale Scale was administered to all students.

12. The Purdue Teacher Morale Scale was administered at the beginning and conclusion of the academic year.

13. Quarterly reports were thoroughly reviewed.

D. Evaluative Sources.

1. Curricula Materials.

The units and modules, derived directly from the Dictionary of Occupational Titles, are organized into twenty job categories based on the community employment market. Already nearly 1,000 of the 7,000 task sheets have been completed. The number of identified tasks per job category range from 1 to 600; the number of modules, from 4 to 29.

Table I includes the task sheet performance for the period August, 1972, through March, 1973. During this period, the students completed over 826 different task sheets, amounting to almost 30 task sheets per student. As a measure of flexibility in the various areas, the percentage of task sheets not completed on the same day was computed. Thus, while a lock-step pattern was found to exist in Agricultural Technology and Carpentry, a very high rate of individualization characterized both Cosmetology (100%) and Health Services (97.92%). The combining of all Career Areas indicated that 35.47% of the task sheets were not completed by all students on the same day. The TIMES Project is to be commended not only for its curricular flexibility, but also for its Computer Managed Instruction (CMI Softward) as well.

2. Computer Hardware and Software.

Computer hardware consists of an IBM 1130 (16k) with a System 7 to spool information provided by IBM remote data entry devices. The system also possesses tape, disc and high speed printing capability. In the presence of evaluators, jobs in Cobol, RPG and Fortran were run on the 1130. Then information was input into the system from a remote entry point. However, the remote entry function could not be demonstrated because IBM had not delivered the software necessary to support the remote entry function. In addition, computer personnel indicated that IBM had decided not to support 1130 software. It appears, then, that the computer system performance has become a distinct liability to the Project.

TABLE I. TASK SHEET PERFORMANCE BY CAREER AREA FOR PERIOD 8/29/72 to 11/20/72

Area	Students X Task Sheets	Task Sheets	Flexibility: Task Sheets Not Completed on Same Date	Flexibility: Percent of Task Sheets Not Completed on Same Date
Agriculture Technology	2460	61	0	0.00
Horticulture	1876	135	22	16.30
Automotive Body Repair	507	16	3	18.75
Automotive Mechanical Repair	365	13	2	15.38
Carpentry	1224	28	0	0.00
Electricity	1875	51	29	56.86
Masonry	1261	28	10	35.71
Plumbing	973	35	8	22.86
Machining	2017	59	33	55.93
Mining	842	32	12	37.50
Welding	1541	60	27	45.00
Cosmetology	1412	37	37	100.00
Health Services	1396	48	47	97.92
Marketing Tech.	1650	59	6	10.17
Personal Srvs.	1101	43	24	55.81
Quality Foods	910	31	6	19.35
Electronics	N/A	N/A	N/A	N/A
Envir. Tech.	258	17	1	5.88
Mech. Drafting	592	37	23	62.16
Data Processing	1066	36	3	8.33
TOTAL	23,426	826	293	35.47 Avg.

The software systems developed by the TIMES staff included the tasks and units completed by the student and by the class. The staff has also developed a sophisticated Computer Manager Instruction (CMI) package which monitors the progress and flexibility of each of the twenty Career Areas. This will be of great assistance to Project Management.

3. Student Reactions.

To determine student attitudes toward the Project, the evaluators interviewed a 10% random sample of morning and afternoon students. A total of 119 students were interviewed. Since two student groups exist (morning and afternoon student populations), all students will be reported in three ways: (1) AM (morning students); (2) PM (afternoon students); (3) total response. Although there are two different student groups, their interview responses were so similar they could have been reported as a single student body. The only response differences which occurred were on the Student Morale Scale.

4. Individualized Nature of the Program.

To evaluate the degree of individualized instruction, two questions were posed: the first, to ascertain the diversification of classtime activities; the second, to determine the time invested to complete the task (See the Student Interview Schedule, questions 10 and 11, Appendix A_1).

Table II indicates the students' answers support the individual nature of the program. The students (84%) are working on several different activities in one class period and 86% of the students report the time completion rate varies with individual students.

5. Students Attitudes Toward "TIMES" Scheduling.

In order to ascertain the attitude of students experiencing the TIMES scheduling system for the first time, three aspects were explored: (1) their attitude toward the way activities were scheduled; (2) a comparison of TIMES with the traditional system (their home school); and (3) any change in attitude since starting the program.

TABLE II. STUDENT'S RESPONSE TO INDIVIDUAL NATURE OF THE INSTRUCTION

	AM		PM		TOTAL	
	N	%	N	%	N	%
1. In your class, all students working on same thing.	8	14	11	18	19	16
Students working on several different things.	51	86	49	82	100	84
2. On a particular task, all students spend about the same amount of time on a particular task.	9	14	9	15	17	14
The amount of time spent on a task varies from student to student	50	86	51	85	101	86

In addition, students were asked to rate individualized instruction on a 5-point scale from Very Good (5) to Very Poor (1). As Table III indicates, students gave an average rating of 4.4 to individualized scheduling. Thus, this system appears to be serving all levels of learners; that is, from slow learners who said they "don't have to keep up" to advanced learners who stated they "don't get bored."

TABLE III. STUDENT RATING* OF INDIVIDUALIZED SCHEDULING

	N	MEAN
AM	57	4.4
PM	60	4.35
TOTAL	117	4.4

*Very Good 5
Good 4
Fair 3
Poor 2
Very Poor 1

Table IV indicates a positive attitude toward TIMES scheduling. Specifically, 98% of the students stated that they liked the way classes were conducted at APVTS, 92% of them preferred the TIMES schedule to their home school schedule, and 82% of the students indicated that their positive attitude toward TIMES had not deteriorated throughout the school year.

When asked to elaborate on which changes impressed them the most, students reported the following: teacher availability, freedom, peer cooperation, and a relaxed atmosphere.

TABLE IV. STUDENT'S ATTITUDE TOWARD TIMES SCHEDULING

			AM		PM		TOTAL	
			N	%	N	%	N	%
1.	Do you like the way classes are conducted at APVTS?	YES	57	100	57	97	114	98
		NO	0	0	2	3	2	2
2.	Do you prefer the way activities are scheduled at APVTS to your home school?	YES	54	92	56	93	110	92
		NO	5	8	4	7	9	8
3.	Are you now less favorable toward the TIMES concept than at the start of the year?	YES	11	19	10	17	21	18
		NO	48	81	48	83	96	82

6. Student Orientation to the "TIMES" Concept.

In order to determine student familiarity with the TIMES concept, the question was posed: "Do you understand how the TIMES system works?" To be acceptable, a yes response required a brief description rated on a five-point scale. The student received a rating of "fair" if he could explain the task sheet and its application to his vocational direction; a rating of "good" if he could relate TIMES to modules and units; and a rating of "very good" for any further definition.

As Table V indicates, 83% of the students were aware of the TIMES concept. Further, when their descriptions were rated overall, the students received an average rating of 3.48. Evidently, students at Admiral Peary understand the use of the task sheet and have some additional knowledge about the spiraling nature of TIMES programming.

TABLE V. STUDENT'S AWARENESS OF TIMES CONCEPT*

	AM		PM		TOTAL	
	N	%	N	%	N	%
YES	51	86	48	80	99	83
NO	8	14	12	20	20	17

Evaluator's Rating* of Student Description

	AM	PM	TOTAL
N	50	57	107
Mean $\bar{X}$	3.48	3.47	3.48

*Key:

Very good	5
Good	4
Fair	3
Poor	2
Very poor	1

In addition, as Table VI indicates, 93% of all students interviewed felt that TIMES would help them in their career planning.

TABLE VI. STUDENT'S RESPONSE TO TIMES HELPFULNESS IN CAREER PLANNING

	AM		PM		TOTAL	
	N	%	N	%	N	%
YES	55	93	56	93	111	93
NO	4	7	4	7	8	7

In order to illicit reasons for the "Yes" responses, the students were asked, "How was it helpful?". Responses included the following:

N	How Helpful
"15	...already know the skills needed
10	...find out about the field
9	...can try out a lot of jobs
6	...can decide if you really want to do it
6	...can get a job quicker
3	...can find out what I like best
3	...can find out if I can do this".

7. Extent of Vocational Preparedness.

When queried about the matter of vocational preparedness, 99% of the students, as shown in Table VII, felt that they had a better understanding of the skills required for various occupations while 97% felt they were progressing toward meeting specific occupational requirements. Further, 87% of the students indicated they were better prepared than when they entered Admiral Peary while only 1% considered themselves to be vocationally unprepared.

TABLE VII. STUDENT'S RESPONSE TO VOCATIONAL PREPAREDNESS

		AM		PM		TOTAL	
		N	%	N	%	N	%
Do you better understand the skills required for various occupations improved since entering the APVTS?	YES	58	98	60	100	118	99
	NO	1	2	0	0	1	1
Do you feel you're making progress toward meeting the requirements of a particular occupation?	YES	59	100	56	95	115	97
	NO	0	0	3	5	3	3
State which best describes you:							
a. vocationally prepared		8	14	6	10	14	12
b. better prepared than upon entering APVTS		50	85	54	90	104	87
c. not vocationally prepared		1	1	0	0	1	1

8. Task Sheet Effectiveness.

Since the task sheet is the key learning activity of APVTS, students were interviewed concerning their preparation for the use of the sheet, ability to read and follow directions, and their activity between the completion of one task and the introduction of the next. (Refer to Questions 6, 7, and 12 in the Student Questionnaire, Appendix A_1).

As reported in Table VIII, 90% of the students felt they were prepared to use the task sheets. Further, 98% of them indicated they had little or no difficulty in following task sheet directions. When asked what they did upon completing the task sheets, 85% of students indicated they got new task sheets, 13% stated they kept busy until everyone "caught up," and 2% reported they "did nothing" while waiting for the others to finish.

TABLE VIII. TASK SHEET EFFECTIVENESS

	YES AM N	YES AM %	NO AM N	NO AM %	YES PM N	YES PM %	NO PM N	NO PM %	YES TOTAL N	YES TOTAL %	NO TOTAL N	NO TOTAL %
1. Prepared for task sheet	45	90	5	10	53	90	6	10	98	90	11	10
2. Can you read and follow directions?	53	98	1	2	56	98	1	2	109	98	2	2

3. When you finish a task, do you:	AM N	AM %	PM N	PM %	TOTAL N	TOTAL %
a. get new task	48	86	51	85	99	85
b. get busy till others finish	8	14	7	12	15	13
c. do nothing until others finish	0	0	2	3	2	2

9. School Morale Scale.

To further assess the effect of the TIMES concept on the affective domain, the Children's School Morale Scale was administered. The instrument, developed by Wrightsman, et al., contains 84-items designed to measure morale in these areas:

a. School Plant
b. Instruction
c. Administration, Regulations, and Staff
d. Community Support and Parental Involvement
e. Other Students
f. Teacher-Student Relationships
g. General Morale

Although the APVTS student body included a higher percentage of males and is older than the normative group (junior high school students), the data presented in Table VIII suggest that student morale at Admiral Peary is extraordinarily high.

Student responses to the instructional subtest are favorable but split, thus indicating a differential effect. The morning students, as Table IX shows, fall at the 77th percentile; the afternoon students, at the 61st. The reason for this AM/PM difference should be ascertained. However, the major fact emerging from the School Morale Scale results is that the Admiral Peary students are evidencing high morale, indicative of an excellent learning environment.

TABLE IX. PERCENTILE RANK* OF ADMIRAL PEARY STUDENTS ON THE SUB-TESTS OF THE SCHOOL MORALE SCALE

Sub-Test	AM Group	PM Group
School Plant	99	98
Instruction	77	61
Administration	74	65
Community	93	82
Other Students	77	59
Teacher-Student Relationships	59	48
General Morale	93	86

*Compared to Junior High school students.

10. Summary.

In view of the evidence, it appears that students at Admiral Peary (1) have a very positive attitude toward the TIMES system; (2) have a good understanding of the system; (3) prefer TIMES to traditional methods of instruction; (4) perceive TIMES as an aid to career planning and vocational preparation; and (5) have mastered its use. In general, the project is meeting its goals in this area.

E. Data Derived from Teachers.

1. Teacher Evaluation of TIMES.

Since the success of the APVTS project depends on teacher involvement and support, the evaluators queried the entire teaching staff to determine their attitudes toward the TIMES concept. Table X shows the teachers' ratings based on a five-point scale ranging from Very Good (5) to Very Poor (1). Overall, the staff has given the TIMES concept a positive rating.

In the curriculum area particularly, the teachers assigned ratings ranging from Good to Very Good to the following components: objectives (mean = 4.46), individualization of instruction (mean = 4.16), and preparation of materials (mean = 4.16). A copy of the Teacher Interview is included in Appendix A_2.

Teachers attached less success to the TIMES concept in the areas of pupil guidance (mean = 3.89), communications with potential employers (mean = 3.54), and communications with parents (mean = 3.00). In no case, however, did the mean fall below 3.00 or Fair.

In Table XI, data are included which indicate the teachers' feelings toward their involvement in the TIMES concept. On a four-point scale ranging from "great deal of involvement" (4) to "not involved" (1), all teachers except one expressed "moderate" to a "great deal of involvement" in the development of objectives, in the individualization of instruction, and in the preparation of materials. The one teacher who expressed only "slight involvement" was a newcomer on the staff who had not participated in the summer training program on task writing.

TABLE X. TEACHER EVALUATION OF TIMES*

Component	1	2	3	4	5	N**	Mean $\bar{X}$
Objectives			1	6	6	13	4.46
Individualization of Instruction			4	9	6	19	4.16
Preparation of Materials (tasks, modules, units)			3	10	6	19	4.16
Guidance of pupils in the utilization of TIMES	2	1	4	6	6	19	3.89
Communication of TIMES concept to potential employers	2		5	3	3	13	3.54
Communication of TIMES concept to parents	2	3	5	5		15	3
TOTAL N	6	4	22	39	27	98	
%	7	5	22	39	27	100	

*Key:
Very poor 1
Poor 2
Fair 3
Good 4
Very good 5

**Unusable data causes number changes

TABLE XI. TEACHER INVOLVEMENT* IN TIMES

Component	1	2	3	4	N	Mean $\bar{X}$
Objectives			4	9	13	3.77
Individualization of Instruction			6	13	19	3.57
Preparation of Materials (tasks, modules, units)		1	4	14	19	3.79
Guidance of pupils in the utilization of TIMES	1	2	2	14	19	3.42
Communication of TIMES concept to potential employers	8	8	2	1	19	1.84
Communication of TIMES concept to parents	7	7	5		19	1.84
N	16	18	23	51	108	
%	15	16	21	48	100	

*1=Not Involved; 2=Slight Involvement; 3=Moderate Involvement; 4=Great Deal of Involvement

2. Teacher Attitude toward TIMES.

As shown in Table XII, the teaching staff at APVTS appears to have a very positive attitude toward the TIMES concept. While only one teacher indicated a neutral attitude, the attitudes of 19 others ranged from positive to very positive. The mean score for the staff of twenty was 4.55.

TABLE XII. TEACHER'S ATTITUDE TOWARD TIMES CONCEPT

N = 20 $\bar{X}$ = 4.55

Very Positive	12
Positive	7
Neutral	1
Negative	0
Very Negative	0

3. Teacher Morale.

In order to determine the effect of the TIMES system on teacher morale, the Purdue Teacher Morale Scale was administered to the Admiral Peary faculty at the beginning and end of the academic year. The results of the Purdue instrument are presented in Table XIII.

TABLE XIII. PERCENTILE RANK OF ADMIRAL PEARY TEACHERS ON THE SUB-TESTS OF THE PURDUE TEACHER MORALE SCALE

Sub-Test	Pre	Post	Change
Rapport with Principal	68	71	+03
Satisfaction with Teaching	18	13	-05
Rapport among Teachers	67	59	-08
Teacher Salary	53	08	-45
Teacher Load	01	14	+13
Curriculum Issues	95	95	0
Teacher Status	27	27	0
Community Support	71	52	-19
School Facilities	08	76	+68
Community Pressures	08	27	+19

4. Teacher Evaluation of the Effect of TIMES on Students.

As seen in Table XIV, various facets of student behavior were used to assess the staff's evaluation of the impact of TIMES

on students. With the exception of pupil motivation, the mean score for each facet exceeded 4 (Good) on the rating scale. Since 86% of the ratings were either Good or Very Good, and only 2% were Poor, it would appear that teachers believe that TIMES is having a positive impact on student behavior. Especially noteworthy is the evaluation of TIMES' effect on pupils' attitudes toward school (4.45) and employability upon graduation (4.44).

TABLE XIV. TEACHER'S EVALUATION* OF TIMES EFFECT ON STUDENTS

Facet	1	2	3	4	5	N	Mean $\bar{X}$
Pupil Motivation		1	4	10	5	20	3.95
Pupil Achievement		1	4	7	7	19	4.05
Pupil Attendance			3	6	10	19	4.37
Pupils' Attitude toward School			2	7	11	20	4.45
Pupil Department and Conduct		1		8	10	19	4.42
Pupils' Attitude Toward the World of Work			2	13	5	20	4.15
Pupils' Understanding of Occupational Requirements		1	2	9	8	20	4.15
Employability of Pupils upon Graduation			1	10	7	18	4.44
N		4	18	70	63	155	
%		2	12	45	41		

*Key: Very Poor 1
Poor 2
Fair 3
Good 4
Very Good 5

5. Teacher Evaluation of In-Service Training.

During the summer of 1972, an in-service program was held to develop teacher understanding of the unique TIMES program. For participating, each teacher received two credits in Vocational Education from the University of Pittsburgh and two credits in Secondary Education from the Pennsylvania State University. Included in the workshop were such activities as: (1) writing behavioral objectives; (2) analyzing and developing curriculum content; (3) determining relationships between course content and occupations listed in the DOT; and (4) specifying prerequisites for modules.

Teachers' ratings of the in-service program are reported in Table XV. Half of the teachers rated the in-service training program Very Good (5), six others rated it Good (4), and two respondents thought it was Fair (3). Excluding the two teachers who were absent, the teachers' mean rating of the in-service training program was 4.4 (Good to Very Good).

TABLE XV. TEACHER'S RATING OF SUMMER IN-SERVICE TRAINING

N = 20 Mean X = 4.4

Very Good	10	5 (Key)
Good	6	4
Fair	2	3
Poor	0	2
Very Poor	0	1
N/A	2	-

6. Summary.

Teachers at APVTS not only feel involved in the TIMES concept and evaluate its curricular areas as Good, but they also perceive TIMES as having a positive effect on student behavior. In addition, their feelings about the in-service training workshop ranged from Good to Very Good.

F. The Teaching-Learning Environment.

At least two evaluators observed in each classroom using one scale to rate the student and two scales to rate teacher behaviors in the teaching-learning situation. A Likert and Semantic Differential Scale were used. The data are presented by Career Areas and represent the total school.

1. Students' Behaviors.

Students were rated by using a modified version of Ryan's Observational Scale. The composite ratings of observed student behaviors appear in Table XVI.

Scores can range between 1 and 7, with a score of 4.0 indicating neutrality or ambivalence. All Career Areas scores are far in excess of this value, ranging from 4.75 (Agriculture-Alertness and Technologies-Initiative) to 6.24 (Building Construction-Responsibility). As a general trend, the ratings are lowest in the Agricultural Area and highest in the Building Construction Area. The overall picture, however, is one of an alert, responsible, confident, and initiating student body.

2. Teachers' Behaviors.

The teachers' behaviors were on two scales. Each was recorded separately and the results are mutually reinforcing. Table XVII includes the nine dimensions used to rate

TABLE XVI. OBSERVATIONS OF STUDENT BEHAVIOR IN THE LEARNING SITUATION

Career Areas	Dimensions*			
	Apathetic-Alert $\bar{X}$	Obstructive-Responsible $\bar{X}$	Uncertain-Confident $\bar{X}$	Dependent-Initiating $\bar{X}$
Agricultural	4.75	5.25	5.00	5.00
Automotive	5.50	6.00	5.50	5.50
Building Construction	5.75	6.25	5.87	5.62
Metals & Materials	5.33	5.50	5.33	5.16
Service	5.40	5.90	5.80	5.20
Technologies	5.22	5.62	5.62	4.75
Total	5.40	5.80	5.42	5.20

*Scores range from 1 to 7 with 4 being midway between polar adjectives.

TABLE XVII. OBSERVATIONS OF TEACHER BEHAVIOR IN THE LEARNING SITUATION

Dimensions	Career Areas: Agricultural	Automotive	Building Construction	Metals & Materials	Service	Technologies	Total (weighed mean)
	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	
Fair	5.25	6.00	5.87	5.83	5.70	5.50	5.70
Responsive	5.00	6.00	5.50	5.50	5.70	5.50	5.35
Understanding	4.75	5.25	5.25	5.33	5.90	4.62	5.25
Stimulating	4.25	5.75	5.62	5.00	5.50	4.75	5.20
Alert	4.50	6.00	5.50	5.83	5.80	5.00	5.47
Confident	5.00	6.25	6.37	6.16	6.00	5.62	5.95
Systematic	4.75	5.75	6.00	5.83	5.80	5.87	5.74
Adaptable	4.75	5.50	5.14	5.00	4.90	4.28	4.89
Optimistic	4.50	6.00	5.62	5.83	5.40	5.14	5.43
Mean	4.75	5.83	5.65	5.54	6.63	5.14	N/A

the faculty. On a rating scale ranging from 1 to 7, the overall results show the faculty to be generally quite good with respect to the nine dimensions listed.

In addition, Table XVIII reinforces the observed behaviors reported in Table XVII. In 83% of the observations, teachers manifested personality qualities favorable to the teaching-learning environment. They were well organized and taught from a sound theoretical base. Less than one percent of the observations indicated that positive behaviors were seldom observed.

3. Clinical Experience.

To determine the effectiveness of the vocational preparation, employers were queried relative to the student's understanding materials in the DOT, work habits, attitude, appearance, and work skills, as well as his overall preparation to enter the world of work. As indicated by the responses in Table XIX, 83% of the employers rated the students as being Good or Very Good in all categories. Only one student was rated Poor on the matter of attitude.

Since the Admiral Peary Vocational-Technical School has been in operation for only one year, the number of students placed in industry was minimal. Therefore, the data in Table XIX are based on the evaluation of 28 Health Assistants who, as a group, were sufficient in number to evaluate. The additional data in Table XX, which were derived from evaluations of the clinical experience, tend to support the contention that Admiral Peary is producing highly capable, productive students.

