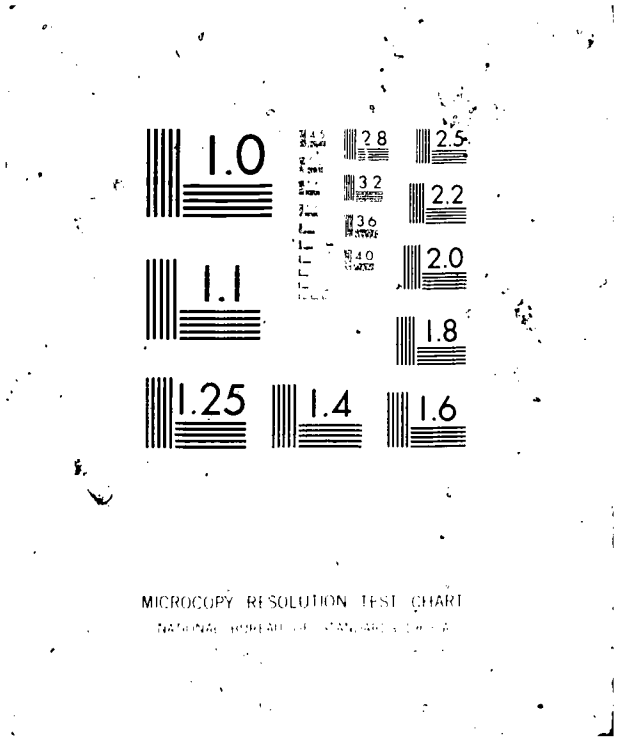
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ABSTRACT

The Massachusetts Occupational Competence Access Project (OCAP) was designed to provide secondary school students with marketable skills and to increase their ability to make decisions about careers. The first year's efforts were primarily concerned with setting up the project and with inservice training for teachers, counselors, and administrators. Work was directed toward three projected OCAP components: A competency-based career guidance system, a skill outcome exploratory program, and a system of computerized student files. (When completed the student files may be linked with the project-career data bank of more than 35,000 performance objectives for occupations and occupational clusters). Two career information centers were established and more are planned for additional schools. Appendixes (134 pages) include project materials, the third-party evaluation report, and the sponsor's site visit report. (MF)

OCCUPATIONAL COMPETENCE ACCESS PROJECT

FIRST YEAR REPORT

June 30, 1976

VT 103 490

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PART I

OCCUPATIONAL COMPETENCE ACCESS

PROJECT -- OVERVIEW

Today's educational system demands that students begin making a series of career-related decisions in about the eighth grade and continuing through high school. These decisions -- what courses to take, whether to select a vocational program, which vocational area to pursue -- affect career options in a very direct way. Yet, although the educational system demands that these decisions be made, most school systems do very little to provide the student with the tools needed to make these important decisions wisely. Too many students leave high school with little real knowledge of the world of work, with insufficient awareness of how their interests and talents relate to career choices, and without any marketable skills.

The Occupational Competence Access Project (OCAP) represents one approach to this problem. The two basic aims of the project were: (1) to increase student skills and abilities in relation to employment opportunities, and (2) to increase student ability in career decision-making. OCAP is a three-year project operated as a joint effort among the King Philip Regional School District (Wrentham, Massachusetts), the Lynn Public Schools (Lynn, Massachusetts) and Project CAREER (a research and development activity of the Massachusetts Division of Occupational Education). (The text of the original proposal can be found in Appendix A.) The two school systems provide quite different settings; King Philip is a regional school district serving several small towns in a semi-rural setting, while Lynn is an urban-industrial center with high unemployment and large numbers of minority residents.

These differences are significant since OCAP is intended as a model appropriate for wider use in the future. OCAP is utilizing the capabilities of Project CAREER, which has developed a computerized data bank to serve as a resource for career education. Using the data and technical assistance of Project CAREER, OCAP intends to implement a coordinated system of career-related instruction and guidance in the King Philip High School and in one of the Lynn high schools (Lynn English).

Basically, OCAP seeks to coordinate three components into a system of guidance and instruction designed to provide students with career exploration activities and skills attainment. The three OCAP components include: a competency-based career guidance system, a skill outcome exploratory program and a system of computerized student competency files.

Competency-Based Career Guidance System

This system begins with an assessment of a student's interests and abilities (self-awareness) and then lead into an information-providing stage where the student is exposed to a variety of occupational clusters and relationships among those occupations (career awareness). The student is provided with resources for relating his interests, abilities and skills to particular occupations. This sort of guidance system operates as part of a student's total program; traditional guidance activities are coordinated with instructional activities (through occupational exploratory programs) and with innovative guidance tools (e.g. computerized inventories of student skills can be linked to the resources of Project CAREER's data bank).

Skill Outcome Exploratory Program

This aspect of the program exposes students to a number of career clusters via practical learning experiences in such a way that students can obtain marketable skills in the process of career exploration. Occupational and academic instruction become more complementary by the infusion of career-related activities into the academic classroom. By listing the skills learned in terms of specific tasks performed, each student's accomplishments can be recorded and utilized through the student competency file system.