4. Club Activities.

Although APVTS has only been in operation since fall, 1972, its students have already become involved in numerous outside activities. For instance, at a regional DECA Conference (January, 1973) in Indiana, Pennsylvania, Admiral Peary students won three second place awards, one third place and one fourth place award. In addition, several first place awards were won by Ad-

TABLE XVIII. TEACHER OBSERVATION SCALE*

ALL AREAS

		1	2	3	4	5	6
1.	The teacher lets the student take responsibility for what the student learns.	-	1	9	22	8	-
2.	The teacher respects students' feelings.	-	-	4	30	6	-
3.	The teacher has a pleasant classroom personality.	-	-	6	30	4	-
4.	There existed a good mix of teacher initiated and pupil initiated discussions.	-	-	11	23	3	3
5.	The teacher possesses a theoretical background adequate to his teaching.	-	1	1	20	17	1
6.	There is a good teacher-student rapport.	-	-	6	22	12	-
7.	Students feel free to discuss things with the teacher.	-	-	8	25	6	1
8.	The teacher is in control of the situation.	-	1	1	22	16	-
9.	The teacher treats the students as individuals not as a group.	-	-	4	24	12	-
10.	The teacher is well organized.	-	-	7	22	10	1
11.	The teacher creates interest in subject.	-	1	7	27	5	-
12.	The teacher is enthusiastic about his work.	-	-	7	22	11	-
	GRAND TOTAL	-	4	71	289	110	6
	%		.8	14	60	23	1.2

Key:
- Very Seldom 1
- Seldom 2
- Neutral 3
- Usually 4
- Almost Always 5
- No Chance to Observe 6

TABLE XIX. SUPERVISOR'S EVALUATION OF STUDENTS WITH CLINICAL EXPERIENCE

	1*	2	3	4	5
1. The student's understanding of materials in her DOT.	-	-	4	14	2
2. The student's work habits.	-	-	2	14	10
3. The student's attitude while working.	-	1	-	7	18
4. The student's appearance.	-	-	1	9	16
5. The student's work skills.	-	-	6	7	13
6. How well prepared is this student for the world of work?	-	-	12	6	8
TOTAL	-	1	25	57	67
%	-	.1	16	39	44

*Key: Very Good 5
Good 4
Fair 3
Poor 2
Very Poor 1

TABLE XX. PERFORMANCE OF CLINICAL EXPERIENCE STUDENTS ON THE APVTS RATING FORM (N = 26)

Aspect	Number Categorized As:					
	NR*	Unsatisfactory	Below Average	Average	Above Average	Excellent
Progress	0	0	0	7	12	7
Initiative	0	1	2	5	13	5
Reliability	0	0	1	9	3	13
Attitude	0	1	1	9	8	7
Cooperation	0	0	0	4	9	13
Appearance	3	0	0	5	7	11
Attendance	3	0	2	0	7	14
Judgment	3	0	1	11	8	3
Interest	3	0	0	5	12	6
Housekeeping	3	0	2	9	9	3
Intellect	3	0	0	5	17	1

*No rating available.

miral Peary students in a county-wide FFA Conference while another first place award was won in regional competition. Finally, as a further indication of "beyond the school" involvement, an Admiral Peary student won the first place award in Business Mathematics at the statewide DECA Conference in Lancaster, Pennsylvania, last March.

5. Summary.

It appears from the observations just reported that the teaching-learning environment at APVTS is conducive to healthy student development. Also, although the number of students receiving an industry-related experience was fewer than desirable, 83% of those who had a clinical experience were rated Good or Very Good by their supervisors. Furthermore, with little more than a year in operation Admiral Peary students are involved in numerous school clubs and outside activities which tends to reflect a favorable "esprit de corps" among students as well as good student morale.

G. Administrative and Staff Attitudes.

1. School Administrators.

To determine administrative attitudes toward the TIMES project, the administrators of the sending schools - five superintendents and one Catholic school principal - were interviewed. Considerable support was expressed for the project in general and Dr. Fluck in particular. All of the administrators felt they were kept well informed by the Director. When they were asked to explain the TIMES concept, all of them gave responses which indicated they understood the concept. All of the administrators had visited the school; some, many times.

When asked to state the strengths of the TIMES program, the administrators mentioned the following:

a. improved socio-economic status for the students;
b. availability of adult education;
c. individualized instruction; and
d. TIMES' appeal to task-oriented parents.

Reported weaknesses, on the other hand, were identified as follows:

a. inability to accommodate all students who applied because of building size; and

b. the lack of acceptance by some home school teachers of APVTS staff members.

It is interesting to note that adult evening school had provided an avenue for change in attitude. Parents once opposed to APVTS have become, in general, its supporters.

There was a reluctance on the part of the superintendents to evaluate prematurely the success of TIMES. However, they felt that if the program were to be proven successful, it would have major applicability for such educational specialties as special education, science, mathematics, and business education. All of the superintendents felt that the TIMES concept was a worthwhile educational experiment.

2. APVTS Staff Members.

Besides interviewing superintendents, the evaluators also interviewed the Supervisor of Vocational Education, the Coordinator of Vocational Education, and two guidance counselors. Cited as TIMES' greatest strengths were: (1) the addition of new teachers; (2) limitless potential for students; (3) lack of pressure; (4) self-management of completed task sheets; (5) career planning; and (6) individualized instruction.

TIMES' greatest weaknesses, on the other hand, were identified as follows: (1) lack of support on the part of a few teachers; (2) students not working up to their potential; (3) students' poor reading ability, and (4) the grading system.

Regardless of the limitations cited, all APVTS staff members saw the TIMES concept as having transferability to such areas as science, mathematics, business education, and IPI.

3. Home School Counselors.

The home school counselors, who play a major role in selecting students for Admiral Peary, were also asked to evaluate TIMES. Of the six counselors interviewed, four of them had a good or very good understanding of the concept; two of the six on the other hand, had a limited understanding of it. However, all of the home school counselors rated TIMES from Good to Very Good. Furthermore, they reported that the most positive reactions toward TIMES came from the brightest students.

While the home school counselors considered "freedom" to be a strength, they reported these weaknesses: (1) the inability of APVTS students to conform to home school rules; (2) an unsatisfactory selection process; (3) insufficient vocational program areas; and (4) unsuitable grading requirements.

When asked about its applicability to other educational settings, the following areas were mentioned: mathematics, science, business, industrial arts, home economics, and mini courses in such subjects as English and history.

All home school counselors expressed strong positive feelings toward their main contact, Mr. Charles Wilson, APVTS counselor.

4. Summary.

With respect to the three groups interviewed, superintendents tended to be more concerned about parents' and teachers' attitudes; APVTS staff members about teacher attitudes and student production; and home school counselors about program overlap between Admiral Peary and the sending schools.

Summarizing, then, the district Superintendents and APVTS staff members and the counselors appear to understand and to support the TIMES system.

H. Conclusions.

1. The Admiral Peary Area Vocational-Technical School has developed and adapted the TIMES concept with considerable success.

2. Dr. Brian Fluck, the Project Director, and Dr. Edward Lareau, the Research Director, are largely responsible for the Project's success.

3. The teaching and administrative staff have manifested strong support for the TIMES concept and have made a maximum effort to achieve the Project's goals.

4. The twenty Career Areas have been identified with a corresponding sequence of units, modules, and tasks.

5. A large number of task sheets (over 1,000) have been developed. Although the task sheets are of mixed quality, this is to be expected at this stage of the Project's development.

6. The "task sheets" approach has produced a Program which is far more flexible than traditional classroom teaching approaches.

7. The summer in-service training workshop was considered to be effective by most participating teachers.

8. While the computer configuration has not worked satisfactorily, software (developed by the TIMES staff) has proven to be quite effective.

9. Apparently, the students are aware of the TIMES concept and enthusiastically support it.

10. The school morale of students appears to be very high.

11. The TIMES concept is conducive to a good learning environment and has strong teacher support.

12. The students are alert, responsible, confident, and initiating in the classroom.

13. Students engaged in clinical experiences received above average ratings from their host supervisors.

14. The Chief School Administrators, the APVTS staff members, and the school counselors are, for the most part, supportive of the TIMES Project.

I. Recommendations.

1. The computer vendor should be contacted for assistance in correcting those computer-related problems which deter Project TIMES' effectiveness.

2. It appears that the hardware-software configuration is not adequate enough to develop an on-line retrieval system which operates simulatneously. Therefore, before additional hardware and software are added to the current system, the TIMES staff should explore other computer sources.

3. To insure a more viable role, home school counselors should be given more information about the TIMES concept through a concentrated orientation program.

4. Apparently, students understand the task sheets and how to use them, but they have a limited idea of the spiralling nature of TIMES. Therefore, teachers should be encouraged to further explain this concept with their students.

5. A more concerted effort should be made to have teachers interact with parents and employers to insure better feedback between the community and the school.

6. While clinical experiences for health assistants proved to be beneficial, similar experiences should be offered to more students.

7. Additional in-service training of faculty should be provided in these areas:

   a. adolescent psychology;

   b. classroom management;

   c. task sheet development; and

   d. infusion and implementation strategies.

8. The use of substitute teachers to enable regular staff members to work on task sheets should be continued and expanded.

CHAPTER II

CAREER EDUCATION IN THE CRAWFORD COUNTY SCHOOLS

A. Introduction.

The unique feature of Project CAREER is that its implementation is dependent upon the interworkings of the Federal Educational Project Center at Meadville, Pennsylvania, and a consortium of four schools whose districts encompass three Pennsylvania Counties: Crawford, Venango and Warren. Unlike many career education projects which, for the most part, tend to be "one-school" centered, the four school districts involved in Project CAREER--namely, Conneaut, Corry, Penncrest and Titusville--are pursuing a joint strategy for change in the schools which, if successful, may beneficially affect more students at one time than any school district could possibly do operating on its own.

Perhaps the consortium arrangement might be better understood if attention is given to the geographical area in which the participating school districts are located. Situated in the Pennsylvania Northwest, the Region encompassing the schools has boundaries which include the State of Ohio, especially industrialized Youngstown, on the west, Lake Erie and rural western New York State on the north, and forested Warren and Venango Counties to the east and southeast, respectively.

Yet despite the variety which characterizes the outlying areas, Crawford, Venango and Warren Counties have been subjected to economic changes which have had a major impact upon employment. Between 1950 and 1960, for instance, almost two-fifths of the area farms were consolidated or disappeared, causing a reduction of over 250,000 acres of tillable soil and a loss of over 7400 jobs. In addition, by 1960, almost three-quarters of the area's farms grossed less than $10,000 per farm, an amount which, at the time, agricultural authorities considered as a minimum for efficient operation. Besides losses in agriculture, over 1500 mining and 2900 railroading jobs were also lost or abolished. (Data Source: Pennsylvania's Regions, Harrisburg, Pennsylvania: The Pennsylvania State Planning Board, 1967.)

Inevitably, the effects of such economic conditions would lead to: (1) an increase in the incidence of the number of families on poverty (e.g., an increase of 278 families in a six year period); (2) an increase in the area's poverty rate (17.1%), making it higher than that of either Pennsylvania (16%) or the United States as a whole (15.1%); and (3) an intensified surge in the area's unemployment rate to over 7%. (Data Source: Joseph Raible, "Poverty in Crawford County, Pennsylvania,"

Crawford County Community Action Association, May 20, 1969.)

Perhaps the most direct result of these statistics is that both young and adult populations have had to either leave the area to seek employment, or to remain in the area without the advantages of new training or skills. Thus, concern over the adverse effects of these conditions was paramount in the decision to form a consortium of four schools--representing 17,260 elementary and secondary pupils--to launch Project CAREER, an innovative thrust which infuses career-oriented activities into academic subject areas, and utilizes the computer as a resource tool for individualizing and facilitating learning.

Participating in Project CAREER are nine elementary schools involving 3,198 pupil-participants and 115 teacher-participants. Two schools are located in the Conneaut School District (Crawford County); two other schools are part of the Corry School District (Crawford and Erie Counties); three schools are members of the Penncrest School District (Crawford County); and two schools are components of the Titusville School District (Crawford, Warren and Venango Counties).

Having stated the background information which led to the writing of the Project proposal, we may now consider the effectiveness of Project CAREER in its first year of operation.

B. Focus of the Evaluation Plan.

The Plan concerned itself with the following areas:

(1) Progress toward the stated objectives;

(2) Progress toward the grade level concept questions; and

(3) An analysis of the methodology employed to meet these objectives and concepts.

C. Progress Toward the Stated Objectives.

1. The Participants:

(a) All students in the Project

(b) All teachers in the Project

(c) All visiting teachers and counselors

2. The Evaluative Design.

To measure the Program's progress, questionnaires were administered to all the populations involved in the Project. In addition, logs were kept to ascertain further insights and observations. Each questionnaire was "user" oriented and contained items related to the Project objectives, thus affording an item by item analysis.

D. Progress Toward Grade Level Concept Questions.

1. The Participants:

(a) Experimental Group - Included one hundred forty-eight (148) students--representing levels K-2, 3-4, and 5-6--who were randomly selected from the Project's thirteen hundred students.

(b) Control Group A - Included one hundred forty-eight (148) students not involved in the Project but attending Project schools.

(c) Control Group B - Included one hundred forty-eight (148) students who were neither involved in the Project nor attending Project schools.

2. The Design.

To answer the question, "What is work?", kindergarten children were shown a series of drawings which were to be sorted into two piles: one, representing people at work; the other, people not at work. While the same procedure was used for each grade level, the concept questions were varied to suit the appropriate students involved. (See examples of the Grade Level Concept Questions and Drawings (K-2) in Appendix B_1).

Once the child divided the five drawings into two piles, the following scores were possible: two positives and two negatives. One drawing, which could be rated either "positive" or "negative," gave the child an extra bonus point (or six points for five drawings) if he could explain the reason for his choice.

E. The Methodology Employed to Meet the Objectives.

1. The Participants:

(a) All teachers in the Project

(b) All students in the Project

(c) Visiting teachers and counselors

2. The Design.

Questionnaires and opinnaires were developed to determine, in a subjective way, whether or not the methodology and activities were better for children than traditional methods. In addition, special attention was paid to ascertain the extent to which the activities promoted the development of positive self-concepts.

F. The Expected Results.

The implementation of this Evaluative Plan should ascertain the

following:

(1) The progress of the Project in relation to its stated objectives

(2) The comparability of the experimental and control groups as to their awareness of the concept questions (content)

(3) The effectiveness of project activities on the improvement of students' self-concepts

(4) The Project's progress in attempting to create a humanistic program for learning

G. Evaluation of Progress toward Objectives.

1.10 A career-oriented curriculum will be developed which will:

1.11 Integrate career and self-awareness concepts with the basic academic materials of grade levels K-6.

1.12 Expose each student to a range of career clusters within the context of his maturity level.

1.13 Individualize the learning program for each student to meet his interests and concerns.

1.14 Demonstrate the feasibility of using existing computer facilities for the storage and retrieval of career-oriented curricula.

1.20 This curriculum will serve as a career-oriented model for use at levels K-6.

2.00 Evidence of Progress toward Objective 1.11:

2.10 The integration of career and self-awareness concepts with the basic academic materials of grade levels K-6 as determined by student units.

2.11 Quantity of Integration.

Number of units integrated - 9

Number of students involved with these units - 1,300

Number of teachers involved with these units - 46

2.12 Quality of Integration through an Analysis by the Panel of Experts.

2.12.0 Composite rating by unit on a five point scale (one through five, low to high respectively).

2.12.0.1	Consumer homemaking	3.7
2.12.0.2	Agriculture-Business	3.0
2.12.0.3	Personnel Service	3.0
2.12.0.4	Business Office	3.1
2.12.0.5	Transportation	2.9
2.12.0.6	Communication	3.3
2.12.0.7	Health	2.9
2.12.0.8	Manufacturing	3.0
2.12.0.9	Public Service	3.1

2.13 Quality of Integration through an Assessment of the Developer and User Questionnaires.

2.13.0 Relevance of Topic toward Academic Career Education.

SA	A	N	D	SD
41	4	1	0	0

2.13.1 Teachers' Self-estimates of Their Ability to Integrate Career and Self-awareness Concepts with Basic Academic Material.

Yes	No	No Response
152	27	5

2.13.2 The following reflect samplings of teachers' opinions concerning the quality of integration as determined by the Developer Questionnaire which appears in Appendix B_2. An example of a complete listing of all statements to Question No. 20 is included in Appendix B_3.

Developer Questionnaire: Question No. 20

As a result of your experiences in Project CAREER, do you possess different ideas, persuasions, and viewpoints about education as they relate to career education? If so, please list some examples.

Samplings of Teachers' Responses

Teachers in my group shared some of their experiences that are somewhat related to helping a child be aware of careers. This gave me some definite ideas for use in my classroom. (Now we can channel some of our past practices into career awareness.)

I received many ideas from this project that I intend to use in my classroom. Before this project I wouldn't have seen this possible.

I had not considered career education at all in the elementary grades. From working on this project I can see a need for making elementary children aware of careers.

Several units were received including the one I worked on. Without this procedure of developing a unit it would have been difficult for me to use the unit in the classroom, at my grade level. I am wholeheartedly in favor of the project because of its value to the child who is not college oriented. As a rough estimate, over half of our high school graduates are unaware of the opportunities available to them careerwise. This program will give them greater career awareness.

I feel that if the project works, it will do great things for the kids. Maybe the kids won't get the idea that they all have to go to college.

Developer Questionnaire: Question No. 21

As a result of your experience in Project CAREER are you more aware of problems in education as they relate to career education, specifically your own school and classroom due to your participation in the workshop? If so, what kind of problems?

Samplings of Teachers' Responses

I'm seeing how subject-oriented my classroom has been.

Most kids in my rural area have little or no idea of the kind of jobs available.

I feel too many of the children are just taught "the book" and not more aware of what's around them.

Before the project we were not doing much in the way of career awareness. Now there will be a more organized approach to careers.

We are too college oriented in our teaching.

Developer Questionnaire: Question No. 25

As a result of your experiences in Project CAREER are you more willing to work with others to solve instructional problems? If so, what type of instructional problem?

Samplings of Teachers' Responses

We have been discussing the opening up of our classrooms. Talking with others, comparing ideas and results, etc. - give confidence.

Curriculum - classes and courses aimed toward career areas.

Making education more relevant and enjoyable.

A large part of the benefit of this project for me has been getting to know the rest of my group.

More relevancy of present school subjects to every day problems and changes people must encounter.

Developer Questionnaire: Question No. 26

As a result of your experiences in Project CAREER do you now have an understanding of the philosophy, concepts, and implications of career education? If yes, please explain.

Samplings of Teachers' Responses

I think I can see the greater need for career education.

Career education is very important to emphasize, even to the very young.

Though the workshop afforded me a basic understanding, this year's implementation should prove to be an invaluable experience in seeding the philosophy and concepts. It may take several years to prove the implications.

This type of education is more practical, more relevant, more useful to students today.

When I first entered the class, my ideas of what we were to accomplish were very vague. After working on a unit in career projects I feel that I should be able to progress with enjoyment using many units that were developed.

2.13.3 Teachers' self-estimates of their ability to integrate concepts about careers and self-awareness with academic subject matter.

Yes	No	No Response
60	22	44

2,13.4 The following statements, extracted from the User Questionnaire (See Appendix B_4), amplify the meaning of Objective 2.13.3.

User Questionnaire: Question No. 12

Do you possess different ideas, persuasions, and viewpoints about education and its processes since your experiences with the Guide? Please explain.

Samplings of Teachers' Responses

These units have made me more aware of individual differences and have given me more confidence in my ability to meet them.

This could be very effective in any area (reading, math, etc.). In fact, it would be excellent!

I prided myself in being non-rigid, but discovered how very "traditional" I really was! I hope this has and will continue to help me "open" my classroom. I find my class is quite responsive to this approach.

Reinforces my belief that traditional classes tend to teach toward the college bound student neglecting the bread and butter society.

This work is relevant to life. It covers a much broader scope than one textbook course covers.

2.13.5 Analysis of the Data.

Based on the observations of the panel of experts (four professional educators not involved in any phase of Project CAREER), the career units were rated from a high of 3.7 to a low of 2.9, with an overall average rating of 3.1 for all nine career units. When considering these data in

relation to the first project objective - to integrate career and self-awareness concepts with academic subject matter (K-6) - the career education units have been rated as being above average.

While it may appear that a discrepancy exists between the responses of teachers in the Project and the panel of experts, this may have occurred because of "interpretive" rather than "true" differences. For instance, teachers who taught career concepts as part of the regular daily lessons considered this approach to be integrative. On the other hand, the panel of experts viewed integration as a "career core," inter-disciplinary in nature, involving the fusion of reading, mathematics, science, language arts, etc. While there may be slight differences in approaches at this period of the Project's development, it is the intention of the Career Education Staff to move in the direction of an inter-disciplinary "career core" as the panel of experts suggest.

In conclusion, it would appear from the evidence elicited from the panel of experts and teacher participants that Project CAREER has made good progress toward the achievement of its initial objective, namely, integrating career and self-awareness concepts into academic subject areas. Further, the majority of teacher participants have come to see career education as a strategy for developing relevant curricula and for giving meaning and purpose to the school.

3.00 Evidence of Progress toward Objective 1.12:

3.10 Exposure to a range of clusters within the

pupil's maturity level.

3.11 Quantity of exposure.

3.11.0 Number of clusters developed for each maturity level.
Number possible - 9
Number developed - 9

3.11.1 Number of students who had clusters available at their respective maturity level - 1,300.

3.12 Quality of exposure to the cluster through analysis, etc.

3.12.0 Composite rating by unit on a five point scale. (One through five, low to high respectively)

3.12.0.1	Consumer homemaking	3.6
3.12.0.2	Agriculture-Business	3.3
3.12.0.3	Personnel Service	3.0
3.12.0.4	Business Office	3.5
3.12.0.5	Transportation	2.9
3.12.0.6	Communication	4.3
3.12.0.7	Health	3.1
3.12.0.8	Manufacturing	2.9
3.12.0.9	Public Service	3.0

3.13 Quality of exposure to clusters through the Developer and User Questionnaires.

3.13.0 Philosophy of exposure evident

SA	A	N	D	SD
34	12	0	0	0

3.13.1 Pupil growth and development patterns considered within a range of career clusters

Yes	No
45	1

3.13.2 Analysis

Most of the positive responses affirmed that career clusters were developed in relation to the student's age and mental maturity level. Only one respondent stated that the career clusters were not written for the primary student.

3.13.3 Orientation toward career awareness.

Yes	No
42	1

3.13.4 Samplings of comments:

Yes, the activities and content did not deal with the theoretical concepts - but the job itself. What the people do - what they call it - what their tools are.

I feel the children gained insights into many areas of careers that they were not aware of before.

Yes, but at the first grade level there was a need for a great deal of general background information preliminary to any career aspects.

Whereas in the past, "Community Helpers" units had emphasized contributions and interrelationships among community workers, in the Public

Service Unit, the emphasis is on what they do.

The majority of objectives and activities required some knowledge showing there were jobs to do these types of activities.

3.14 Analysis of the data.

With respect to the accomplishment of the objective of exposing each student to a range of career clusters within his own maturity level, the panel of experts assigned an overall rating of 3.3. On the other hand, in a somewhat stronger endorsement, 75% of the teachers queried on this same point felt that most of the career clusters units were being developed with the student's maturity level in mind. Further, 98% of the teachers indicated (on the Questionnaire) that a good job was being done to include growth and development patterns in the formulation of career clusters units.

Although there was strong agreement on the part of teachers that the above objective was being met, they did make the following recommendations:

(1) Students should be given more background information and exposed to more orientation activities prior to the teaching of particular career clusters units; and

(2) Teachers should be given a better understanding of the structure of career clusters as well as more help in developing them during the pre-planning phase.

4.00 Evidence of Progress toward Objective 1.13:

4.10 Individualization of the Learning Program

4.11 Quantity of Individualization

4.11.0 Number of variables on student profile sheet (See Appendix B_5) 124

4.11.1 Number of individualized printouts 1650

4.11.2 Number of teacher-pupil conferences to help individualize the students' selections and options within the unit 1650

4.11.3 Average number of objectives available for each student's individual selection per unit 110

4.11.4 Average number of content items available for each student's individual selection per objective 270

4.11.5 Average number of instructional activities available for each student's individual selection per objective 350

4.11.6 Average number of instructional resources available for each student's individual selection per objective 500

4.11.7 Average number of measuring devices available for each student's individual selection per objective 200

4.12 An Analysis of the Quality of Individualization

4.12.0 Composite rating by unit on a five point scale. (One through five, low to high respectively)

4.12.0.1 Consumer homemaking 3.7

4.12.0.2 Agriculture-Business 3.3

4.12.0.3	Personnel Service	3.8
4.12.0.4	Business Office	3.2
4.12.0.5	Transportation	3.4
4.12.0.6	Communication	4.8
4.12.0.7	Health	3.2
4.12.0.8	Manufacturing	3.8
4.12.0.9	Public Service	3.2

4.13 Quality of individualization as determined by the Developer Questionnaire.

4.13.0 Scope and focus were on individualization

SA	A	N	D	SD	NR
7	24	9	5	0	1

4.13.1 Resources (human and material) are needed for the development of an individualized unit

SA	A	N	D	SD	N
15	24	4	3	0	0

4.13.2 Developers were given experience in personal individualization

SA	A	N	D	SD
82	41	8	7	0

4.13.3 Teachers changed their behavior in the direction of individualization

Yes	No	No Response
89	39	10

4.13.4 Concern was shown for the development of individual pupil growth and developmental patterns

Yes	No
45	1

4.13.5 The following comments reflect teacher opinions concerning the quality of individualization:

Developer Questionnaire: Item No. 18

The make-up of the group was sufficiently diverse to provide an adequate cross-section of opinion and expertise.

I will try to be more conscientious in stressing careers.

I hope to become more aware of and involved in my student's individual interests.

I hope so. I became more aware of individual wants and needs and how to help others to their satisfaction.

I plan to teach more units on career awareness and have more discussion on careers.

We will spend more time learning about careers and go on more field trips, and use resource people (I didn't realize the availability of community resources until this project).

Developer Questionnaire: Question No. 24

As a result of your experiences in Project CAREER do you feel increased respect for others' opinions regarding solutions to educational problems as they relate to

career education? If so, describe.

Working as closely as we did in a group there were many opinions expressed. I gained much from this - like others' opinions of classroom set-up and materials used (ITA, etc.)

In planning at school, we need to listen more to others.

While not being too specific, our group discussed many problems that will arise in teaching our units. We tried to benefit from each other's past experiences and gave advice to each other on solutions to problems.

I respected their opinions to begin with. I thought it was beneficial to work with people I did not know.

The older, more experienced teachers have earned more of my respect because of some of their opinions.

4.14 Analysis of Objective 1.13.

Of the objectives considered thus far, "individualizing" the learning program in terms of students' interests and concerns received the highest rating from the panel of experts. More specifically, the judges' ratings ranged from 4.8 to 3.2, with the average rating being 3.6. Since much of the literature in education presently deals with the individualization process, this may have accounted in part for the high rating assigned this objective. Even with this possibility, however, teachers' responses, as determined by both the Developer and User Questionnaires, indicated strong support toward including concepts about careers as a viable part of the individualization process.

5.00 Evidence of Progress toward Objective 1.14:

5.10 Feasibility of existing computer facilities

5.11 Quantitative

5.11.0 Computer use: One UNIVAC 9300 32K - Tape Drive and Disc Drive Combination.

5.11.1	Total storage in K's	32 K
5.11.2	Percent of storage used by the Project	16 K
5.11.3	Average number of total combinations stored and retrieved per unit	2950
5.11.4	Total number of readable print-outs which have been retrieved	1650
5.11.5	Total possible	ad infinitum

5.12 Qualitative

The computer has apparently had a facilitative effect on Project CAREER for these reasons: (a) The computer offers an unlimited number of individualized learning experiences; (b) Teachers can develop their own program with little or no training in computer science; (c) The computer affords speedy service to both teachers and pupils, and delivers print-outs which accommodate different reading levels; (d) The computer acts as an efficient delivery system and enables teachers to retrieve whatever units, or parts of units, they deem necessary; (e) The computer completes many of the data collection tasks, thus giving teachers more time to interact with their students; and (f) The Computer serves as an efficient classroom management technique which enables teachers to group students on the basis of their own interests, needs, and abilities.

6.00 Progress toward Grade Level Concept Questions.

The Participants:

(1) Experimental Group - Included one hundred forty-eight (148) students - representing levels K-2, 3-4, and 5-6 - who were randomly selected from the Project's thirteen hundred students.

(2) Control Group A - Included one hundred forty-eight (148) students not involved in the Project but attending Project schools.

(3) Control Group B - Included one hundred forty-eight (148) students who were neither involved in the Project nor attending Project schools.

The Design: Grade Level Concept Questions.

To answer the question, "What is work?", kindergarten children were shown a series of drawings which were to be sorted into two piles: one, representing people at work; the other, people not at work. While the same procedure was used for each grade level, the concept questions were varied to suit the students involved.

Once the child divided the five drawings into two piles, the following scores were possible: two positives and two negatives. One drawing, which could be rated either "positive" or "negative," gave the child an extra bonus point (or six points for five drawings) if he could explain the reason for his choice.

6.10 The concept questions

6.11 What Is Work? (K)

6.12 What Are the Occupations?

6.13 Who Works in These Occupations?

6.14 What Is Meant by the Life Style of People?

6.15 Whom Do People Work With?

6.16 Where Are These Jobs?

6.17 How Do They Accomplish Their Jobs?

6.20 Student results per unit per grade

6.20.1 Kindergarten - What Is Work?

6.20.1.1 Experimental N = 15

Control A - N = 15

Control B - N = 15

6.20.1.2 Mean Scores of correct identifications

Experimental = 3.6

Control A = 3.9

Control B = 3.7

6.20.2 Grade 1 - What Are the Occupations?

6.20.2.1 Experimental N = 15

Control A - N = 15

Control B - N = 15

6.20.2.2 Mean scores of correct identifications

Experimental = 3.9

Control A = 3.9

Control B = 3.8

6.20.3 Grade 2 - Who Works in These Occupations?

6.20.3.1 Experimental N = 15

Control A - N = 15

Control B - N = 15

6.20.3.2 Mean scores of correct identifications

Experimental = 4.5

Control A = 4.0

Control B = 4.3

6.20.4 Grade 3 - What Is Life-Style?

6.20.4.1 Experimental N = 28

Control A N = 28

Control B N = 28

6.20.4.2 Mean scores of correct identification

Experimental = 3.7

Control A = 3.9

Control B = 3.9

6.20.5 Grade 4 - Whom Do People Work With?

6.20.5.1 Experimental = 15

Control A N = 15

Control B N = 15

6.20.5.2 Mean scores of correct identifications

Experimental = 3.9

Control A = 4.4

Control B = 4.8

6.20.6 Grade 5 - Where Are These Jobs?

6.20.6.1 Experimental N = 20

Control A N = 20

Control B N = 20

6.20.6.2 Mean scores of correct identifications

Experimental = 4.4

Control A = 4.3

Control B = 4.6

6.20.7 Grade 6 - How Do They Accomplish Their Jobs?

6.20.7.1 Experimental N = 39

Control A N = 39

Control B N = 39

6.20.7.2 Mean scores of correct identifications

Experimental = 4.2

Control A = 4.4

Control B = 4.3

6.30 Data analysis

An examination of the above data reveals that overall, with the exception of the first and second grades, the Control Groups outscored the Experimental Groups in the number of correct identifications. However, these results may have occurred because of faulty instrumentation, faulty test administration, content constraints, and/or the quality of the drawings themselves.

To avoid a similar occurrence in the future, the evaluators recommend the following:

(1) Expose the students to drawings which cover a more comprehensive range of occupations;

(2) Supplement the drawings with open-ended questions and taped interviews of students;

(3) Administer the drawings individually, thus reducing the possibility of "copying";

(4) Emphasize the content to be taught at each grade level and expand the content to include careers not likely to be known; and

(5) Improve the evaluation process by including in-depth interviews and broader evaluative instruments.

7.00 An Analysis of the Methodology Employed.

To expand the data acquired from both the Developer and User instruments, an Anonymous Questionnaire was administered to the teachers involved in Project CAREER. Over 45% of the teachers responded. The questions employed and samplings of teachers' responses appear below. A copy of the Anonymous Questionnaire is included in Appendix B_6.

PROJECT CAREER 1972-73

ANONYMOUS RESPONSES OF TEACHERS ON THE EVALUATION OF METHODOLOGY

1. In your opinion, what are the good points of the Career Education Program's methodology?

   (a) What I like best is the way it can be adapted for individual work or for group work. Also the way the students have a choice of activities.

   (b) The idea behind the program - to make children aware of careers - is important and excellent.

   (c) Individual printouts automatically motivate most students. Each printout reflects one particular student's interests. We can't become more selective.

   (d) In many classrooms, Career Education provided a much needed change of pace. It provides for a wide latitude of individual differences.

   (e) At the awareness level, it is an excellent program to give students a broader view of the wide range of job possibilities.

2. In your opinion, what is wrong with the Career Education Program's methodology?

   (a) Printouts are too long in the area of materials. Activities are not explained well enough. The way the printouts are designed requires too many hours of pre-planning by the teacher for all the more benefit children seem to glean from the program.

   (b) A hang-up in time, that is, the slow processing of student printouts.

   (c) It lacks a well defined program of progress in basic skills.

   (d) Each student wants his printout to be unique, but it isn't since so many activities are the same for different objectives.

(e) Not enough available materials for activities are listed. Innovation contributed much to this area.

3. How does the model's methodology contribute toward the development of a positive self-concept?

(a) There's a no failing aspect, since the children choose their interests and pace themselves.

(b) I think it contributes greatly. The students who enjoy working on this can go at their own speed and feel a sense of accomplishment and pride not normally felt outside of "careers" work!

(c) Working in groups and getting out into the community provide the child with another "mirror" in which he may see yet another facet of his "self" reflected.

(d) It allows the child to identify with a part of the real world. He can stay with a concept for as long or as short a period as he cares to.

(e) Frankly, most of my children became aware of the importance and need for "blue collar" jobs, i.e., a ditch digger is necessary.

4. How do you think this methodology compares with the other methodologies or teaching techniques you have used?

(a) I think it is a much better teaching technique. It creates much more enthusiasm on the part of the student and the teacher. Each student can do something different instead of all doing the same thing.

(b) I ended up teaching it quite similar to other units - mainly because I was unable to have children read their printouts.

(c) I believe it is basically sound and encourages creativity. It recognized individual differences to a greater degree than most other techniques.

(d) It still needs to be polished and accepted, especially by parents, students and other teachers who are not fully

aware of the programs.

(e) It correlates very well with the techniques encouraged today, but what bothers me is that it allows the student to "sluff-off." He starts many activities, but finishes only a few.

5. How do you feel the children react to this Program? Describe briefly.

(a) Very enthusiastically! They all loved it and wanted to do it much more than they did. They didn't feel they had enough time to work on this program. They really enjoyed doing various projects and got very involved. They were extremely interested in knowing what some of the other students were doing.

(b) Children react with enthusiasm. I believe it gives them a real sense of adventure into the real world and therefore has meaning for them. It's not "just another assignment."

(c) Very favorably! My students were constantly asking when their "computer papers" were coming. It's a complete unique experience. The change from the structured classroom is most welcomed.

(d) They look forward to it. They seemed to think of it as "play" rather than school "work."

(e) I felt my children reacted favorably. They liked the activities and they enjoyed the variety of sources of information. They enjoyed working together. They became more alert to newspaper articles and magazine articles. Several showed much initiative in doing new things.

6. Implications of Teachers' Anonymous Responses to Questions 1-5.

Question No. 1: Anonymous Questionnaire

1. Children are being provided with experience designed to increase their career awareness, extend their knowledge

of the world of work, and explore them to the numerous career opportunities available to them.

2. Based on the student's abilities, needs, and interests, instruction is individualized through the use of computer printouts which include specific objectives, content material, learning activities, resources, and appropriate teaching aids and devices.

3. A myriad of activities and materials are available to teachers which lend variety to the accomplishment of stated goals and objectives.

Question No. 2: Anonymous Questionnaire

1. Resource materials, while extensive in the printout listing, are often difficult to obtain.

2. Numerous learning activities apply to several objectives and, consequently, tend to be confusing. Units would be far more effective if they had "their own" specific activities.

3. A well-defined plan for articulating the basic skills within career education units appears to be lacking.

4. Many of the computer printouts are too long for easy use and require too much pre-planning time on the part of the teachers.

Question No. 3: Anonymous Questionnaire

1. Students working at their own speed and with materials related to their own abilities, needs and interests develop a sense of accomplishment, something not normally found in many classrooms.

2. The "no fail" aspect of the career education program contributed favorably to the improvement of student's self-concepts.

3. Working in groups provided children with additional information about themselves and how they function with other children.

Question No. 4: Anonymous Questionnaire

1. Teachers generally felt that the methodology of career-oriented units stimulated not only their own enthusiasm and creativity, but also that of their students as well.

2. Teachers reported that this new methodology afforded a broader approach to the teaching of unit topics, and that it provided for individual differences in a manner that was far better than the methods previously employed.

3. A substantial number of teachers indicated that more materials must be developed for use with children, particularly for those pupils in grades K-3.

4. There is sufficient data to suggest that more attention must be given to the "what" and "how" of the various career clusters units to better facilitate the implementation aspect of the Crawford County Career Education Project.

Question No. 5: Anonymous Questionnaire

1. For the most part, the children appear to be enthusiastic about the kinds of career-oriented experiences they're engaged in.

2. It appears that the "no fail" aspects of the program as well as the individualization of instruction have done much to improve the teaching-learning climate.

H. Conclusions.

Based on the data collected by the evaluation team, the following conclusions can be made:

(1) Project CAREER has made good progress toward integrating career and self-awareness concepts into the various academic subject areas.

(2) The majority of teacher-participants endorse career

education as a strategy for developing relevant curricula.

(3) Most teacher-participants believe that the career clusters units are being developed with the student's maturity level in mind.

(4) The computer can facilitate the development of an unlimited number of individualized learning experiences.

(5) Computer printouts can accommodate differences in reading levels and thus facilitate learning.

(6) The computer serves as an efficient informational delivery system and "frees" the teacher from many data collection tasks.

(7) The experiences of Project CAREER have helped students to develop positive self-concepts.

(8) The methodology of Project CAREER is sound and sufficiently flexible to meet changing students' needs, interests, and abilities; and

(9) The stated objectives of Project CAREER have been more than adequately met.

I. Recommendations.

The recommendations below are offered as strategies which, if implemented, might increase the effectiveness of Project CAREER.

1. An attempt should be made to reduce the disparity between computer-listed resources and materials and those actually available.

2. A concerted effort should be made to develop materials for use with children in grades K-3.

3. One of the needs of in-service is to develop a better understanding of the meaning of career clusters and how they can be integrated into the curriculum.

4. Printouts should be shortened (while not sacrificing their effectiveness) to facilitate their usability and to lessen the amount of time teachers have to spend on them.

5. The concept drawings are in need of further research and revision since their results in this evaluation may have been affected by faulty instrumentation, faulty administration, content constraints, or the quality of the drawings themselves.

6. A concerted effort should be made to develop a "career core"--that is, an interdisciplinary core which integrates the basic skills (reading, mathematics, science, etc.) into career units.

7. There is a need to involve more teachers of art, music, and early childhood education on the teams developing the various career-oriented units.

CHAPTER III

CAREER EDUCATION AT JAY COOKE JUNIOR HIGH SCHOOL

A. Introduction.

Philadelphia is the fourth largest city in the United States and the largest in the State of Pennsylvania. With a population of nearly 2,000,000 people, Philadelphia ranks as a major center of commerce, industry, and culture, as well as one of the world's leading ports. Yet despite these attractive features, Philadelphia's employment picture continues to be a rather tenuous one. Consider, for instance, that a disproportionate number of the City's unemployed are young people who lack both the skills and seniority needed to hold a job. Then, too, a sizable number of Philadelphia's unemployed come from the ranks of school dropouts who have failed to complete high school at a time when the high school diploma has become the minimum requirement for employment. It has been estimated that 70 percent of Philadelphia's males over age 25 have not completed high school, and that although the dropout rate is higher for Blacks than Whites, three-fifths of the students quitting school in Philadelphia are White.

Thus, it is the goal of the Philadelphia School District to reverse this trend, and hopefully, offer a career-related curri-

culum which is attractive to students and based on real-life experiences and needs.

As part of its commitment to prepare all youth for useful and productive roles in the world of work, the Philadelphia School District is developing a career education model program at North Philadelphia's Jay Cooke Junior High School (hereafter referred to as Cooke or the Cooke School).

The Cooke School [illegible] 13th and Loudon Streets, has a student population of 1,8[illegible] students, of which 608 are seventh graders, 680 are eighth graders and 531 are ninth graders. The student population includes 68 percent Blacks and 32 percent Whites and other groups. The racial composition of Cooke is similar to the total student population of the Philadelphia School District wherein Blacks represent 60 percent of the students and Whites and other racial groups, 40 percent.

Through a Comprehensive Career Education Model (CCEM) Program at Cooke, the School District of Philadelphia is attempting to incorporate meaningful career education concepts and experiences into a single-site model which includes basic CCEM elements that may be transferred in part, or as a whole, to other schools.

B. Program Objectives.

The basic objectives of the Career Education Program at Cooke are:

1. to fuse relevant career education concepts, exploratory experiences, and other career-related resources and/or information into the existing curriculum;

2. to provide career exploratory experiences outside the school and related "hands on" experiences in the school;

3. to provide an effective guidance and counseling program to assist students in using their exploratory and curricular experiences in career planning, decision-making, and self-understanding; and

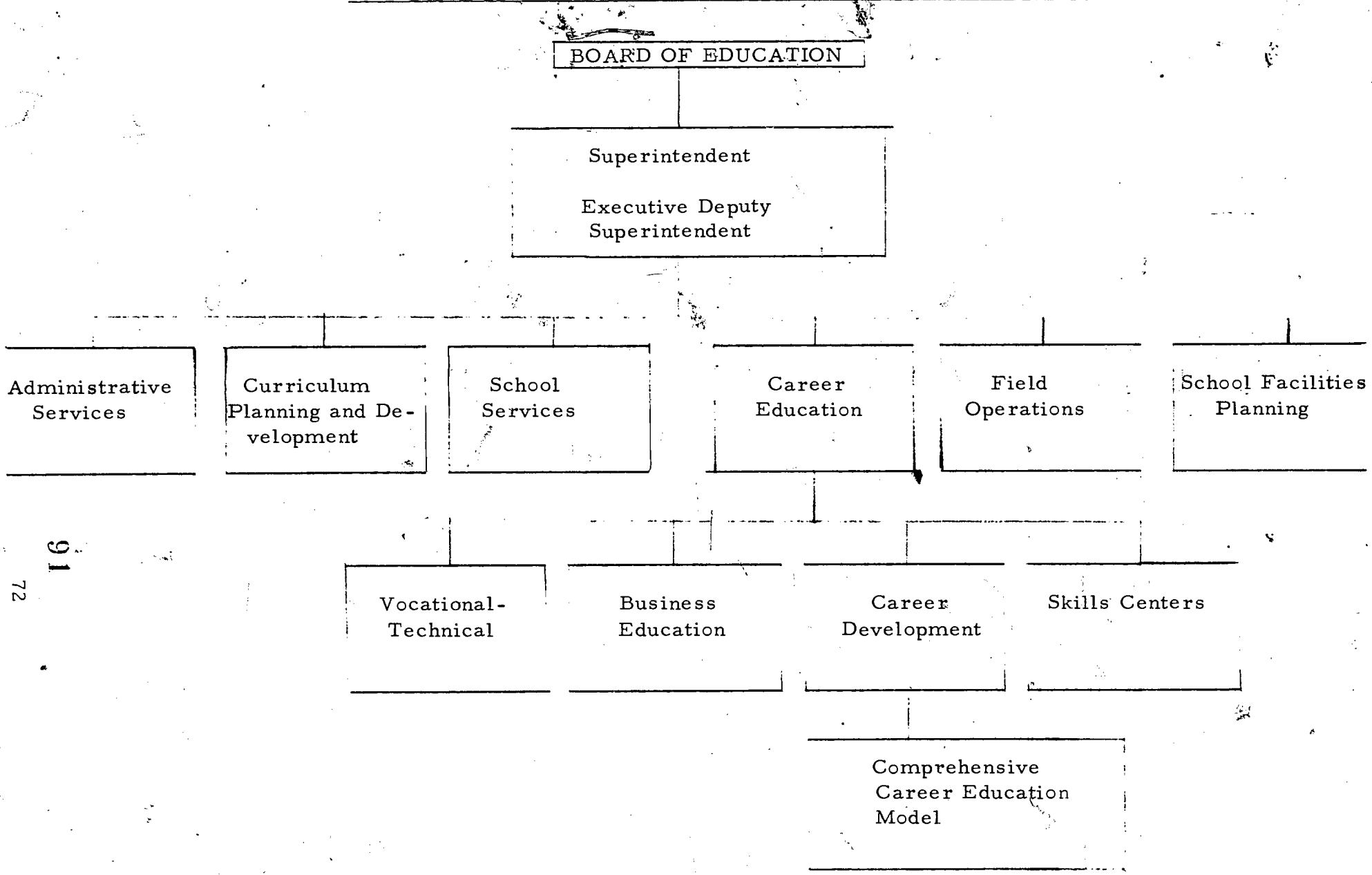
4. to develop a Career Education Resource Center.

The stated objectives have been designed not only to provide meaningful career orientation and exploratory experiences to the target population, but also to develop positive student attitudes toward the personal, social, psychological and economic aspects of work.

C. The Administrative Structure.

The administrative organization of the School District of Philadelphia tends to illustrate its commitment to career education. As shown in Figure 1, Career Education is one of the six major administrative components whose Associate Superintendents and/or Directors report directly to the Superintendent of Schools. Specific program divisions within the Career Ed-

FIGURE 1. SCHOOL DISTRICT OF PHILADELPHIA'S RELATIONSHIP TO THE COMPREHENSIVE CAREER EDUCATION MODEL



cation Administrative Unit include (1) the Vocational-Technical Education Division, (2) the Business Education Division, (3) the Career Development Division, and (4) the Skills Centers Division. Each Division, it is to be noted, is headed by its own Director. As indicated in Figure 2, the CCEM Program is one of several being conducted by the Career Development Division.

D. The CCEM Program Staff.

The CCEM Project Director is the Director of the Division of Career Development while the Project Coordinator is the principal of the Jay Cooke Junior High School. The Cooke School, which is under the jurisdiction of the District Six Superintendent, receives its major support from that office.

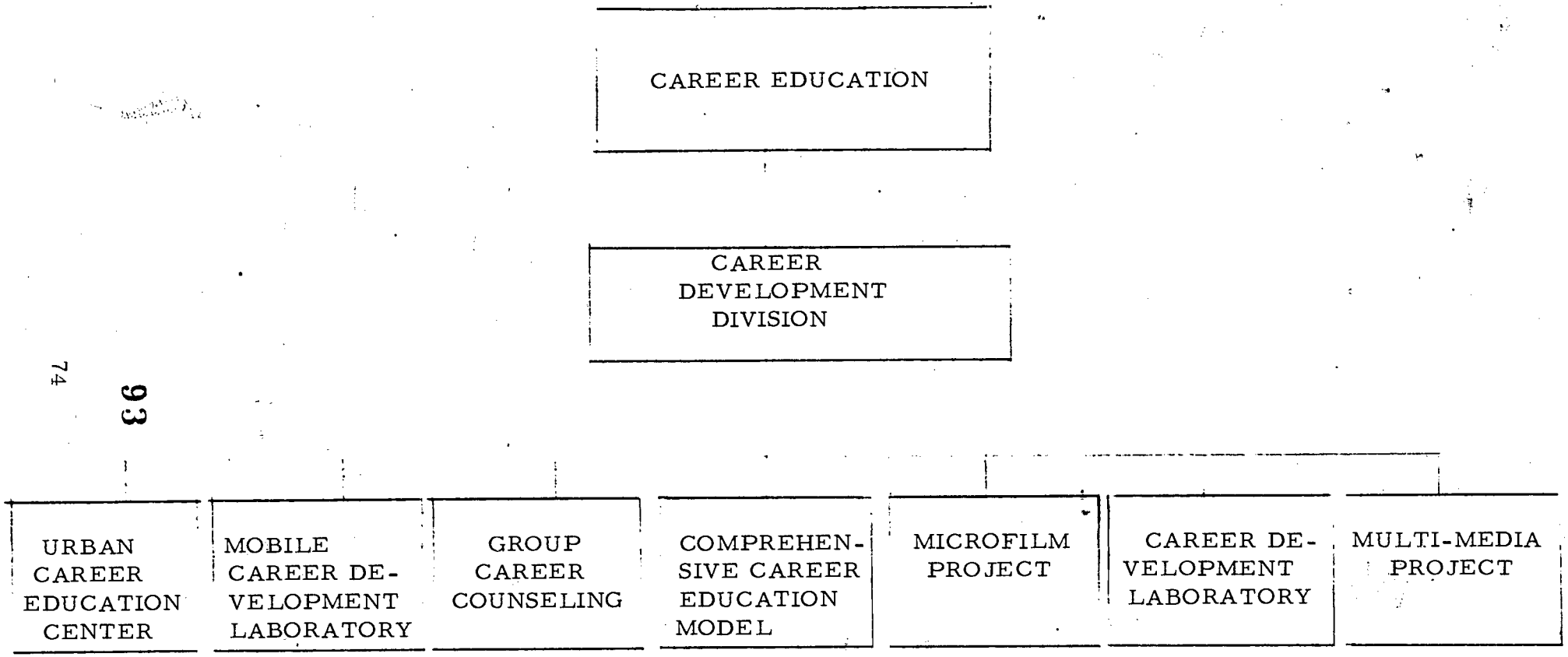
The operational staff of the CCEM Program includes four full-time personnel: a Project Manager, two Career Development Specialists, one Career Development Assistant who is a paraprofessional, and two high school seniors who are participating in the Cooperative Office Education Program (COPE).

The basic responsibilities of the CCEM Program Staff are as follows:

1. Project Manager - responsible for overall program development and implementation;

2. Career Development Specialist (Curriculum Specialist) - responsible for all in-school program activities. Specific

FIGURE 2. SCHOOL DISTRICT OF PHILADE[illegible]
PROGRAMS IN THE CAREER DEVELOPMENT D[illegible]N



responsibilities include consultation with instructors regarding fusion of career education concepts into the curriculum, coordination of the General Steering and Career Staff Committees, assisting in the pre-and post-planning of tours, and participating in group counseling;

3. Career Development Specialist (Community Resource Specialist) - responsible for all out-of-school program activities. Specific responsibilities include arrangement of tours, recruiting of discussants, developing resources for "hands-on" exploratory experiences and participating in group counseling;

4. Career Development Assistant - responsible for the physical aspects of the Career Education Center. This includes maintaining a functional Career Education Center, scheduling individual and group periods, and the dispatching of materials and equipment, etc.

E. CCEM Program Facilities.

The CCEM Program Office is located on the second floor of the Cooke School. It is a small office occupied by the Program Manager and two Career Development Specialists. The Career Education Center, located on the third floor of Cooke, is housed in a small room that originally was a locker room. It is in the Career Education Center that the Career Development Assistant performs her varied duties. Two COPE assistants, on the other hand, work in either the Career Education Center or in the Career Education Staff Office.

All resources and facilities of the Career Education Center have been made available to the students, teachers, counselors,

and administrators of the Cooke School. The Center may be used by students on an individual or group basis, as well as by teachers and counselors engaged in research. The basic holdings of the Career Education Center are included in Appendix C_1.

F. Curriculum Considerations.

In order for school personnel to develop an understanding of and an appreciation for the basic components of career education, a Staff Development Career Education Workshop was conducted for eighteen participants during the period July 5-August 1, 1972. The workshop, sponsored by the Division of Career Development, met five days per week from 9:00 A.M. to 1:00 P.M. for a period of four weeks. The main objectives of the Staff Development Career Education Workshop were:

1. to review and to restructure the curriculum in order to incorporate relevant career education concepts and related occupational information into each of the disciplines within the curriculum;

2. to afford students the opportunity of visiting business and industrial firms in order to observe and communicate with people at work; and

3. to provide initial experiences for the development of a comprehensive career education plan, as well as to integrate the academic disciplines with the various career clusters.

G. Faculty Participation.

The eighteen participants included department chairmen and

teachers from all disciplines with the exceptions of art and science. By December, 1972, staff participants had increased to twenty-five in number, all of whom served as members of the Full Career Education Committee. From this body, fifteen members were selected to serve on the Career Education Steering Committee. The function of both committees is to serve not only in an advisory capacity to the CCEM Program Staff, but also to offer technical assistance in the fusion of career education concepts into the curriculum. As of June 30, 1973, a total of forty-five faculty members were participating in the CCEM Program.

During the 1972 Summer Career Education Workshop, the eighteen participants were exposed to the fifteen career clusters developed by the U.S. Office of Education. These clusters, in turn, were modified by the CCEM Program Staff to fit the Philadelphia area and to insure broader utilization by Cooke's students. Both the workshop and the Career Education Center served as resource "take off" points for infusing career education concepts into Cooke's curriculum. Tables 1 and 2 include the clusters which have been developed for the Philadelphia area. Table 3 presents a listing of slides and/or tapes which deal with the selected clusters.

TABLE 1. OCCUPATIONAL CLUSTERS

1. POWER MECHANICS
   - Automotive Mechanic
   - A C Engine Mechanic
   - Diesel Engine Mechanic
   - Auto Transmission Mechanic

2. ELECTRO-MECHANICAL
   - Computer Maint. Tech.
   - Appliance Serviceman
   - Office Machine Service

3. BUILDING CONSTRUCTION & MAINTENANCE
   - Carpenter
   - Plumber
   - Trowel Trades Mechanics
   - Painter
   - Operating Engineers

4. COMMUNICATIONS
   - Electronics Tech.
   - TV Serviceman
   - Radio & TV Broadcast Techn.
   - Printing & Composing Room Workers

5. PERSONAL SERVICES
   - Restaurant Practice (Cook, Salad Maker, Etc)
   - Waitress
   - Cosmetologist
   - Hotel (etc.) Manager

6. METAL PROCESSING
   - Auto Body Mechanic
   - Welder
   - Machinist
   - Sheet Metal Worker

7. BUSINESS DATA PROCESSING
   - Bookkeeping Clerk
   - Computer Operator
   - Computer Programmer
   - Key Punch Operator

8. SECRETARIAL
   - Stenographer
   - Secretary
   - Typist

9. DISTRIBUTION
   - Warehouse Clerk
   - Retail Clerk
   - Stock Clerk
   - Cashier

10. CLERICAL
    - Clerks (Mail, Civil Service, Postal, Bank)
    - Office Machine Operator
    - Receptionist
    - Telephone Operator

11. HEALTH SERVICES
    - Hospital Attendants
    - Practical Nurse
    - Medical Technician
    - Dental Assistant
    - Dietitian
    - Optical Mechanic

12. APPAREL TRADES
    - Tailor
    - Power Sewing Operator
    - Designer
    - Presser

13. DRAFTING
    - Machine Design Draftsman
    - Tracer
    - Blue Print Draftsman
    - Photogrammetry

TABLE 2. OCCUPATIONAL CLUSTERS (BASIC CATEGORIES WITH EXAMPLES OF SPECIFIC JOB TITLES)

ART (Drawing, Painting, Photography, Sculpture).

- Architect
- Artist
- Fashion Designer
- Draftsman
- Photographer
- Sculptor
- Interior Designer

ATHLETICS

BUSINESS (General)

- Administration/Management
- Insurance Agent
- Purchasing
- Sales

CLERICAL (General Office Work, Office Machines and Records)

- Business Machine Operator
- Office Clerk
- Receptionist
- Secretary
- Typist
- Telephone Operator

COMMUNICATION (Verbal Media)

- Advertising
- Journalist
- Public Relations
- Public Speaking
- Radio Production
- Television Production
- Writing

HEALTH AND MEDICAL (Working with People with Medical Problems; Helping People to Stay Healthy; Working with the Ill)

- Dental Assistants
- Dentist
- Dietitian
- Doctor
- Lab Technician
- Nurse
- Therapist
- X-Ray Technician

MATHEMATICS (Other than with Science; Computations, Quantitative, Pure Math)

- Accountant
- Actuary
- Bookkeeper
- Computer Programmer
- Mathematician
- Statistician

MECHANICAL (Working with Machines or Machine-type Work; Operation, Service, Repair).

- Machine Operator
- Mechanic
- Repairman

TABLE 2. OCCUPATIONAL CLUSTERS (BASIC CATEGORIES WITH EXAMPLES OF SPECIFIC JOB TITLES) CONTINUED

MILITARY

MUSIC (All Phases: Voice, Instrumental, Composition)

PERFORMING ARTS

Actor
Dancer
Model

PROFESSIONAL, GENERAL (Other than Science, etc.; Education and/or Training, Human services, Social Services; Working with People, Human Help or Growth, Human Problems)

Educational Aid
Lawyer
Librarian
Psychologist
Social Worker
Teacher

PROTECTIVE SERVICE (Protecting Life and Property; Representing Authority)

Criminologist
Detective
Police
FBI

SCIENCE (Emphasis in Math and Science; All Levels of Education and Training)

Aeronautics
Aerospace
Biologist
Chemist
Electronics
Engineer
Geologist
Oceanographer

SERVICE, GENERAL (A Variety of Non-Technical Services)

Airline Stewardness
Beautician-Cosmetologist
Nurse's Aide
Domestic
Food Service
Waiter
Service Station Attendant

TRADES (Working with Hands; Manual Skills; Manual Dexterity; Other than technical areas, as in Science; Other than with Machines)

Carpenter
Mason
Plumber
Sheetmetal Worker
Welder

TABLE 3. SLIDES AND TAPES RELATED TO SELECTED OCCUPATIONAL CLUSTERS

1. POWER
   - Auto Overview
   - Auto Mechanic
   - Service Station Attendant

2. BUILDING CONST. & MAINTENANCE
   - Carpenter
   - Rodman
   - Plumber, Pipefitter
   - Bricklayer
   - Painter, Paperhanger
   - Operating Engineer
   - Construction Overview

3. COMMUNICATIONS
   - Linotype Operator
   - Hand Composition
   - Silk Screen
   - Printing Pressman
   - Stripper Platemaker
   - Lithographer
   - Bindery
   - Photographer
   - Photo Technician

4. PERSONAL SERVICES
   - Cook & Chef
   - Waiter & Waitress
   - Kitchen Helper
   - Food Service Overview
   - Janitor
   - Hairdresser

5. METAL PROCESSING
   - Auto Body & Fender
   - Auto Body Painter
   - Sheet Metal Worker

6. BUSINESS/DATA PROCESSING
   - Bookkeeper Clerk
   - Accounting Clerk
   - Computer Operator
   - Key Punch Operator

7. SECRETARIAL
   - Banking Overview
   - Stenographer
   - Secretarial Overview

8. CLERICAL
   - Typist
   - File Clerk
   - Office Machine Operator
   - Receptionist
   - Telephone Operator
   - Cashier
   - Salesclerk

9. HEALTH SERVICES
   - Licensed Practical Nurse
   - X-Ray Technician
   - Medical Lab. Technician
   - Dental Assistant
   - Registered Nurse
   - Pharmacist
   - Doctor
   - Dentist

10. PUBLIC SERVICE
    - Policeman
    - Postal Employees
    - Ramp Serviceman

11. PROFESSIONAL
    - Certified Public Accountant
    - Attorney

12. APPAREL TRADES
    - Power Sewers
    - Dry Cleaning
    - Knitters
    - Cutters & Spreaders

13. INDUSTRIAL
    - Foundry Worker
    - Truck Driver

H. The "Teacher Brief."

In order to document the kinds of career education activities being developed by teacher participants, as well as to determine the extent to which the Career Education Staff and Center resources were being utilized, the Career Education Staff devised the following form: TEACHER BRIEF: Activity in Career Education. Documented on the form were:

1. Specific career education activities and/or resources utilized by the teacher and/or students;
2. Career education activities designed to relate career information to various subject matter areas;
3. Statements describing how students were involved in preparing for career education activities; and
4. Follow-up activities.

It was determined by the Career Education Program Staff that the TEACHER BRIEFS approach was an appropriate technique for gathering information dealing with the various ways career education might be fused into the existing curriculum. An analysis of the eighty-six TEACHER BRIEFS is shown in Table 4. Likewise, a detailed copy of the form is presented in Appendix C_2.

TABLE 4. CAREER EDUCATION ACTIVITIES, RESOURCES AND SUBJECT AREAS

CE Activity/Resource	No.	Subject Area	No.
Student research in Center	5	Social Studies	39
Teacher research in Center	7	Math/Science	7
Occupational information	8	Business	21
Equipment	11	Industrial Arts	19
Tours	29		
Curriculum development	6		
Counseling	2		

I. Career Education Orientation Workshop, April-May, 1973.

A spring Career Education Orientation Workshop involving Cooke teachers, administrators, and counselors was held during the months of April and May, 1973. The workshop, which covered four one-hour sessions spread over a period of six weeks, was designed not only to familiarize Cooke personnel with the kinds of career education resources available, but also with techniques used in developing career-related lesson plans. A total of thirty-eight Cooke personnel participated in this special workshop.

During the latter part of May, 1973, participants were asked to evaluate the workshop by completing the form, Participant Evaluation: Career Education Orientation Workshop, April - May, 1973. The evaluative form dealt with these main categories: (1) Content (2) Organization (3) Self-appraisal, and (4) Overall General Impressions. The percentages of responses by each of the participants to questions in the four categories above are presented in Table 5. Table 6, on the other hand, reflects the percentages based on the responses of all the participants to the same four categories.

An analysis of the responses indicates that the participants perceived the worthiness of the workshop experiences as ranging from average to above average. Of particular importance, however, is the fact that most participants - at least in terms of self-appraisal - felt that the workshop was a valid learning experience for them. Question number 3 in both of the above Tables attests to this observation. The remaining responses are so diffuse that a meaningful analysis is inappropriate at this time. However, it can be stated, at least from an analysis of question number 6 (Recommendations for Next Workshop), that nearly half of the participants saw the need for longer and more frequent career education workshops while a comparable percentage

TABLE 5. RESPONDENTS' RESPONSES TO A PORTION OF THE FACULTY EVALUATION (IN PERCENTAGES)

	NO COMMENT	DISAGREE	AGREE	AGREE STRONGLY
Question 4	7	14	64	14
Question 5	10	7	48	35
Question 6	7	-	48	50
Question 7	-	-	36	64
Question 8	7	-	36	59
Question 9	7	-	58	35
Question 10	-	-	50	50

TABLE 6. PERCENT OF STUDENT RESPONSES FOR SEVEN ITEMS ON THE STUDENT EVALUATION QUESTIONNAIRE

	ITEMS	% Responses for Students All Completing Evaluation (N = 55)			% Responses for Students not on Student Career Education Committee (N = 40)			% Responses for Students on Student Career Education Committee (N = 15)		
2.	...Like using the C.E. Career Center	15	80	5	20	77	3	-	87	13
3.	...Like the people who work in the Center	16	84	-	24	76	-	-	100	-
4.	...Talking with the C.E. counselors	15	84	1	20	77	13	-	100	-
5.	...Learning about jobs and careers	19	80	1	17	80	3	20	80	-
6.	...The C.E. tours	41	56	3	45	53	2	33	67	-
7.	...Learning more about subject selection for next year	27	70	3	32	63	5	13	87	-
8.	...the way the Center is arranged	41	51	8	40	50	10	47	53	-
9.	...having some C. E. information in your subject classes	16	75	9	20	68	12	7	93	-

of respondents called for more teacher participation in future workshops.

J. Faculty Evaluation of the CCEM Program.

In order to ascertain teachers' reactions to the Career Education project, participating personnel at Cooke were asked to complete the form, Faculty Evaluation, which is included in Appendix C_3. The general design of some of the questions, especially the open-ended items, has tended to limit not only the making of an in-depth analysis of the data, but also the making of any generalizations. However, questions 4 through 10, which do lend themselves to interpretation, are presented in tabulated form in Table 5.

Since the weight of the responses fall on the "agree-agree strongly" side of the evaluative scale, it can be assumed that, in general, participating teachers seem to have a positive attitude toward the Career Education Program at Cooke.

K. Student Evaluation of the CCEM Program.

On the last day of class students were asked to evaluate the Career Education Program at Cooke. The form, which appears in more detail in Appendix C_4 was administered to fifty-five, randomly selected students. Of these fifty-five students, fifteen of them, or twenty-seven percent, had served on the Student Career

Education Committee for the school year just completed. A tabulation of students' responses is included in Table 6.

Again, the design of items 10-15 placed constraints upon the kinds of observations that could be made. However, students' responses to questions 2-9 did suggest these findings:

1. All of the students queried plan to utilize the Career Education Center next year;

2. With the exception of a minimal negative response to Question No. 2, all other questions (2-9) were heavily endorsed by the Student Career Education Committee;

3. Thirty-five students (or 64 percent of the respondents) recommended that the Career Education Center be expanded in terms of facilities and resources;

4. Students consistently indicated the need for more time to utilize the Center, as well as the need for more equipment and/or information; and

5. Students on the Student Career Education Committee consistently pointed to the need of informing other students about the Center and its activities.

L. Student Career Education Committee.

In the winter of 1972, a Student Career Education Committee was formed at Cooke to serve as a working component of the CCEM Program. The Committee, which has three faculty sponsors and administrative support, usually meets once a week during school time, and represents all grade and ability levels. This Committee has helped to coordinate the activities of the Career

Education Program, and has hosted career education activities such as "Cooke on Parade" and "Parents Night." The Committee functions as a formal channel for students' reactions to, and suggestions for the CCEM Program. Its information-gathering function determines not only what students want from the CCEM Program, but also how they want to be involved.

The Student Career Education Committee plans to meet during the summer of 1973 to prepare for the coming school year. Its intention will be to focus on activities such as orientation, planning, career development, and counseling and guidance. Likewise, part of the Committee's plan is to develop five sub-committees to deal with these facets of the CCEM Program: plant tours, discussants, career exploration, and career-related curricular experiences.

M. The Counseling and Guidance Component.

A counseling and guidance program is developing at Cooke which provides individual and group counseling in such personalized areas as career planning, career exploration, career decision-making and increased self-awareness. Presently, the counseling staff is attempting to modify its present program to facilitate career education thrusts. In order to make counseling and guidance more responsive to career education concepts and goals,

the Cooke counseling staff has been: (1) observing the Career Education Staff in its workings with students and teachers; (2) utilizing the resources of the Career Education Center; (3) participating in school-community career education activities; and (4) participating in plant tours. It is through these varied activities that the Cooke counseling staff hopes to:

1. become familiar with the Career Education Center and its resources;
2. observe how the Center is being used by the CCEM Program Staff;
3. ascertain how the Center is used for purposes of curricular revision; and
4. use the Center as a supportive service when counseling students about careers.

In essence, then, the Cooke counseling and guidance program is predicated on the concept of individualization; that is, it focuses on the needs, interests, aspirations, and life styles of individual students. While not discounting the importance of group processes and group counseling, the program pays particular attention to each student in terms of his own particular uniqueness, aspirations and goals.

N. Tours and Field Trips.

To expand the in-school objectives of career education, plant tours have been included to afford students meaningful and relevant

experiences that relate to specified career clusters. In addition, pre-and post-tour discussions are integrated into the teacher's lesson plan. Topics for possible classroom discussion might include the following:

1. What kinds of work were people engaged in?
2. What specific tasks were being performed by the workers you observed?
3. What particular skills are needed to perform these job tasks?
4. To what career cluster(s) are these particular job tasks related?
5. What is the relationship between the work task you observed and what you are learning in school?

In Appendix C_5 is a list of tour sites that have either been visited or will be visited during the 1973-74 school year. Apparently, Cooke personnel see plant tours and/or field experiences as a viable way of adding to curricular relevancy.

O. Conclusions.

(1) The Comprehensive Career Education Model (CCEM) at Cooke Junior High School is the first major Career Education Program to be undertaken by the Cooke School administration and staff. Rather than imposing the Program upon the teaching staff, the Career Education Program Staff has been soliciting staff acceptance through a process of

cooperative staff involvement.

(2) In its attempt to be responsive to students, the Philadelphia School Board has committed itself to a K-12 Career Education Program which speaks to: (a) developing career-related curricula, (b) promoting career exploratory experiences, (c) entering into a partnership approach with business, industry, labor, and other community agencies, (d) cooperating with nearby educational institutions to enhance the goals of career education, (e) promoting student self-and career-awareness, and (f) encouraging teachers, students, and parents to participate in the CCEM Program to insure the achievement of its objectives.

In addition to the aforementioned observations, the administrative structure of the Philadelphia School District, as represented in Figures 1 and 2, is conducive to the development of an effective career education implementation strategy. Not to be overlooked, however, is the City of Philadelphia itself whose large reservoir of people, talents and skills affords the CCEM Program an excellent source of facilitative resources.

(3) Although the Career Education Workshop of 1972 included only eighteen participants, the CCEM Program now claims

forty-five participants, or over half of the Cooke School staff. In addition to staff participation, active committees--such as the Career Education Steering Committee and the Student Career Education Committee--are giving considerable assistance to the overall CCEM Program.

(4) Also a dynamic interaction process appears to be evolving in which administrators, teachers, students, parents, and community groups and agencies are cooperatively attempting to develop a viable CCEM Program at Cooke. As already stated, the call to participate in the CCEM Program is not imposed but rather presented in a manner which affords teachers the opportunity of deciding for themselves whether or not they want to be involved. Apparently, this "low key" approach has had positive effects. However, once they do decide to be involved, all participants have the opportunity of contributing, suggesting, creating, modifying, or designing facets of the CCEM Program as they see fit, thus adding to the Program's meaningfulness and relevancy.

(5) Furthermore, the Career Education Center has proven to be a valuable source of career information. Geared originally to junior high school students, the Center now serves

approximately eight hundred students on an assignment basis, as well as fourteen hundred students who use the Center's resources during their lunch hour. These data are based on logs kept for December, 1972 and for the period March through June, 1973.

(6) Despite the positive gains made by the CCEM Program at Cooke, the long Philadelphia school teachers' strike (which lasted for nearly one-third of the 1972-73 school year) acted as a major constraint upon the achievement of previously stated goals. In fact, some implementation plans and strategies had to be delayed or even eliminated. The strike had a particularly hampering effect on: (a) the development of the counseling and guidance component, (b) the development of career-related curricula, and (c) the development of out-of-school facilitative resources and experiences.

P. Recommendations.

Barring any additional unforeseen circumstances (such as another costly strike), the CCEM Program at Cooke could become a model program with meaning for other schools. With this possibility in mind, the following recommendations are suggested as being necessary to implement the next phase of

Cooke's CEEM Program. They are:

(1) A formal documentation procedure should be established to facilitate not only the purposes of evaluation, but also the dissemination of information to all students, parents and school personnel involved in the CCEM Program.

(2) A formal evaluation design should be developed to evaluate the process and product compoments of the CCEM Program.

(3) Appropriate consultants should be engaged to develop an evaluation design and/or procedure which is conducive to the collection and analysis of meaningful data.

(4) A formal procedure should be established to insure that appropriate Program feedback is being disseminated to members of the Cooke staff, teachers, students, parents and community groups.

(5) A formal research design should be developed to determine the extent to which the CCEM Program is achieving such stated goals as self-awareness, career awareness and career exploration.

(6) The facilities of the Career Education Staff and of the Career Education Resource Center should be expanded as soon as possible. This expansion should include the procurement of additional informational holdings as well as needed equipment.

(7) A more concerted effort toward involvement is needed to insure greater participation on the part of teachers of mathematics, science, art, foreign language and physical education.

(8) Information which was collected from the TEACHER BRIEF should be disseminated to all members of the faculty as well as to all members on the Career Education Staff, thus insuring needed Program feedback.

(9) Immediate attention and emphasis should be given to the development of a career-oriented counseling and guidance program.

(10) Continued emphasis should be placed on the "tour development" phase of the Program by giving special focus to such aspects as pre-and post-tour planning, discussion, and tour-lesson plan integration.

(11) Attention should be directed toward the development of both in-school and out-of-school "hands on" experiences.

(12) The activities of the Career Development, Steering, and Student Career Education Committees should be expanded.

(13) All of the resources within the Career Development Division should be used to accomplish the stated objectives of the CCEM Program.

It is important to note that the initial implementation efforts of the CCEM Program have not been appropriately documented, nor have formalized procedures and/or techniques been developed to evaluate both the product and process aspects of the CCEM Program. However, an analysis of existing data as well as interviews with the Career Education Program Staff appear to support the contention that Cooke personnel and students generally tend to support the CCEM Program at Cooke. Lack of documentation and appropriate techniques preclude the making of more exacting process interpretations at this time. It is obvious, however, that a process has been developed and that its ingredients are conducive to effective Program development.

In conclusion, it appears that the CCEM Program objectives are being approached but not fully achieved. Of the four stated objectives, the development of a Career Education Resource Center has been accomplished best, whereas the development of a viable counseling and guidance component has been accomplished least. It is possible that the two major teachers' strikes (nearly three months in duration) may have had a limiting effect on the achievement of higher level Program goals. While recognizing this limitation, it is still essential that the CCEM Program Staff give the highest priority to the development of an appropriate research and evaluation

design to lessen the accumulation of "uninterpretive" data. Lastly, it is hypothesized that thirteen recommendations presented should, if carried out, result in the further effective development of the CCEM Program at Cooke Junior High School.

CHAPTER IV

CAREER EDUCATION AT THE McKEESPORT AREA SCHOOL DISTRICT

A. Introduction.

The McKeesport Area School District can be described as a very dynamic and innovative system. Included in this School District is a population which characterizes most larger urban areas; that is, its center city runs the gamut from professional workers and businessmen to poor Whites and Blacks, with the latter group constituting about 15 percent of the total population. Out of a total of 10,000 students in the School District, 2,000 have been classified as poverty cases as determined by Federal guidelines.

The McKeesport Area School District has 16 elementary schools (K-6), two junior high schools (7-9), and one comprehensive senior high school (10-12). The total staff numbers 517, with 461 of these functioning as classroom teachers and 56 others as support personnel.

Enrolled in the sixteen elementary schools are 5,000 students, or half of the District's total school population. At the secondary level, the respective enrollments are as follows: McClure Junior High School, 975; McKeesport Junior High School, 1,425; and McKeesport Area Senior High School, 2,500.

Until the 1970-71 school year, the District operated two high schools on a common campus. One building housed the academic program; and the other, the vocational. In the 1971-72 school year, the two student bodies and programs were merged into a comprehensive high school which included a vocational-technical department. This merger was a major step toward removing the stigma attached to students enrolled in a separate vocational high school.

Besides implementing a major Career Education Project, the McKeesport School District operates a Day Care Program (funded in excess of a million dollars), provides clinical experiences for teacher education majors from the University of Pittsburgh, and is developing a model for improving career counseling in the schools.

The Career Education Program at McKeesport supports the notion that all individuals should be engaged in activities which will help them to explore their own interests, to evaluate their own abilities and to arrive at decisions about their own lives. These experiences occur in a nexus of approaches which have been identified as reality bound, self-oriented and personalized. It is upon these three philosophical cornerstones that McKeesport is building its Career Education Program.

B. Program Description

Of the four federally funded Career Education Projects in Pennsylvania, the McKeesport project is the only one which attempts to adopt the concept of career education for all grade levels (K-12). As was mentioned earlier, the program has been hypothesized in terms of activities which are: "reality bound," "self-oriented," and "personalized."

Reality bound experiences provide the student with the opportunity of relating subject matter to real situations either through an on-going process in the classroom or through learning excursions into the community. Self-oriented experiences, on the other hand, provide the student with activities designed to answer such questions as "Who am I?" and "What do I value?" These experiences focus on the affective process as a legitimate and critical component of classroom activities. Finally, personalized experiences are those which enable the student to develop in accordance with his own perceived interests, values, and abilities. Thus, subject matter becomes individualized and person-centered with each student assuming the responsibility for directing his own learning.

C. The Three Concepts and What They Mean.

Perhaps more meaning may be derived by presenting a des-

cription of the aforementioned concepts as evisioned at McKeesport.

1. Reality Bound Assumptions.

   a. Subject matter has a "now" or current focus.

   b. Subject matter is related to an on-going process.

   c. Individuals learn best when they can see, hear, smell, and touch those things about which they are expected to learn.

   d. The abstract becomes meaningful when based on "real" experiences with people, data and things.

   e. Education, based on real people, things, and data, takes on a more significant dimension.

   f. The transition from the reality of school to the reality of the world of work is implemented by infusing the two.

   g. The individual's awareness that reality in our society revolves around the world of work is expanded.

   h. An attitude of flexibility is fostered so that the student may meet his needs in an ever-changing occupational world.

2. Self-oriented Assumptions.

   a. Awareness of self (in terms of needs, attitudes, values, interests and abilities) is expanded so that the individual learns who he is and what he would like to become.

   b. The individual's awareness is enhanced in terms of his societal, work, family, and community roles.

   c. The individual is given an opportunity to explore areas where he possesses interests and/or skills.

   d. The individual becomes more adept at communicating

about himself and to others.

e. The individual is aided in the development of decision-making competencies.

f. The individual's awareness of how the educational program is related to him is expanded.

g. The individual is aided in developing an understanding and appreciation of the importance, dignity, and interrelatedness of all occupations.

h. The individual can work on any specific aspect of a unit that meets his needs.

i. The individual experiences an awareness of his feelings when he is involved in specific self-related tasks.

j. The individual uses himself as a starting point in his search for a place in the world of work.

3. Personalized Assumptions.

a. Schools become "needs oriented" to allow for individual differences.

b. The individual develops an appreciation of his own differences in attitudes and needs and relates them to the differences in attitudes and needs of others.

c. The curriculum affords the individual the opportunity to interact with workers in varied occupations so that he develops feelings about where he best fits into the occupational world.

d. As the individual pursues his education, he is given experiences which correlate his needs, abilities, and interests to occupational areas.

e. Through the process of career education, teachers become more aware of the various feelings of each student toward himself, toward others, and toward his contacts in the world of work.

f. The teacher creates an atmosphere in which the student is free to test himself in a variety of experiences using his own interests and abilities.

g. The school focuses on helping each student to fully develop his own potentiality.

D. The Evaluation: A Conceptualization.

The McKeesport evaluation will consist of two sections: (1) a process evaluation; and (2) a product evaluation. Process goals may be thought of as those types of activities designed to attain product goals. Process objectives, on the other hand, refer to the specific classes of activities considered to be necessary to insure the actualization of process goals. Each process goal has a unique set of process objectives which describe the particular types of activities encompassed by each process goal.

The product goals for the McKeesport Program may be defined as the desired outcomes resulting from the educational process. Goal achievement, on the other hand, may be thought of as the attainment of product objectives for each specific goal. If it were determined that the set of objectives for a particular goal had been achieved, then it would have been assumed that the product goal had been attained also.

While process goal fulfillment is assumed to lead to product

goal fulfillment, there is the possibility of achieving the former without the latter or, less likely, the latter without the former. Since one product may be produced by many processes, and one process by many products, it becomes difficult to establish a cause-effect relationship. Then too, other variables may be operating to produce products which have not been taken into account. In a program as extensive as McKeesport's, such confounding elements, it would seem, are to be expected.

E. Process Evaluation.

To determine the attainment of process goals, the evaluators utilized a five-point semantic differential scale ranging from 1 for "excellent" to 5 for "no progress." Below are the results of the formal evaluation based on a consensus of the evaluators. Each process goal, stated first, is followed by the average rating of the evaluation team for each of the schools involved.

Process Goal I:

This Program (K-12):

(a) will enhance the traditional educational program with career development themes and occupationally oriented activities.

	Average Rating
George Washington Elementary (G.W.E.)	3
Model School Elementary (M.S.E.)	2

	Average Rating
Junior High (J.H.S.)	2
High School (H.S.)	2

(b) will enhance the traditional educational program with activities which emphasize the affective domain.

George Washington School	2
Model School	2
Junior High	2
High School	2

Process Goal II:

This Program (K-12):

(a) will provide the student with activities for the development of skills needed to meet his social needs.

	Average Rating
George Washington School	2
Model School	3
Junior High	2
High School	3

(b) will provide opportunities to help students understand the relationship between the feelings and values of others and their own.

George Washington School	3
Model School	3
Junior High	2
High School	3

Process Goal III:

This Program (K-12):

(a) will provide students with activities that will introduce them to a variety of occupational roles.

	Average Rating
George Washington School	1
Model School	1
Junior High	2
High School	3

This Program (7-12):

(b) will provide students with activities that will help them explore in depth the functions, skills, and requirements of various careers and training opportunities.

	Average Rating
Junior High	2
High School	2

Process Goal IV:

This Program (K-12):

(a) will provide the student with activities that will help him understand that career choice is an extension of his own personal characteristics.

	Average Rating
George Washington School	5
Model School	5

Junior High	5
High School	4

This Program (7-12):

(b) will provide the student with activities that will enable him to see alternatives in the making of career choices.

	Average Rating
Junior High	5
High School	2

(c) will provide the student with a variety of opportunities and materials which will help him to explore his interests and abilities in relation to his career choices.

	Average Rating
Junior High	5
High School	2

Process Goal V:

This Program (K-12):

(a) will provide the student with activities that will relate the traditional educational program to real world activities.

	Average Rating
George Washington School	1
Model School	1
Junior High	1
High School	3

(b) will enhance the traditional educational program by providing the student with activity-oriented experiences that parallel world of work activities.

	Average Rating
George Washington School	2
Model School	2
Junior High	3
High School	2

Process Goal VI:

This Program (K-12):

(a) will enhance the traditional educational program by involving community resources in the educational process.

	Average Rating
George Washington School	1
Model School	1
Junior High	2
High School	2

(b) will provide the student with activities that promote an understanding of the various factors affecting job availability as well as the need for individual flexibility in the making of career choices.

	Average Rating
George Washington School	5
Model School	5

Junior High	5
High School	2

Process Goal VII:

This Program (K-12):

(a) will provide the student with the opportunity of participating in situations that will require the utilization of decision-making skills.

	Average Rating
George Washington School	2
Model School	2
Junior High	1
High School	3

This Program (10-12):

(b) will provide the student with activities that will enable him to formulate and execute post-graduation plans.

	Average Rating
High School	2

(c) will develop a Job Placement Center which will expand the school's responsibility to help each student make a positive transition from school to work.

	Average Rating
High School	1

F. Recommendations.

Upon completion of the on-site visitations, the evaluators made these recommendations about the process goals and also about the Program in general.

Goal Areas

Goal I: The term "monitor student affect" should be clarified. The methods of dealing with student affect are limited. Effort should be made to further refine techniques for working with "affect." The separation of the cognitive and affective domains should be examined.

Goal II: More emphasis might be given to conflict and competition. It was felt that cooperative experiences were "good" but limited. Likewise, it was felt that more attention should be given to the social pressures on Blacks in the job market.

Goal III: Generally, more emphasis should be placed on observations and activities at the high school level. "Awareness," "Exploration," and "Preparation" activities could not be clearly identified. Also, there was a lack of transition between the three levels. In terms of "in-depth exploration," most activities seemed to be superficial. There was no evidence indicating the involvement of vocational teachers.

Goal IV: The evaluators questioned the appropriateness of Goal IVa for elementary students, and felt that self-exploration might be more important. In any case, the mechanisms leading to "career choice as an extension of personal characteristics" were not clear. In this goal area, the "self" should be stressed more.

Goal V: In Goal Va more emphasis might be given to cooperative experiences, interdisciplinary activities, and the exploration of professions. "Real world activities" should be defined. In Goal Vb, the educational experiences that parallel world of work activities are not clear. Is

there a distinction between "real world" and "work world" activities?

Goal VI: The evaluators felt that Goal VIa was perhaps furthest along in development, and recommended that the fine job be continued. They also felt that factors affecting job availability might be reserved for the high school level.

Goal VI: It was felt that more opportunities must be provided for decision-making since such opportunities seemed to be weak at all levels, particularly in the high school. Also, in terms of the formulation of plans, the secondary level was particularly weak. Therefore, effort should be made to coordinate more carefully counseling and project activities. Furthermore, there was little evidence to show that vocational students were getting sufficient help in formulating their plans. It was also determined that the Job Placement role is understaffed. Consequently, a conference should be held involving the high school principal, the vocational school principal, and the project director to clarify the role descriptions and to insure better "coverage" of students.

G. General Recommendations.

1. The vertical and horizontal articulation of units must be considered. The teacher-centered approach has produced much activity but little organization. Specifically, a plan for unit utilization should be developed which ties into the existing curriculum.

2. Principals have not been actively involved in either the planning or the execution of the Project. It is recommended, therefore, that a conference be held involving the principals, the superintendent, and the project director to discuss the role of the principals in the implementation of the Project.

3. The McKeesport central office staff has not yet taken an active part in the Program. Specific assignments should be made to the central staff to aid in implementing this Program.

4. At the elementary level, more counselors are needed; therefore, attempts should be made to find funds for one elementary counselor per school.

5. At the elementary level, a committee should be established consisting of the Career Education Staff and personnel from the elementary schools. Counselors should also be included on this committee, as well as the director of the District's Contingent Resource Team. The purpose of this committee would be to develop a career education approach that would be more flexible than the "unit" approach.

6. There should be a total re-examination of the Project's goals and objectives by the Project staff, principals and central staff. Any written recommendations to alter the existing goals and objectives should be presented to the project director.

7. Each of the developed units should be examined by a team of teachers to determine the possibility of their adoption.

8. The School Board should be asked to review the Project.

9. The vocational high school should be more directly involved in the Program.

10. Since the high school component appears to be the weakest as well as the most understaffed component in the Project, special help should be given staff members to correct this situation.

H. Conclusions.

In the opinion of the evaluators the Career Education staff at McKeesport has been extremely receptive to the comments of all parties involved in the process evaluations. Though it experienced some growth pains, this Program has, through its receptivity and flexibility, matured in its first year of funding. Given the developmental processes that have occurred, the second year can be one of full implementation.

I. Product Evaluation.

The desired products of McKeesport's Career Education Program are started in terms of general goals followed by more specific objectives. Both the product goals and objectives are as follows:

Product Goal I: Students will develop an awareness of self.

Objective:

1. To help the student (K-6) develop the conceptual and verbal skills necessary to evaluate self-awareness.
2. To increase the student's (K-6) understanding of the significance of interests, values, and abilities as they relate to career activities.
3. To improve the student's (K-12) self-concept.
4. To increase the student's (K-12) awareness of his interests, abilities, values, and attitudes.
5. To increase the teacher's use of the career development process in the classroom.

A sample of Product Goal I, as it applies to the elementary, junior high and senior high school levels, is included in Appendix D_1.

Product Goal II: Students will develop an awareness of the significance of their personal characteristics in their relationships with others.

Objective:

1. To increase the student's (K-12) understanding of the importance of interpersonal relationships in life-career experiences.

2. To increase the student's (K-12) appreciation of individual differences.

Appendix D_2 contains an example of the various dimensions of Product Goal II for the three levels of the school - elementary, junior high and senior high school.

Product Goal III: Students will have knowledge of a variety of career roles, of the functions of those roles in society, and of the skills required to perform those functions.

Objective:

1. To increase the student's (K-12) knowledge of a variety of careers.

2. To increase the student's (7-12) knowledge of careers, functions, and skills as measured by the P.E.C.E. Knowledge Test.

3. To increase the student's (10-12) knowledge of career avenues (job, further training, and/or education) as measured by the P.E.C.E. Knowledge Test and by the frequency of use of the Career Occupational Resource Center.

Product Goal IV: Students will develop an awareness of the relationship between their personal characteristics and various career roles.

Objective:

1. To increase the student's (K-6) understanding of how different types of jobs require different personal characteristics.

2. To increase the student's (K-12) awareness of his feelings toward various learning activities that are related to occupational functions.

3. To increase the student's (7-12) ability to match personal characteristics associated with given occupations.

4. To increase the student's (7-12) interests in the various career roles and functions.

5. To increase the student's (7-12) exploration of his interests and abilities in relation to his own career choices.

6. To increase the student's (K-12) use of the community as a learning resource.

Product Goal V: Students will understand how their education is related to career-life experiences.

Objective:

1. To increase the student's (K-12) perception of the educational program.

2. To improve the student's (K-12) attitude toward the educational process.

3. To increase the student's awareness of the relationship between skills learned in the classroom and skills used in the world of work.

4. To increase the involvement of, and the interaction between, the counselors, teachers, administrators, and Career Education Coordinators (K-12) in implementing career education into the curriculum.

Product Goal VI: Students will develop an understanding and an appreciation of the interdependence of man, society, and technology.

Objective:

1. To increase the student's (K-6) ability to relate the contributions made by people engaged in various occupations to his own life.

2. To increase community involvement in the educational process.

3. To increase the student's (7-12) awareness that consideration of career alternatives is a necessity in a technological society characterized by changing work roles.

4. To increase the student's (7-12) awareness of the various levels and alternatives existing within a given occupational cluster.

Product Goal VII: Students will develop effective decision-making skills and the means for implementing them.

Objective:

1. To increase the opportunities for students (K-12) to participate in situations requiring the use of decision-making skills.

2. To increase the student's (7-12) general decision-making ability.

3. To increase the number of students having career plans at graduation.

4. To increase the student's satisfaction with post-high school placement.

J. The Evaluative Instruments.

Eight different student tests were utilized to assess the attainment of product objectives in grades K-12. Two of these were used in the K-3 elementary subcomponent, four in the 4-6 elementary subcomponent, four in the 7-9 or junior high component, and five in the senior high component. The eight selected instruments are described below.

1. The Self-Appraisal Inventory

This inventory exists in two forms, one for use at the primary level, K-3, and one for the intermediate level, 4-6. The primary level form consists of twenty questions and the intermediate form consists of eighty.

This self-report device attempts to secure, in a rather straightforward fashion, a child's responses to questions which pertain to four aspects of the self-concept. Three of these four dimensions (family, peer, scholastic) are viewed as arenas in which one's self-concept has been (or is being) formed. A fourth dimension reflects a more general, global estimate of self-esteem. Examples of each dimension (for which subscales scores are obtainable in the inventory) are (1) General: "Are you a good child?", (2) Family: "Are you an important person to your family?", (3) Peer: "Would you rather play with friends younger than you?", (4) Scholastic: "Can you get good grades if you want to?" (Examples taken from primary form). From these examples it can be seen that if a child wished to answer untruthfully, in such a way that he would be viewed in a better light, it would not be too difficult to do so. Such tendencies to supply false responses can be minimized by administering the inventory in such a way that the anonymity of the respondent is both real and perceived.

Five questions measure each of the four dimensions in the primary level form while twenty questions measure each

dimension in the intermediate form. Scores may be obtained by counting one point for each positive response and no points for each negative response. The four dimensions are as follows:

(a) General favorable perceptions of self (general subscale)

(b) Favorable view of self in relation with peers (peer subscale)

(c) Favorable view of self in the family context (family subscale)

(d) Favorable view of self in school situations involving school work, relationships with teachers, etc. (school subscale)

Four subscores are obtained, but no total score is derived. The maximum (best) score on each of the four subtests is five for the primary level and twenty for the intermediate. While administration time depends upon the student's ability, approximately 10 minutes to administer the primary form and 30 minutes to administer the intermediate form are needed.

2. The School Sentiment Index

The School Sentiment Index, having both primary and intermediate forms has thirty items and seventy-five items, respectively. Questions on the primary form are read orally by the administrator, whereas the intermediate level students read and respond to the items themselves. While primary students respond "yes" or "no," intermediate students answer "true" or "untrue."

This self-report instrument attempts to secure a child's responses to questions which pertain to five aspects of attitude toward school. Examples of each dimension (for which subscale scores may be obtained) are these:

A. Primary Form:

(1) Teacher: "Is your teacher interested in the things you do at home?"

(2) School subjects: "Do you like to write stories in school?"

(3) School social structure and climate: "Does your school have too many rules?"

(4) Peer: "Do you like the other children in your class?"

(5) General: "Is school a happy place for you to be?"

B. Intermediate Form:

(1) Teacher: "My teacher makes sure I always understand what she wants me to do." (mode of instruction); "My teacher treats me fairly." (authority and control); "I like my teacher." (interpersonal relationships)

(2) Learning: "I would rather learn a new game than play one I already know."

(3) School social structure and climate: "The principal of my school is friendly toward the children."

(4) Peer: "I really like working with the other children in my class."

(5) General: "I often get headaches at school."

Rather than the total score, each of the five subscores below is significant.

A. Primary Form Maximum (Best) Subscores:

(1) Teacher	7
(2) School Subjects	7
(3) School Social Structure and Climate	5
(4) Peer	5
(5) General	6

B. Intermediate Form:

(1)	Teacher	34
(2)	Learning	6
(3)	School Social Structure and Climate	16
(4)	Peer	10
(5)	General	9

The "Teacher" subscale (intermediate level) may be classified into three dependent scales: (1) Mode of instruction; (2) Authority and control; and (3) Interpersonal relationship of teacher to pupils. For purposes of the McKeesport data, only the main subscale score was considered.

It took approximately 15 minutes to administer the primary form and 30 minutes to administer the intermediate form.

3. The Elementary Occupations Test

Administered only to the elementary subcomponent (4-6), this test is designed to assess the student's knowledge of occupations and his occupational-educational expectations. It consists of twelve questions, each of which relates to one of the following four categories:

(a) The education or training required for specific occupations;

(b) The nature or work involved in specific occupations;

(c) Recognition of the relation of other occupations to the specified occupation; and

(d) Recognition of the field of work corresponding to the specified occupation.

Each multiple-choice item has four options, one of which is correct. While each correct response receives one point, each negative response receives none. The total possible score is 12.

4. The Occupational Listing Test

The Occupational Listing Test is the simplest to administer.

Students (grades 4-12) are asked to list the names of as many occupations as they can think of within a specified time period. The total score is based on the number of correct occupational titles listed regardless of spelling.

5. The P.E.C.E. Knowledge Test

The P.E.C.E. Knowledge Test is a 75 item test originally developed in longer form (100 items) by the Georgia State Department of Vocational Education. The instrument was developed to measure the effects of the P.E.C.E. program implemented in Georgia during the 1969-1970 school year. Very little information is available concerning the original development of the P.E.C.E. test, and there is no existing record of the instrument's reliability and validity in Georgia records.

The instrument is divided into three sections: (1) a 19 item matching section; (2) a 27 item true-false section; and (3) a 29 item multiple-choice section. The "correct-incorrect" method of scoring is used, with a score of one being assigned to correct answers and zero, to incorrect answers. The total possible score for this test is 75, with reliability coefficients ranging from .80 to .92 for students in grades 6-12. The test was administered to all students involved in the junior and senior high components of the McKeesport Career Education Project.

6. The Education Scale

The Education Scale is a 22 item, Likert-type scale used to measure the attitudes of junior and senior high school students toward education.

Items which reflect a positive attitude toward education are weighted heavier than those which do not. Thus, the student's score becomes the sum of the weighted alternatives endorsed by him, with a high score (total possible score = 110) indicating a positive attitude toward education.

7. The Attitude Towards Self and Others Scale

Administered to the junior and senior high components,

this scale is composed of 64 items designed to assess the positiveness of student attitudes toward themselves and others. The scale is a composite adaptation of 41 selected items taken from the 64 item scale "Acceptance of Self and Others" developed by E. L. Phillips. The instrument is essentially a Likert-type scale except that it uses a modified response mode. Thirty-five items measure attitudes toward self, and 29 items measure attitudes toward others; therefore, two scores are obtained.

The score for each item ranges from 1 to 5, with a low total score indicating a more favorable attitude toward self or others; that is, total scores of 29 and 35 respectively on the items measuring attitudes toward others and self would indicate the most positive attitudes in each case. Reliability coefficients for this scale have ranged from .79 to .88 for the 35 "self" items, and from .68 to .77 for the 29 "others" items.

8. The Counseling Scale

Administered only to grades 10-12, the Counseling Scale (see Appendix D_3) consists of four items. The first item pertains to student-guidance counselor interaction, with four alternative responses ranging from "never" to "four or more times." Each item has two subquestions which call for "yes-no" type answers. Items answered "yes" require an additional completion-type entry for identifying the college or vocational school referred to by the student. The interpretation is based on frequency and percentage of responses rather than the total score.

K. Statistical Methodology.

1. Student Sample.

A total of 1031 students from the McKeesport Area School District were tested with the above instruments in order to assess the behavioral changes brought about by the implementation of the Career Education Program. Of the 1031 students, 278 were from the K-3 elementary subcomponent, 246 from the 4-6 elementary subcomponent, 287 from the junior high component, and 220 from the senior high component.

As indicated in the Description of the Program section above, two comparisons were of interest in the elementary component: (1) Whether or not students undergoing the career education treatment performed any better on the measures than those who were not receiving treatment; and (2) Whether or not those students in the Center Schools (high-cost, externally-supported Career Education Program, served by the Program staff) performed differentially from those in the satellite schools (low-cost, internally-supported Career Education Program, served by in-house, school district employees). The sample for the K-3 subcomponent included 140 treatment students and 138 control; of these, 138 students were from the five Center Schools and 140 from the six Satellite Schools. For the 406 subcomponent, 123 were treatment students, 123 control. The Center Schools accounted for 122 students and the Satellite Schools, 124.

Three groups of students were identified for testing in the junior high school component (grades 7-9): (1) students receiving an intensive career education treatment; (2) students receiving some career education treatment; and (3) those students receiving no treatment, or the control group. Of the 287 students tested, 95 received intensive treatment, 100 some treatment, and 92 no treatment. The sample consists of 96 seventh graders, 102 eighth graders, and 89 ninth graders.

The sampling plan at the senior high component level (grades 10-12) is somewhat complicated, but derives from that just described for the junior high component. Since the high school students were not limited to one of the three basic groups, nine subgroups of students were obtained for purposes of data comparison. Figure 1 is a description of the method of random assignment of students to treatment cells.

Figure 1. Sampling Design - High School Component

First School Session	Second School Session: Control	Second School Session: Treatment	Second School Session: Intensive Treatment
Control	Control-Control	Control-Treatment	Control-Intensive Treatment
Treatment	Treatment-Control	Treatment-Treatment	Treatment-Intensive Treatment
Intensive Treatment	Intensive Treatment-Control	Intensive Treatment-Treatment	Intensive Treatment-Intensive Treatment

Students conforming to the cells of the design were identified, and a total of five males and five females from each of grades 10-12 were randomly assigned to each of the appropriate cells. Only 40 tenth-grade students were included in the data sample because only four of the nine possible sub-groups were realized for that grade, namely: Control-Control; (2) Treatment-Control; (3) Control-Treatment; and (4) Treatment-Treatment.

All of the nine possible subgroups existed in grades 11 and 12, while 90 students from each grade comprised the rest of the senior high school component sample.

2. Statistical Designs.

Factorial analysis of variance designs were utilized to assess the existence of behavioral differences either between

or among the appropriate student groups. The designs were delineated as follows:

(a) Grades K-3, Elementary Subcomponent:

(1) A 2 x 4 factorial analysis of variance design was used to test for differences between treatment groups and among children in K-3, as well as for a determination of the significant interaction between treatment and grades.

(2) A 2 x 2 factorial analysis of variance design was utilized to test for differences between treatment and control students, between students from Center and Satellite Schools, and for a significance of interaction between the treatment and dichotomous schools. This would be termed an analysis of cost effectiveness.

(b) Grades 4-6, Elementary Subcomponent:

(1) A 2 x 3 factorial analysis of variance design was used to test for differences between treatment and control students, among children in grades 4, 5, and 6, and for a significance of the interaction between treatment and grades.

(2) Same as A-2 above, utilizing student data from grades 4-6.

(c) Grades 7-9, Junior High School Component:

A 3 x 3 factorial analysis of variance design was utilized to test for differences among the three treatment groups (intensive treatment, some treatment, and control), among the three grades 7-9, and for a significance of the interaction between treatment and grades.

(d) Grades 10-12, Senior High School Component:

(1) A 2 x 9 factorial analysis of variance design

was used to test for differences between grades 11 and 12, among the nine treatment groups (see Figure 1), and for a significance of the interaction between grades and treatment.

(2) A 3 x 4 factorial analysis of variance design tested for differences among grades 10, 11, and 12, among treatment groups (control-control, treatment-control, control-treatment, and treatment-treatment), and for a significance of the interaction between grades and treatment.

3. Observed Products.

Tables 1-4 illustrate the results of the statistical analyses performed on the data obtained from the testing of the McKeesport student sample. The following is considered an accurate assessment of product objective attainment:

(a) Elementary Component, Grades K-6:

(1) Objective I (2); Not attained
(2) Objective I (3); Partially attained
(3) Objective II (2); Partially attained
(4) Objective III (1); Not attained
(5) Objective IV (1); Not attained
(6) Objective IV (2); Partially attained
(7) Objective V (1); Partially attained
(8) Objective V (3); Not attained

(b) Junior High School Component, Grades 7-9:

(1) Objective I (3); Not attained
(2) Objective II (2); Partially attained
(3) Objective III (1); Not attained
(4) Objective III (2); Not attained
(5) Objective III (3); Not attained
(6) Objective IV (3); Not attained
(7) Objective V (1); Not attained
(8) Objective V (3); Not attained

Table 1. Summary of Results, K-3 Elementary Sub-Component, McKeesport Area School District Career Education Program, May 1973, All Variables.

Variables	Grade (4) by Treatment (2)			Treatment (2) by School Dichotomy (2)		
	Grade K/1/2/3	Treatment T/C[1]	Interaction	Treatment T/C	Center/Satellite C/S	Interaction
Sentiment Scale:						
Teacher	K=1=2=3	T=C	None	T>C	C=S	None
Peer	K=1=2=3	T=C	None	T=C	C>S	None
School Subjects	K=1=2=3	T=C	None	T=C	C=S	None
Social Structure	K=1=2=3	T>C	None	T>C	C=S	None
General	K=1=2=3	T=C	None	T=C	C=S	None
Self-appraisal Scale:						
Peer	K=1=2=3	T=C	*	T=C	C>S	None
Family	K=1=2=3	T=C	None	T=C	C=S	None
School	K=1=2=1	T=C	None	T=C	C=S	None
General	K=1=2=1	T=C	None	T=C	C=S	**

[1] T = treatment student; C = control students

* Significant interaction of grades and treatment.

** Significant interaction of treatment and school dichotomy.

Table 2. Summary of Results, 4-6 Elementary Sub-Component, McKeesport Area School District Career Education Program, May 1973, All Variables.

	Grade (3) by Treatment (2)			Treatment (2) by School Dichotomy (2)		
Variables	Grade 4/5/6	Treatment T/C[1]	Inter-action	Treatment T/C	Center/ Satellite C/S	Inter-action
Sentiment Scale:						
Peer	4<5=6	T>C	None	T>C	C=S	None
Teacher	4=5=6	T=C	None	T=C	C=S	None
School Social Structure	4=5=6	T=C	None	T=C	C>S	None
General	4=5=6	T=C	None	T=C	C>S	None
Learning	4=5=6	T=C	None	T=C	C=S	None
Self-appraisal Scale:						
Peer	4=5=6>4	T=C	None	T=C	C=S	None
Family	4=5=6	T=C	None	T=C	C=S	None
School	4=5=6	T=C	None	T=C	C=S	None
General	4=5=6	T=C	None	T=C	C=S	None
Occupational Listing	4=5=6>4	T=C	*	T>C	C=S	None
Elementary Occupations	4<5<6	T=C	None	T=C	C=S	**

[1]T = treatment students; C = Control students.
*Significant interaction of grades and treatment.
**Significant interaction of treatment and school dichotomy.

Table 3. Summary of Results, 7-9 Junior High Component, McKeesport Area School District Career Education Program, May 1973, All Variables.

	Grade (3) by Treatment (3)		
Variables	Grade 7/8/9	Treatment IT/T/C[1]	Interaction
Self attitude[2]	7=8=9	IT=T=C	None
Others attitude[2]	7=8=9	IT=T, IT=C, T>C	None
Rundquist	7=8=9	IT=T=C	None
Occupational Listing	7<8<9	IT=T=C	None
P.E.C.E.	7<8<9	IT=T=C	None

[1] IT = intensive treatment students; T = treatment students; C = control students.

[2] In terms of positiveness of attitude towards self or others.

Table 4. Summary of Results, 10-12 Senior High Component, McKeesport Area School District Career Education Program, May 1973, All Variables.

	Grade (2) by Treatment (9)			Grade (3) by Treatment (4)			10th Grade
Variables	Grade 11/12	Treatment[1] CC/TC/ ITC/CT/ TT/ITT/ CIT/TIT/ ITIT	Inter-action	Grade 10/11/12	Treatment CC/TC/ CT/TT	Inter-action	CC/TC/CT/TT
Self attitude[2]	11=12	No difference	None	10=11=12	No difference	None	No difference
Others attitude[2]	11>12	No difference	None	10=11=12	No difference	None	CC=TC>TT; TT=CT
Rundquist	11=12	No difference	None	10=11=12	No difference	None	No difference
Occupational Listing	11=12	No difference	None	10=11=12	No difference	None	CC=CT; TC=TT; CC, CT>TC, TT
P.E.C.E.	12>11	No difference	None	12>11>10	No difference	None	No difference

[1] C = control; T = treatment; IT = intensive treatment; e.g., CIT = control first semester, intensive treatment second semester.

[2] In terms of positiveness of attitude towards self or others.

(c) Senior High School Component, Grades 10-12:

(1)	Objective I (3);	Not attained
(2)	Objective II (2);	Not attained
(3)	Objective III (1);	Not attained
(4)	Objective III (2);	Not attained
(5)	Objective III (3);	Not attained
(6)	Objective IV (3);	Not attained
(7)	Objective V (1);	Not attained
(8)	Objective V (3);	Not attained

The cost-effectiveness comparisons at the elementary level are inconclusive. The Center School students obtained higher scores than the Satellite School students on the school subjects subtest of the School Sentiment Index (grades K-3), and on the general and school social structure (and climate) subtests of the School Sentiment Index (grades 4-6). Satellite School students scored higher than the Center students on the Peer portion of the Self-Appraisal Inventory and thus demonstrated a more favorable view of themselves in their relations with their peers (grades K-3). The absence of identical results across grades K-6 on the variables in question precluded positive assessment of cost-effectiveness (high cost versus low) at this point in time.

The assessment of product objective VII (3), utilizing the results of the Counseling Scale was determined by a chi-square comparison among treatment groups. Frequencies and percentages of responses are illustrated in Table 5. The statistical analyses revealed no differences among treatment groups (see Figure 1), and therefore this objective is considered not attained.

On the surface, it would appear from the statistical results that the overall objective of the McKeesport Area School District Career Education Program is not being obtained. However, such a conclusion would be erroneous, particularly in the case of the high school component. The number of learning excursions and resource personnel utilized, together with the number of students engaged in work-related experiences and enrolled in the co-operative work-studies program, indicate that some progress has been made.

Table 5. Frequency and Percentage of Responses to the Counseling Scale, McKeesport (Pa.) Area School District Career Education Program, Grades 10-12, Overall and by Treatment Groups [1, 2].

Item		Over-all N=220	C-C N=30	T-C N=30	IT-C N=20	C-T N=30	T-T N=30	IT-T N=20	C-IT N=20	T-IT N=20	IT-IT N=20
1: Non-respondents	N	0	0	0	0	0	0	0	0	0	0
	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	N	51	6	3	6	7	10	5	5	6	3
	%	23.2	20.0	10.0	30.0	23.2	33.3	25.0	25.0	30.0	15.0
B	N	46	3	11	3	6	5	4	3	5	6
	%	20.9	10.0	36.7	15.0	20.0	16.7	20.0	15.0	25.0	30.0
C	N	67	13	7	7	9	8	6	8	2	7
	%	30.5	43.3	23.2	35.0	30.0	26.7	30.0	40.0	10.0	35.0
D	N	56	8	9	4	8	7	5	4	7	4
	%	25.5	26.7	30.0	20.0	26.7	23.3	25.0	20.0	35.0	20.0
2A: Non-respondents	N	8	0	2	1	2	1	1	1	0	0
	%	3.6	0.0	6.7	5.0	6.7	3.3	5.0	5.0	0.0	0.0
Yes	N	93	10	16	6	10	13	6	10	11	11
	%	42.3	33.3	53.3	30.0	33.3	43.3	30.0	50.0	55.0	55.0
No	N	119	20	12	13	18	16	13	9	9	9
	%	54.1	66.7	40.0	65.0	60.0	53.3	65.0	45.0	45.0	45.0
2B: Non-respondents	N	19	3	2	3	3	3	1	0	3	1
	%	8.6	10.0	6.7	15.0	10.0	10.0	5.0	0.0	15.0	5.0
Yes	N	148	21	24	11	18	16	14	13	16	15
	%	67.3	70.0	80.0	55.0	60.0	53.3	70.0	65.0	80.0	75.0
No	N	53	6	4	6	9	11	5	7	1	4
	%	24.1	20.0	13.3	30.0	30.0	36.7	25.0	35.0	5.0	20.0

(continued)

Table 5 (continued)

Item		Overall N=220	C-C N=30	T-C N=30	IT-C N=20	C-T N=30	T-T N=30	IT-T N=20	C-IT N=20	T-IT N=20	IT-IT N=20
3A: Non-respondents	N	12	0	2	1	2	2	0	2	1	2
	%	5.5	0.0	6.7	5.0	6.7	6.7	0.0	10.0	5.0	10.0
Yes	N	126	17	18	8	19	18	12	10	12	12
	%	57.3	56.7	60.0	40.0	63.3	60.0	60.0	50.0	60.0	60.0
No	N	82	13	10	11	9	10	8	8	7	6
	%	37.3	43.3	33.3	55.0	30.0	33.3	40.0	40.0	35.0	30.0
3B: Non-respondents	N	29	5	3	5	5	3	1	3	2	2
	%	13.2	16.7	10.0	25.0	16.7	10.0	5.0	15.0	10.0	10.0
Yes	N	155	22	25	11	22	19	16	11	16	13
	%	70.5	73.3	83.3	55.0	73.3	63.3	80.0	55.0	80.0	65.0
No	N	36	3	2	4	3	8	3	6	2	5
	%	16.4	10.0	6.7	20.0	10.0	26.7	15.0	30.0	10.0	25.0
4A: Non-respondents	N	7	0	2	1	1	2	0	0	0	1
	%	3.2	0.0	6.7	5.0	3.3	6.7	0.0	0.0	0.0	5.0
Yes	N	158	21	21	11	24	22	16	14	14	15
	%	71.8	70.0	70.0	55.0	80.0	73.3	80.0	70.0	70.0	75.0
No	N	55	9	7	8	5	6	4	6	6	4
	%	25.0	30.0	23.3	40.0	16.7	20.0	20.0	30.0	30.0	20.0
4B: Non-respondents	N	28	6	2	5	5	2	1	2	2	3
	%	12.7	20.0	6.7	25.0	16.7	6.7	5.0	10.0	10.0	15.0
Yes	N	174	23	26	14	24	23	17	16	17	14
	%	79.1	76.7	86.7	70.0	80.0	76.7	85.0	80.0	85.0	70.0
No	N	18	1	2	1	1	5	2	2	1	3
	%	8.2	3.3	6.7	5.0	3.3	16.7	10.0	10.0	5.0	15.0

[1]Tenth grade students not included (nor applicable) in groups with N = 20.

[2]C = Control; T = Treatment; IT = Intensive Treatment.

One must also consider certain limitations that are placed on this evaluation. Late involvement of the evaluation party precluded its active participation in the early stages of the program's development. Had the evaluation team been involved earlier, it might have guaranteed randomness in the assignment of students to treatment cells, a condition necessary to assure the factual interpretation of statistical results. In addition, another type of design, such as analysis of covariance, might have been more sensitive since it takes into account initial student differences. Furthermore, it is possible that the fluctuating nature of McKeesport's Career Education Program made the instruments inappropriate. Finally, pretesting, which was impossible because of the evaluation team's late involvement, would have placed the evaluators in a more tenable position with respect to the absoluteness of the statistical results.

L. Conclusions.

1. After its first year of existence, it can be said that the McKeesport Career Education Program is an excellent one. Despite some recurring problems yet to be overcome, the McKeesport Program is probably one of the best of its type in the nation.

2. Part of the Career Education Program's success may be attributed to the support given to it by the Board of Education and the District's School Superintendent.

3. In addition to having the necessary administrative support, the Program is fortunate in having a Program Director who has given it superior leadership from the stage of conceptualization to that of implementation.

4. The Career Education Staff is to be commended for its willingness to adapt, to improve, and to integrate into the Program the ideas of sources within and without the school.

5. All of the members of the Program Staff are to be commended for the manner in which they performed their Program responsibilities and for their adeptness in creating new ways to accomplish their assigned tasks.

In conclusion, it should be said that the McKeesport Area School District Career Education Program can be very proud of its accomplishments to date. However, the evaluators urge that there be a continuous reassessment of the meaning of career education to the School District, and likewise, that the central office staff become more involved in this reassessment. There is still some question as to the appropriateness of the product objectives chosen, as well as some concern relative to the appropriateness of the specified changes. It is important to note, however, that the Program has remained faithful to the legislative intent alluded to earlier in this report.

M. Recommendations.

To insure the continued success of the McKeesport Career Education Program, the following recommendations are offered:

1. Vertical articulation of the Program should be clarified and rigorously practiced.
2. The monitoring system for staff activities should be re-evaluated and improved.
3. Two process evaluations, at least two days in duration, should be planned and contracted for.
4. An overt attempt should be made to directly involve the school principals and the middle-level central staff in the implementation of the Program, and to assign specific and reasonable responsibilities to each of these groups.
5. A joint planning session should occur in the near future which involves the Program staff, teachers, principals, and central office staff.
6. A documentation system of successful curricular units should be conceptualized and implemented as soon as possible.
7. The McKeesport Area School Board should be encouraged to make an onsite review of Program activities.
8. The desired involvement of the senior high school teachers and support personnel should be delineated and implemented.
9. More involvement by the regular vocational staff members is urgently needed.

10. A system of student record keeping should be initiated to log the career education experiences of the students involved in the Project.

11. A Career Education Curriculum Guide should be developed which is complementary to the McKeesport School District Guide.

12. An attempt should be made to completely centralize the placement function.

13. The Career Education Program should be articulated with other innovative programs within the district.

APPENDICES

APPENDIX A$_1$

STUDENT INTERVIEW SCHEDULE
APVTS

Program _____ Interviewer _____
Student _____ Date _____

1. They have a system called "TIMES" to schedule student learning activities here at APVTS. Do you know how this system works?

   Yes____
   No ____

   Please give a brief description.

	EOC
____	V G
____	G
____	F
____	P
____	VP

2. Did anyone explain to you how the "TIMES" scheduling works?

   Yes____ Who? _____
   No ____

3. The APVTS attempts to schedule students to a variety of activities which they complete at their own rate. How do you rate this method of instruction?

   ____V G
   ____G
   ____F
   ____P
   ____V P
   ____On what basis?

4. Do you consider this procedure (units, modules, tasks) helpful in planning your career?

   _____Yes
   _____No
   _____How

STUDENT INTERVIEW SCHEDULE
APVTS

5. Do you prefer the way activities are scheduled here at APVTS to the way they are scheduled at your home school?

Yes_____
No _____
Why ____

6. Do you feel that you are prepared for each task sheet when it is presented to you by the teacher?

Yes _____
No _____
Why _____

7. Are you able to read the task sheets well enough to follow the instructions?

Yes._____
No _____
Why _____

8. Are you less favorable toward the Admiral Peary System of modular scheduling now than when you first came to the APVTS?

Yes _____
No _____
Why _____

9. Do you like the way classes are conducted here at the APVTS?

Yes _____
No _____
Why _____

10. In your class, which of the following is more likely to occur?

_____All students working on same thing.

_____Students working on several different things.

STUDENT INTERVIEW SCHEDULE
APVTS

11. As far as the amount of time students spend on a particular task, which is more likely to occur?

____All students spend about the same amount of time on a particular task.
____The amount of time spent on a task varies from student to student.

12. When you finish a task, what do you do then?

____Get a new task to work on.

____Get busy work until others have finished that task.

____Do nothing until others have finished that task.

13. Which state of vocational preparation best described you?

____Vocationally prepared at this time.

____Not yet vocationally prepared but better prepared than when I entered APVTS.

____Not vocationally prepared.

14. Has your understanding of the skills required for various occupations improved since entering the APVTS?

Yes ____
No ____

15. Has your attitude toward school improved since coming to APVTS?

Yes ____
No ____
How ____

STUDENT INTERVIEW SCHEDULE
APVTS

16. Do you feel you're making progress toward meeting the requirements of a particular occupation?

Yes _____
No _____
How _____

17. How much time have you spent talking to the APVTS counselors (Mr. Cassidy, and Mr. Wilson) regarding occupational requirements and characteristics?

_____Hours per year

How many hours with home school counselor?

_____Hours per year

APPENDIX A_2

TEACHER/STAFF INTERVIEW SCHEDULE
APVTS

1. I am going to mention the components of the TIMES System used here at the APVTS. Please indicate your degree of involvement in that component and your evaluation of it.

Component	Involvement* 1 2 3 4	Evaluation** 1 2 3 4
Objectives	- - - -	- - - -
Individualization of instruction	- - - -	- - - -
Preparation of Materials (tasks, modules, units)	- - - -	- - - -
Guidance of pupils in the utilization of TIMES	- - - -	- - - -
Communication of TIMES concept to potential employers	- - - -	- - - -
Communication of TIMES concept to parents	- - - -	- - - -

2. Please evaluate the effect of TIMES on the following:

Facet	Rating** 1 2 3 4 5
Pupil motivation	- - - - -
Pupil achievement	- - - - -
Pupil attendance	- - - - -
Pupils' attitude toward school	- - - - -

TEACHER/STAFF INTERVIEW SCHEDULE
APVTS

Pupil deportment and conduct - - - - -

Pupils' attitude toward the world of work - - - - -

Pupils' understanding of occupational requirements - - - - -

Employability of pupils upon graduation - - - - -

3. How do you view your role in the personal counseling of students?

4. What is your general attitude toward the TIMES concept?

_____ Very Positive

_____ Positive

_____ Neutral

_____ Negative

_____ Very Negative

5. How many hours per week do you spend in preparing task sheets? _____

6. How do you evaluate the training you received in preparing task sheets?

_____ Very Good

_____ Good

TEACHER/STAFF INTERVIEW SCHEDULE
APVTS

_____ Fair

_____ Poor

_____ Very Poor

---

*1 = Not Involved
2 = Slight Involvement
3 = Moderate Involvement
4 = Great Deal of Involvement

*1 = Very Poor
2 = Poor
3 = Fair
4 = Good
5 = Very Good

APPENDIX B$_1$

GRADE LEVEL CONCEPT QUESTIONS K-2

Kindergarten, What is Work?

A. Instructions:

Place in a pile all the pictures that show people at work. Now why did you put this one (W) in the pile?

B. Drawing

2. Transportation

a. Stewardess with a tray (P)

b. Car rental girl at her desk (P)

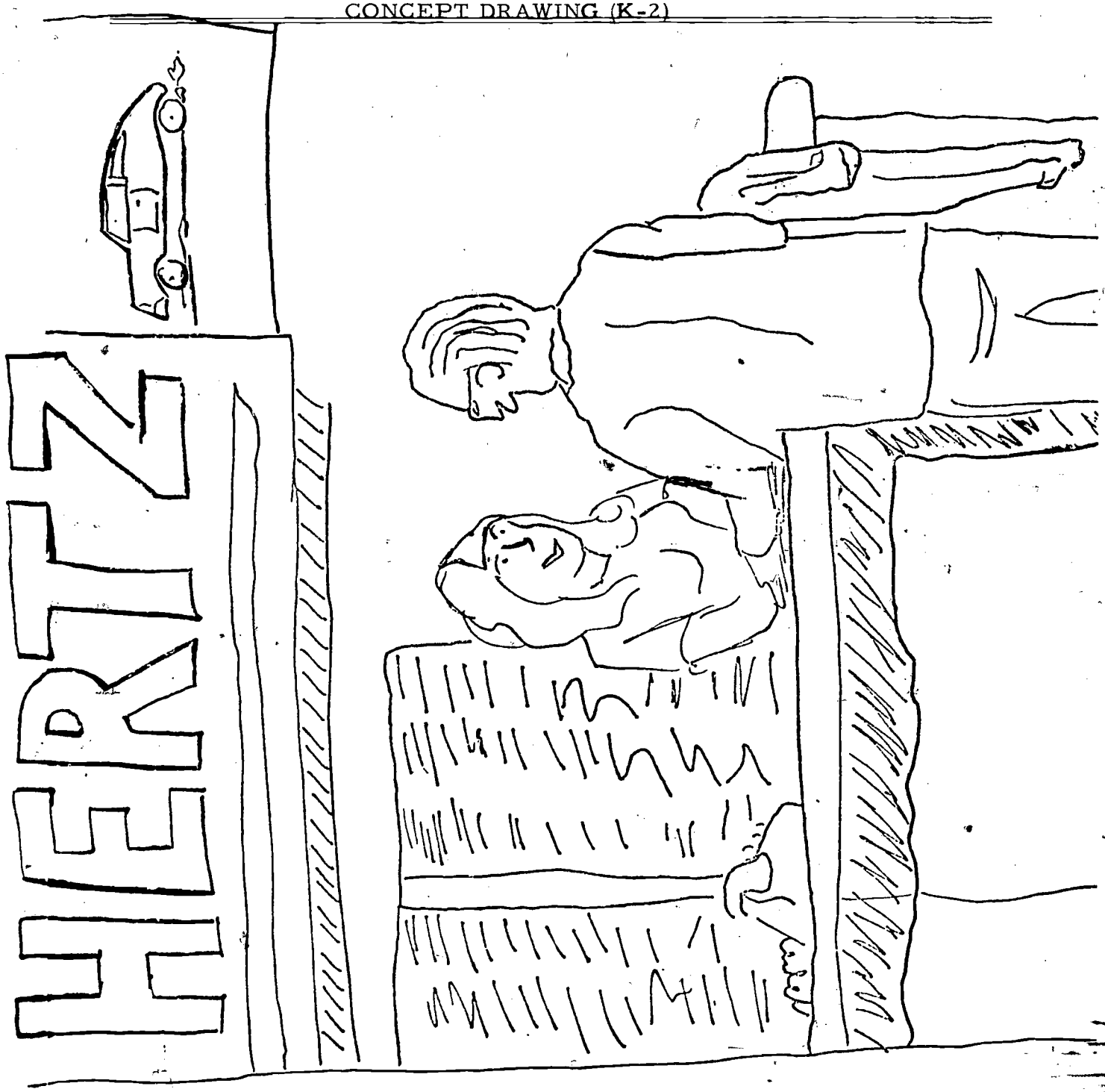
c. Pilot driving a car (N)

d. Pilot in a small plane (W)

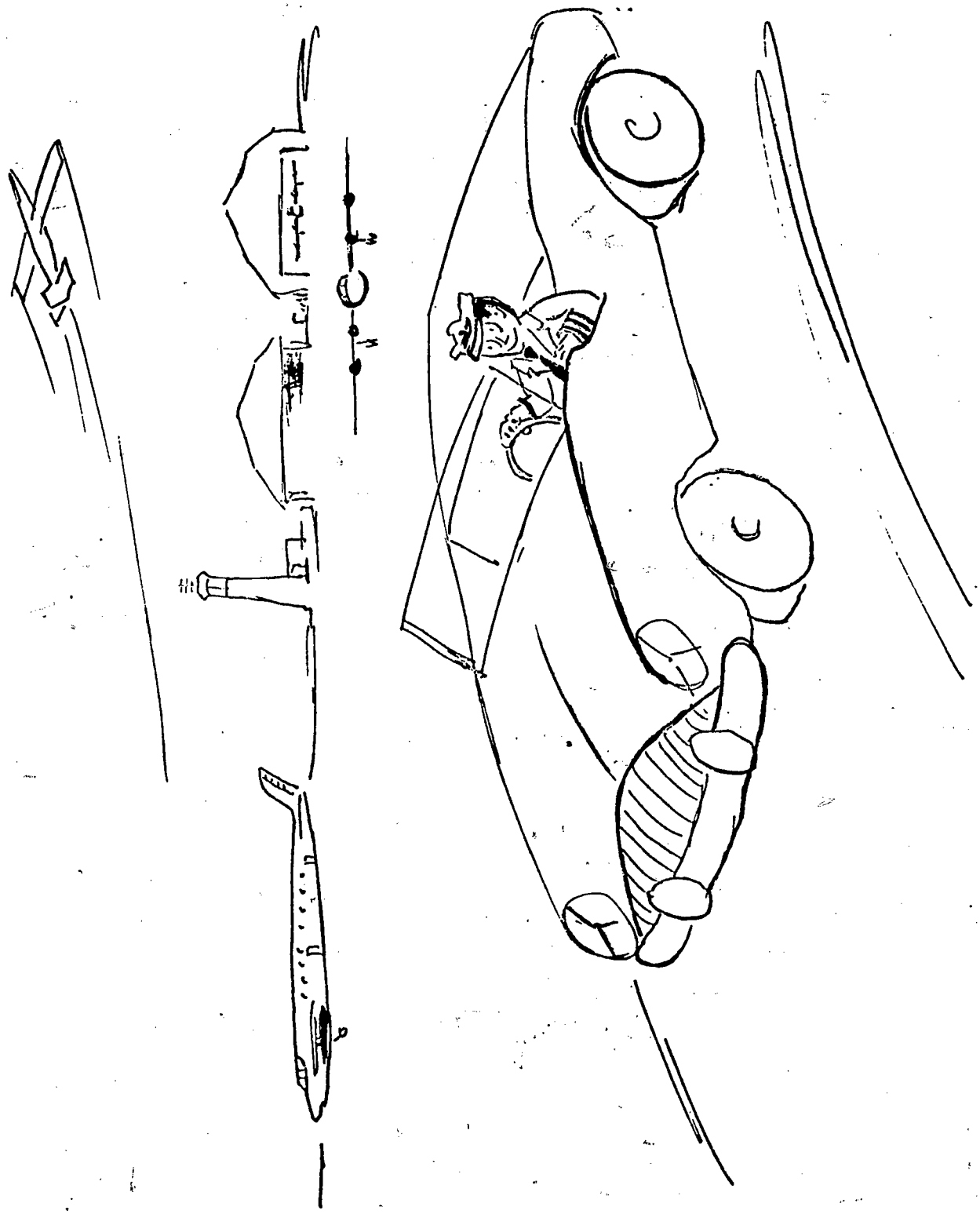
e. Ramp attendant signaling a plane (P)

CONCEPT DRAWING (K-2)

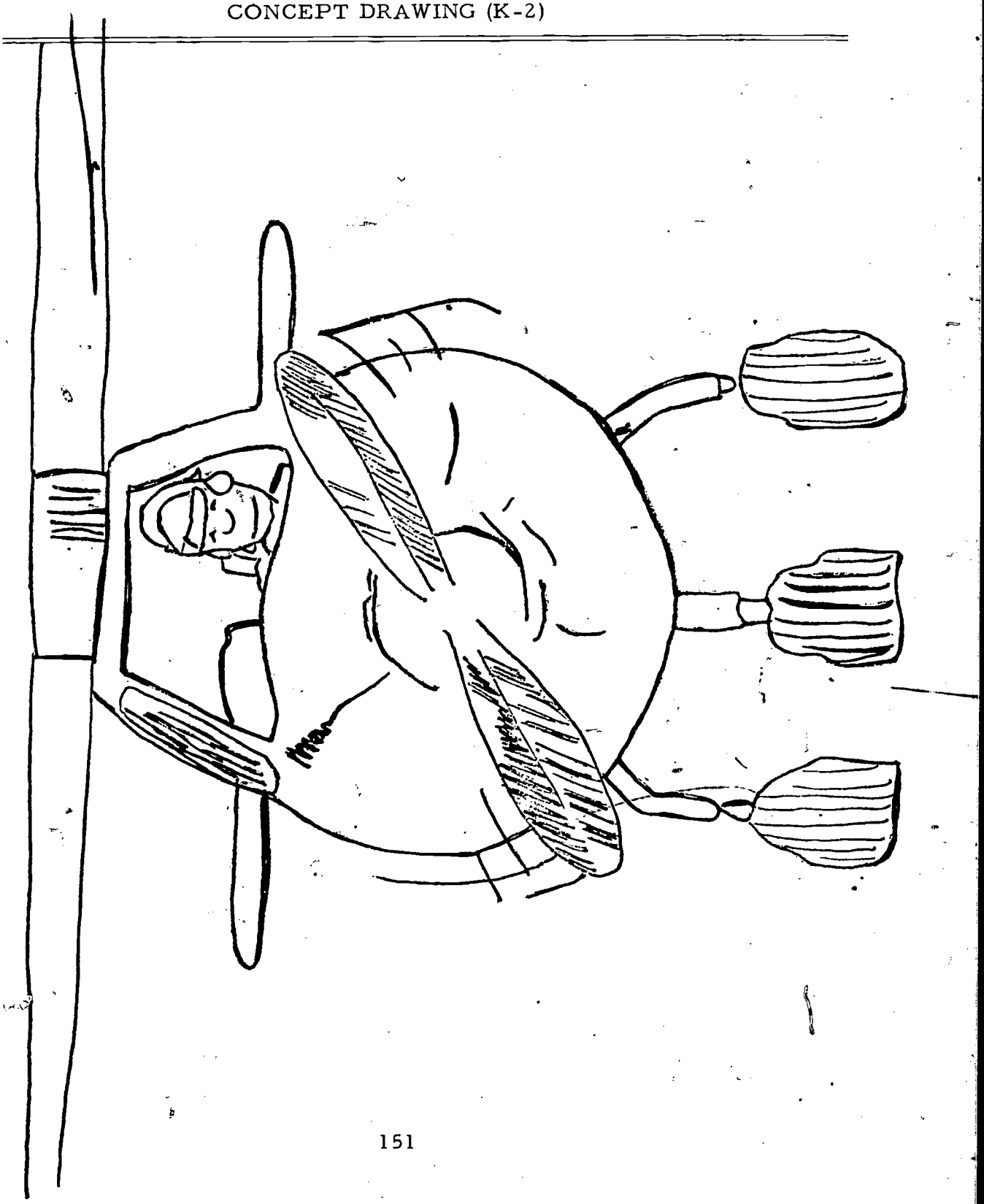
CONCEPT DRAWING (K-2)



CONCEPT DRAWING (K-2)



CONCEPT DRAWING (K-2)



CONCEPT DRAWING (K-2)

APPENDIX B_2

PROJECT CAREER DEVELOPER QUESTIONNAIRE

The purpose of this questionnaire is to gather information about Project CAREER. This includes the experience which you as a teacher have gone through in developing the CAREER Cluster Resource Unit. The following questions represent an effort to determine some feelings and opinions related to the project. Please answer these questions honestly to the fullest extent possible. It is through your answers that we will be able to constantly improve the project.

Name _____

Present Position _____ Location _____

Title of the CAREER Cluster Resource Unit you helped develop _____ Dates during which cluster was developed _____

For each of the following statements, indicate your reaction by checking the appropriate space which most nearly reflects your feeling in each case.

SA - denotes strong agreement with the statement

A - denotes mild agreement with the statement

N - denotes neutral

D - denotes mild disagreement with the statement

SD - denotes strong disagreement with the statement

PROJECT CAREER DEVELOPER QUESTIONNAIRE

You are encouraged to elaborate in the space provided after each item (especially if your response is negative). Please attach any additional comments or suggestions.

		SA	A	N	D	SD
1.	The topic of the unit which I helped develop was significant to me.	—	—	—	—	—
2.	The topic of the unit I helped develop is relevant to career education.	—	—	—	—	—
3.	I was given sufficient information about the project (i.e., topic and format) prior to the workshop.	—	—	—	—	—
4.	I was given ample opportunity to define the scope and focus of the individualized unit.	—	—	—	—	—
5.	There was an atmosphere of mutual respect and cooperation between myself and other participants.	—	—	—	—	—
6.	There was an atmosphere of mutual respect and cooperation between myself, the project staff, and the consultants.	—	—	—	—	—
7.	There were available, most of the human and material resources I felt necessary for developing the unit.	—	—	—	—	—
8.	Once I had made some decision (e.g., a change in procedure obtaining resources, etc), it was easily implemented.	—	—	—	—	—

PROJECT CAREER DEVELOPER QUESTIONNAIRE

	SA	A	N	D	SD
9. There was an opportunity to test ideas regarding the unit in real situations or obtain factual information concerning their worth or effectiveness.	—	—	—	—	—
10. Progress was continually assessed by all active participants throughout the program.	—	—	—	—	—
11. Individual differences among the participants were accepted by all.	—	—	—	—	—
12. There was adequate coordination among those working on a single cluster.	—	—	—	—	—
13. There was adequate coordination among the various groups working on different units.	—	—	—	—	—
14. Sufficient attention was paid to group problems.	—	—	—	—	—
15. Sufficient attention was paid to individual problems in the group.	—	—	—	—	—
16. I felt my activities were significant and meaningful to the project.	—	—	—	—	—
17. The philosophy and concepts of career education were taken into consideration in the development of the cluster resource unit.	—	—	—	—	—
18. The make-up of our group was sufficiently diverse to provide an adequate cross-section of opinion and expertise.	—	—	—	—	—

PROJECT CAREER DEVELOPER QUESTIONNAIRE

	SA	A	N	D	SD
19. To what degree did you develop the unit around the concept of meeting individual student needs and interests?	___	___	___	___	___

PLEASE ANSWER THE FOLLOWING QUESTIONS BY CHECKING THE YES or NO BLANK.

	YES	NO
20. As a result of your experiences in Project CAREER do you possess different ideas, persuasions, and viewpoints about education.	___	___
If so, please list some examples.		
21. As a result of your experience in Project CAREER are you more aware of problems in education as they relate to career education, specifically your own school and classroom due to your participation in the workshop?	___	___
If so, what kind of problems?		
22. As a result of your experience in Project CAREER do you anticipate your relationship with your students will change?	___	___
If so, please describe.		

PROJECT CAREER DEVELOPER QUESTIONNAIRE

		YES	NO
23.	As a result of your experiences in Project CAREER do you anticipate your classroom procedures will change?	___	___
	If so, please describe.		
24.	As a result of your experiences in Project CAREER do you feel increased respect for others' opinion regarding solutions to educational problems as they relate to career education?	___	___
	If so, describe a situation.		
25.	As a result of your experiences in Project CAREER are you more willing to work with others to solve instructional problems?	___	___
	If so, what type of instructional problem?		
26.	As a result of your experiences in Project CAREER do you now have an understanding of the philosophy, concepts, and implications of career education?	___	___
	If yes, please explain.		
27.	As a result of your experience in Project CAREER, are you more able to evaluate certain education practices of your school?	___	___
	If yes, specify practices.		

PROJECT CAREER DEVELOPER QUESTIONNAIRE

		YES	NO
28.	In developing the CAREER cluster resource unit, was concern given for individual pupil growth and development patterns?	____	____

29. Please evaluate the following list of activities as to the degree of helpfulness in developing the units. Check the appropriate space.

	None	Some	Much	No Response
Group conferences----------	____	____	____	____
Individual conferences-------	____	____	____	____
Visitations to resources-----	____	____	____	____
Reading professional books and teaching materials------	____	____	____	____
Demonstrations ----------	____	____	____	____
Examining teaching materials----------	____	____	____	____
Consultant help ----------	____	____	____	____
Other----------	____	____	____	____

PLEASE ELABORATE OR SPECIFY

APPENDIX B_3

QUESTION NO. 20: THE DEVELOPER QUESTIONNAIRE

#20. As a result of your experiences in Project CAREER do you possess different ideas, persuasions, and viewpoints about education as they relate to career education? If so, please list some examples.

Statements of All Teachers.

As I talked with workers and employers in our orientation week I found areas which they felt needed emphasis in schools.

I feel we can relate careers to elementary students as low as kindergarten. I also feel we can and should do more individualization.

Teachers in my group shared some of their experiences that are somewhat related to helping a child be aware of careers. This gave me some definite ideas for use in my classroom. (Now we can channel some of our past practices into career awareness.)

I received many ideas from this project that I intend to use in my classroom. Before this project I wouldn't have seen this possible.

I think I am more aware of the need for career education and awareness in the elementary school.

At first I felt that we might be getting too involved at the elementary level, but was convinced of the need for the awareness phase after working on the project.

I am just more convinced that pupils should become aware of the many career opportunities.

I had not considered career education at all in the elementary grades. From working on this project I can see a need for making elementary children aware of careers.

Need for career education.

[illegible]

APPENDIX B_4

PROJECT CAREER USERS' QUESTIONNAIRE

Name _____ Date _____

Present Position _____ Location _____

Which of the units did you use? _____

At what grade level was it used? _____ How many students involved? _____

Please indicate the month and year in which you utilized the unit _____

PLEASE ANSWER THE FOLLOWING QUESTIONS BY CHECKING THE YES or NO BLANK.

(You are encouraged to elaborate on your answers in the spaces provided.)

	YES	NO
In your opinion was this unit oriented toward career awareness for the elementary student?	____	____
Did you experience difficulty in obtaining the materials or measuring devices related to the unit	____	____

If yes, please explain.

Were the instructional activities restricted by the physical facilities of the school, e.g., lack of individual study carrels	____	____

If yes, please specify kind of activity and restriction.

PROJECT CAREER USERS' QUESTIONNAIRE

		YES	NO
4.	Do you feel that by using this guide, you could more effectively utilize state syllabi or local courses of study?	____	____
	If yes, how?		
5.	Had you taught this topic previously without benefit of the Guide?	____	____
6.	If you had taught the same unit previously, did the past experience lessen your use of the Guide?	____	____
7.	In your print-out for individual students, were the number of suggestions relating to content, activities, materials, and measuring devices sufficient?	____	____
	If no, please explain.		
8.	Would you consider a laboratory, demonstrating class, or other in-service training of value in helping you to learn how to implement units?	____	____
	If other, please explain.		
9.	Is the Instructional staff at your school adequate for the effective utilization of the Guide? (e.g., media specialists, instructional leadership, and other teachers)	____	____

PROJECT CAREER USERS' QUESTIONNAIRE

	YES	NO
If no, please explain.		
10. Were you given sufficient information and guidance prior to using and during the use of the units?	____	____
If no, please explain.		
11. As a result of using the Guide, have you subsequently used other resources (either in or out of school) more extensively?	____	____
Please specify.		
12. Do you possess different ideas, persuasions, and viewpoints about education and its processes since your experience with the Guide?	____	____
Please explain.		
13. Are you more aware of problems in education and career education specifically in your own school and classroom as a result of using the Guide?	____	____
14. Has your relationship with your students changed?	____	____
If yes, please explain.		

PROJECT CAREER USERS' QUESTIONNAIRE

		YES	NO
15.	Have your classroom procedures changed?	____	____
	Please explain.		
16.	Are you planning to use this unit again?	____	____
17.	Would you like to use other units?	____	____
18.	Would you like to work as part of a team in developing a unit?	____	____
19.	Do you feel this unit attempts to meet the individual student's needs and interests?	____	____
	Please elaborate.		

APPENDIX B_5

CAREER RESOURCE GUIDE REQUEST FORM

Student's Name _____ Unit Title _____

School _____ Teacher's Name _____

Phone No. _____ Subject Area _____

OBJECTIVES

LEARNER VARIABLES

1. Boy
2. Girl

GRADE LEVEL

3. K
4. 1
5. 2
6. 3
7. 4
8. 5
9. 6
10. Above

GENERAL INTERESTS

11. Airplanes
12. Bikes
13. Camping
14. Cars/Trucks
15. Clubs
16. Colors
17. Construction (making things)
18. Dancing
19. Dramatics
20. Drawing
21. Drugs/Narcotics
22. Earth
23. Ecology
24. Electricity
25. Entertainment
26. Fables/Fairy Tales
27. Family
28. Famous People/Places
29. Farming/Gardening
30. Fashions/Grooming
31. Food/Cooking
32. Friends
33. Games/Puzzles
34. Geography
35. History
36. Hobbies
37. Horses
38. Hunting/Fishing/Trapping
39. Language
40. Magic

CAREER RESOURCE GUIDE REQUEST FORM

41. Mathematics
42. Models
43. Money
44. Music
45. Mysteries/Adventures
46. Needlecraft
47. Neighborhood
48. Painting
49. Pets
50. Photography
51. Play
52. Politics
53. Pre-historic Animals
54. Racing
55. Reading
56. Religion
57. School
58. Science
59. Scouting/4-H
60. Social Problems
61. Space
62. Sports
63. Stars/Planets
64. Television/Radio
65. Toys
66. Travel
67. Wildlife
68. Writing

CAREER RESOURCE GUIDE REQUEST FORM

TO BE COMPLETED BY TEACHERS ONLY

DISADVANTAGE

69. Socio-Economic
70. Educational
71. Cultural

ACHIEVEMENT

72. Low Achiever
73. Average Achiever
74. High Achiever

READING LEVEL

75. Non-Reader
76. Pre-Primer
77. Primer
78. 1.0
79. 1.5
80. 2.0
81. 2.5
82. 3.0
83. 3.5
84. 4.0
85. 5.0
86. 6.0
87. 7.0
88. 8.0
89. 9.0
90. 10.0
91. 10+

MATH PLACEMENT LEVEL

92. Readiness
93. A
B
C
D
94. E
F
G
H
95. I
J
K
L
M
N
O
P
Q

CAREER RESOURCE GUIDE REQUEST FORM

HANDICAPS

96. Partially Sighted
97. Hard of Hearing
98. Fine Motor Disability
99. Short Term Impa[redacted]ent
100. Long Term Im[redacted]ent
101. Educable M[redacted]Retarded
102. Speech Im[redacted]ed
103. Visually Impaired
104. Hearing Impaired
105. Crippled and Health Impaired
106. Emotionally Disturbed
107. Socially Maladjusted
108. Remedial Reader
109. Learning Disability

APPENDIX B_6

ANONYMOUS QUESTIONNAIRE

TEACHER'S ANONYMOUS RESPONSE FOR EVALUATING THE METHODOLOGY IN RELATION TO PROJECT CAREER 1972-1973.

Please complete the following:

1. In your opinion, what are the good points of the Career Education Program's methodology?

2. In your opinion, what is bad about the Career Education Program's methodology?

3. How does the model's methodology contribute toward the developing of self concepts?

4. How do you think the methodology compares with the other methodologies or teaching techniques you have used?

5. How do you feel the children react to this program? Describe briefly.

APPENDIX C_1 .

BASIC EQUIPMENT AND INFORMATION HOLDINGS OF THE CCEM CAREER EDUCATION CENTER

A. EQUIPMENT/FURNISHINGS

Item	No.
Projector, film - strip, w/sound	2
Projector, 16 mm, sound	1
Projector, slide	1
Projector, screen, 50" x 50" lenticular	2
Viewer, film-strip, w/sound	4
Reader-printer, w/18 x lens	1
Reader-printer microfiche attachment	1
Cassette Recorder, with narrator, slide-synch	2
PA system, portable	2
Listening center, w/eight headphones	1
Slide trays, cables, patch cords w/plugs, etc.	misc.
Typewriter, IBM Selectric	1
Typewriter, electric, primer-type	1
Typewriter elements	3
Xerox Model 2400 reproduction unit	1
Storage cabinets	2
File cabinets	2
Audio-visual tables	
Magazine rack, floor-stand	
Pamphlet boxes	
Desks	
Desk chairs	
Table chairs	
Chairs, arm-swivel	
Shelving	

BASIC EQUIPMENT AND INFORMATION HOLDINGS OF THE CCEM CAREER EDUCATION CENTER

B. INFORMATION/DOCUMENTATION

Item	No/Sets
Occupational Guidance Units, Finney	2
Widening Occupational Roles Kit, SRA	2
Encyclopedia of Careers and Vocational Guidance 2 Vols.	4
Occupational VIEWDECK, w/cardboard viewer	5
The Reference Library of Black America	1
PENN-Script deck*	
Chronicle VIEWDECK, w/cardboard viewer	4
Guidance Series, film-strip, sound (Guidance Associates)	
Education and Training Series, film-strip, w/sound (Singer)	1
SRA Guidance Series	4
Career Games and Career Development Lab	1
Occupational Outlook Handbook	10
D.O.T., Vols. 1-2	4

Film-strips and slides
Films and Cartridges
Career opportunities handbooks
Vocational guidance manuals
Career kits
Guides and booklets

*A PHIL-Script deck, currently being developed by the Multi-Media Program, will complement this item.

APPENDIX C_2

TEACHER BRIEF: Activity in Career Education

CAREER EDUCATION OFFICE (CCEM) at Cooke Junior High School
Division of Career Development

1. Teacher _____ 2. Today's Date _____

2. Subject Area _____

3. Class Section(s) _____ _____ _____ _____

4. Brief Title of Lesson: _____

5. Activity Date _____

6. CE ACTIVITY/RESOURCE: (check appropriate items)

(a) _____ student research in Center (b) _____ teacher research in Center
(c) _____ occupational information:
(identify, if specific)

_____ SRA Occup. Role Kit _____ D.O.T.
_____ Finney Occup. Briefs _____ (Other)
_____ Chronicle Kits
_____ Occup. Outlook Handbook
_____ Encyclopedia of Careers

(d) _____ slide-sound programs (career) (e) _____ film-strip (career/title)
_____ _____
_____ _____
_____ _____

(f) _____ film, 16mm (brief title) (g) _____ trip (locale)
_____ _____
_____ _____

(h) _____ discussant (name & title) _____
_____

(i) _____ other experience/event: _____
_____
_____
_____

TEACHER BRIEF: Activity in Career Education

(NB: If #7-#10 are detailed in lesson-plan as attached, you may omit entries here)

7. C.E. Integration: How was career education information tied in with subject and/or lesson? (briefly)

8. Student Preparation: Brief identification of student preparation for this lesson:

9. Student Involvement: Brief identification of student activity involved:

10. Follow-up:? ? ? What plans/activity as a follow-up of this experience? ? :

PLEASE ATTACH XEROX COPY OF LESSON PLAN

YOUR SUPERVISORS AND BERNEATHA BROWN want to help you plan and implement!! ASK!!!

APPENDIX C_3

FACULTY EVALUATION

CAREER EDUCATION MODEL (CCEM) at Cooke Junior High School
Division of Career Development June 1973

Insofar as the CCEM is a research project (reporting to Harrisburg and to Washington), and in the interest of better service to the Cooke staff, we require of ourselves to solicit your cooperation in this brief "internal" evaluation. Please do not be overly concerned with absolute accuracy as to numbers or degree; at this time we really want your responses to be "off-the-top."

We also request your overall, general and broad reactions to "broad" items. You may include other more specific notations under Additional Comments below.
(Your personal identity/anonymity is your choice. See Below)
PLEASE RETURN ON/BEFORE FRIDAY, 29 June, 1973. (CE box, CE Center, or CE Office) Thank you for your participation and cooperation.

SECTION I: Participation in C.E. Project, to date:

1. In your judgment, what has been your own degree of participation with the program resources, concepts, etc., during this past year (allowing for the "broken" year, etc.)

_____NONE _____MODERATE _____ACTIVE

2. Did you attend (i.e., at least 75% of sessions): YES NO

2.1	Summer Workshop 72?	____	____
2.2	Workshop I - Orientation?	____	____
2.3	Cooke C.E. Committee?	____	____
2.4	C.E. Steering Committee?	____	____
2.5	Other specific training/exposure to C.E.?	_____	

3. What has been your involvement with specific C.E. oriented activities (i.e., HOW MANY--Approximately)?

3.1	Student tours	____	3.4	Unit Plans	____
3.2	Discussants	____	3.5	Other (please specify)	____
3.3	Lesson plans	____		_____	

FACULTY EVALUATION

SECTION II: Feedback (Please check your overall, general reaction)

	NO COMMENT #1	DISAGREE #2	AGREE #3	AGREE STRONGLY #4
4. Program organization and format to date has been adequate				

**NB: If you check #1 or 2, please indicate specific reservation:

---

5. Program staff development and orientation to faculty has been effective				

** Specific reservation? ----------

6. Support by C.E. Staff has been helpful				

** Specific reservation? ----------

7. Career Education has an important role to play in our curriculum				

** Specific reservation? ----------

8. C.E. has an important role to play in my teaching area				

**Specific reservation? ----------

9. C.E. has helped in the motivation of my own students.				

**Specific reservation? ----------

10. I support the concepts of C.E. as presented by the C.E. Staff				

** Specific reservation? ----------

11. How might we improve upon the CE Center, its location, equipment etc. _____

_____

_____

FACULTY EVALUATION

12. What specific job titles/careers should be added to our resources (i.e., slide programs, briefs, etc.)?

13. How might C.E. Staff improve service to teachers, students, etc.?

14. ADDITIONAL COMMENT:

(Helpful, if you do not mind)

Teacher _____ Department _____ Date _____

(Thanks, again. And, a good summer to you, too!)

APPENDIX C_4

STUDENT EVALUATION

CAREER EDUCATION MODEL (CCEM) at Cooke Junior High School
Division of Career Development June 1973

**You are checking on us--and how we have served you! THANK YOU for your cooperation.

1. I have served on the Student Career Education Committee this past year: YES:____ NO:____

? ? ? DID YOU LIKE ? ? ?	NO COMMENT	YES	NO
2. Using the C.E. Career Center?			
3. The people who work in the Center?			
4. Talking with the CE counselors?			
5. Learning about jobs and careers?			
6. The C.E. tours?			
7. Learning more about subject selection for next year?			
8. The way the Center is arranged?			
9. Having some C.E. information in your subject classes?			

10. How can we improve the CE center (one way, maybe)? _____

11. What materials or equipment did you like best? _____

12. What, in the Center, did you find of least value or interest? _____

13. What activity would you like to have us start next year? _____

14. Are you planning to use the Center next year? YES____ NO____

15. What job or career should we add to our information material? _____

(ONLY IF you want to): Name_____ Section _____

APPENDIX C_5

CCEM PROGRAM TOUR-SITE SELECTIONS

Philadelphia Bulletin*
**Philadelphia Tribune
WPHL TV
KYW TV
WCAU TV & Radio
WHAT Radio
Brock & Keating
Anastasi Bros.
Eaton, Yale & Towne*
Jerrold Electronics
Philadelphia Police Department
Philadelphia City Council
Water Treatment Center
Holidays Inns
Dairy Maid Candies
Bell Telephone Company
Philadelphia Electric Company
Wills Eye Clinic
SEPTA
1st Pennsylvania Bank
Scott Paper Company
Philadelphia International Airport

Ellisco Can Company
U.S. Weather Bureau
Philadelphia Food Distribution Center
Sun Oil Company
**Micro-Electronics Corporation
Penn Mutual Life Insurance
Philadelphia Gas Works
Philadelphia Municipal Court
Stenton Child Care Center
Beaver College*
Acme Bakery and Warehouse*
Acme Food Distributors
United States Mint*
Philadelphia Zoo
**Key Creations*
Marriott Motel
Philadelphia Naval Yard
**Opportunities Industrial Center*
Federal Bureau of Investigation
Temple University*
Rohm and Haas Corporation*
Maritime Museum*

*Facility and/or site visited

** Minority-owned organization

PRODUCT GOAL I EACH STUDENT WILL DEVELOP AN AWARENESS OF SELF.

Elementary

PRODUCT OBJECTIVES	PROCESS GOALS	PROCESS OBJECTIVES
1. To develop the students' understanding of the difference between thinking and feeling.	1. This program will enhance the ongoing educational program with activities which emphasize the affective domain.	1. The teacher will enrich the curriculum for students by encouraging them to express their feelings within the content material.
2. To develop the students' vocabulary to articulate feeling.	2. This program will promote the fusing of cognitive and affective learning.	2. The teacher will focus on the understanding of the affective vocabulary by providing experiences for the student to express these feelings through role playing and discussion groups.
3. To develop within the student a value of his own feelings.		3. The teacher will provide experiences for the student that will enable him to examine his own values.
4. To develop the students' understanding of their own personal values and interests.		

PRODUCT GOAL I EACH STUDENT WILL DEVELOP AN AWARENESS OF SELF.

Junior High

PRODUCT OBJECTIVES

1. To improve the students' self concept as measured by a self-other rating scale.
2. To increase the students' awareness of his interests, abilities, values and attitudes. (Planning)
3. To increase student and counselor interaction as measured by the "Counselor Visitation Scale."
4. To increase the teachers' implementation of career development concepts as measured by the frequency of use of Career Education activities.

PROCESS GOALS

1. This program will enhance the traditional educational program with group counseling activities which emphasize self-awareness.
2. This program will provide the student with activities that involve him in "Value Clarification" experiences.
3. This program will enhance the on-going educational program with activities which emphasize the affective domain.

PROCESS OBJECTIVES

1. Each counselor will involve students in small self-awareness groups which deal with interests, values and abilities.
2. Each teacher will include some aspect of "Value Clarification" experiences as they relate to Career Education activities.
3. Each teacher will implement Career Education activities incorporating, where appropriate, the five elements: source persons, learning excursions, subject matter tie-in and simulation activities.
4. Each teacher, while implementing Career Education activities will utilize interviewing, role playing and debriefing as a strategy to increase student self awareness.
5. Each teacher will work with the Career Education Coordinator in developing and implementing Career Education activities.

PRODUCT GOAL I. EACH STUDENT WILL DEVELOP AN AWARENESS OF SELF.

Senior High

PRODUCT OBJECTIVES

1. To improve the students' (10-12) self concept as measured by the self-other rating scale.
2. To increase the students' (10-12) awareness of interests, abilities, values and attitudes.

PROCESS GOALS

1. This program will enhance the ongoing educational program with developmental themes aimed at providing students with information which will enable them to make self-satisfying career choices.
2. The program (K-12) will enhance the ongoing educational program with activities which emphasize the affective domain.

PROCESS OBJECTIVES

1. Each teacher will utilize values clarification strategies through the subject matter area.
2. Each student, when utilizing a community experience (such as a work related experience or a recourse person into the classroom) will go through a follow-up or "debriefing" conducted by a counseling staff member or the classroom teacher.
3. Each teacher will work with the Career Education staff in developing and implementing Career Education activities.
4. Each teacher will utilize simulation activities in the classroom to be followed by debriefing procedures.

PRODUCT GOAL II EACH STUDENT WILL DEVELOP AN AWARENESS OF HIS PERSONAL CHARACTERISTICS AS THEY AFFECT HIS RELATIONSHIPS WITH OTHERS.

Elementary

PRODUCT OBJECTIVES	PROCESS GOALS	PROCESS OBJECTIVES
1. To develop the students' appreciation for individual differences.	1. This program will provide the student with the opportunity to participate in activities which will help to develop interpersonal skills.	1. Each teacher will utilize values clarification strategies within the context of the subject matter.
2. To break down the students' stereotypes that accrue to group differences.	2. This program will provide opportunities which will help students understand the differences of values and feelings among people and groups in a pluralistic society.	2. Each teacher will utilize resource people who tend to counter stereotypes whenever possible.
3. To develop the students' knowledge of ways to develop satisfying relationships.		3. Each teacher will use role play situations and assign non-stereotype roles to situations whenever possible.
4. To develop the students' interpersonal skills.		4. Each teacher will focus on human relations within the use of role play and group discussions.
		5. Each teacher will give students the opportunity to develop basic interviewing skills when utilizing resource persons or learning excursions.

PRODUCT GOAL II EACH STUDENT WILL DEVELOP AN AWARENESS OF HIS PERSONAL CHARACTERISTICS AS THEY AFFECT HIS RELATIONSHIPS WITH OTHERS.

Junior High

PRODUCT OBJECTIVES	PROCESS GOALS	PROCESS OBJECTIVES
1. To increase the students' understanding of the importance of interpersonal relationships. (Planning)	1. This program will provide the student with the opportunity to participate in activities which help to develop interpersonal skills.	1. Each teacher will incorporate into each Career Education unit or activity, experiences that involve the students in cooperative group work and group decision making activities.
2. To increase the students' understanding of and appreciation for individual differences as measured by a self-other rating scale.	2. This program will provide the student with opportunities that will help him to develop an understanding of the impact of his values and feelings in relationship to others.	2. Each counselor will, in group situations, involve students in discussions or simulation activities which focus on interpersonal relationships.
3. To increase the students' awareness of the ways in which his behavior affects others and vice versa. (Planning)	3. This program will involve the student in activities that help him to see the impact of his behavior on those around him.	3. Each teacher in the development of Career Education activities will include role playing, learning excursions or resource persons and the corresponding interviewing techniques and debriefing.

PRODUCT GOAL II EACH STUDENT WILL DEVELOP AN AWARENESS OF HIS PERSONAL CHARACTERISTICS AS THEY AFFECT HIS RELATIONSHIPS WITH OTHERS.

Senior High

PRODUCT OBJECTIVES	PROCESS GOALS	PROCESS OBJECTIVES
1. To increase students' (10-12) understanding of the importance of interpersonal relationships in life experiences.	1. This program will provide the student with the activities which will help in the development of interpersonal skills.	1. Each teacher will incorporate in Career Education activities role playing, cooperative work and group decision making (where appropriate) for carrying out the activity effectively.
2. To increase the students' (10-12) understanding of how his own personal characteristics effect his relationships with others.	2. This program (K-12) will provide opportunities which will help students understand the impact of the feelings and values of others in relationship with their own.	2. Each teacher will provide opportunities for cooperative interpersonal relationships by utilizing task oriented groups.
3. To increase the students' (10-12) appreciation of individual differences as measured by a self-other rating scale.	3. This program (K-12) will emphasize the relationship between career choice and personal characteristics and life style.	3. Each teacher will utilize values clarification strategies into the ongoing classroom activities with debriefing.
		4. Students will be debriefed by counselors upon return from a work related experience.

APPENDIX D_3

COUNSELING SCALE

NAME_____ TODAY'S DATE_____

SEX_____ GRADE_____ SCHOOL_____

HOMEROOM NUMBER____ HOMEROOM TEACHER_____

1. How many times did you talk with a guidance counselor this year about your future education or job training? (Check one)

   ( ) A. Never
   ( ) B. Once
   ( ) C. Two or three times
   ( ) D. Four or more times

2. Have you ever read a college catalog or a vocational school catalog?

   College: ( ) A. No
   ( ) B. Yes What College? _____

   Vocational School: ( ) C. No
   ( ) D. Yes What School? _____

3. In the past 12 months, have you ever written to or talked with a college or vocational school official about going to his school? (Check one for each category).

   College: ( ) A. No
   ( ) B. Yes What College? _____

   Vocational School: ( ) C. No
   ( ) D. Yes What School? _____

4. Have you filled out an application form for entrance in a college or vocational school next fall? (Check one for each category).

   College: ( ) A. No.
   ( ) B. Yes What College? _____

   Vocational School: ( ) C. No.
   ( ) D. Yes What School? _____