Student Competency Files

Each student's file contains a computerized listing of occupational competencies (performance objectives) and academic competencies (prerequisite learnings) in which the student has demonstrated proficiency. The skills which a student learns in his school programs are coded so that they can be linked to the appropriate performance objectives in the Project CAREER data bank, which presently includes over 35,000 industrially validated performance objectives linked to occupations and to occupational clusters.

In the Project CAREER data bank, each coded performance objective is linked to its coded prerequisite learnings, and, similarly, each occupation is appropriately linked to its required performance objectives. Thus, a progression of prerequisites for each skill, and a progression of skills for each occupation is easily identified. In addition, the prerequisites common to any group of skills may be identified; the skills common to a cluster of occupations may be identified; the prerequisites common to specific occupations may be identified; and, in fact, an endless series of desired data configurations and linkages may be identified.

An immediate ramification of the above is that the course of study and accomplishment to satisfy the requirements of any occupation in the data bank can be printed out easily. In addition, if a given student has his/her accomplishments identified in a computer file, then the additional requirements of any entire occupation can be identified. In fact, this can be generalized, as follows: Given any student's file of accomplished prerequisite learnings and occupational skills, then a completed analysis of where this file of accomplishments matches occupational requirements can be made.

Competency Based Guidance System

This is the key to the competency based guidance system. This component of a total guidance system uses occupation competency requirements as (1) a means of identifying exploratory experiences common to clusters, (2) a mechanism for steering students toward areas in which they show greater expertise, and (3) a basis for a wide variety of other guidance information.

By bringing together the various elements in the guidance system, the occupational exploratory program and the student file system, OCAP makes it possible to coordinate a student's career education activities -- those which occur in the various classrooms and those taking place in non-classroom guidance activities. In addition, OCAP seeks to extend this coherence to other important points in the school/career environment. The high school program should not operate in isolation from career education at the elementary and junior high levels. Nor should it be cut off from the

employment community or from colleges and other post-high school programs. To facilitate a smooth transition between school levels and between school and employment, OCAP can be linked to existing career education programs in the feeder schools at King Philip and Lynn so that a student's experiences in OCAP will complement his earlier career learning. By establishing ties to the employment community in both areas, OCAP can utilize area employers as resources for the activities of the project (e.g., cooperative education, "shadow" programs, practice interviews) as well as potential employment sites for school graduates.

The development of the program components and their coordination into a working system should produce important student benefits. A student who is aware of career opportunities and equipped with marketable skills should be better prepared for the future.

PART II

OCAP ACTIVITIES - YEAR ONE

The goals and objectives of OCAP are ambitious; for a program such as this to become fully operational, not only must all the components be developed, but they must all function together as a system. Setting up a system which requires the coordination of so many different elements needs the active participation of administrators, academic and occupational teachers and guidance personnel. Therefore, much of OCAP's efforts during the first year went into laying the necessary groundwork -- explaining the aims of the project, introducing basic concepts, demonstrating the potential value of the system and gaining acceptance.

Initial activities began late at both sites. King Philip delayed the opening of school because of incomplete construction work. In Lynn, there was a teachers' strike at the beginning of the school year.

Programs for implementing the OCAP objectives varied between the two sites, primarily because the starting points were quite different. King Philip High School offers a vocational program as well as a regular high school curriculum; the availability of vocational facilities and instructors for implementing occupational exploratory activities put King Philip ahead of Lynn in this area. Furthermore, the King Philip administration has committed itself to the goal of integrating the vocational and academic programs into a comprehensive high school system. English High in Lynn has no vocational shops to utilize -- vocational training in Lynn occurs primarily at the Lynn Vocational-Technical School. Concepts such as skills listings or cluster-based occupational exploratory activities were less familiar to

the English High teachers and administrators than to those at King Philip. By the end of the first year, progress had been made at both sites: many of the components of the guidance and information system were implemented at both schools, but the implementation of instructional objectives was much more extensive at King Philip than at Lynn, where the situation was essentially that of "starting from scratch". The Lynn staff however, has made substantial progress in the area of developing an understanding of the OCAP concepts toward a modality of acceptance which will form the basis for adoption in the coming year.

Orientation workshops for teachers, counselors and administrators were conducted at both sites prior to school openings, and plans were completed for in-service training for those teachers and counselors who were to be directly involved in OCAP activities. At King Philip, in-service training took the form of credit courses offered through Fitchburg State College, ED 850 and ED 851. The aim was to expose teachers and counselors to innovative techniques in occupational competence curricula and to provide them with practice in using those techniques in their own teaching and counseling activities. Some of the topics explored include: techniques used in interest and ability testing, strategies for introducing the concept of career decision-making into the curriculum, development of cross-discipline approaches to curriculum development, development and use of skills listing and performance objectives. (Complete course description can be found in Appendix B). With the assistance of OCAP staff, the teachers developed skills listings for their courses which were then coded for linkage

with performance objectives in the Project CAREER data bank. (See Appendix C for a sample of coded skills listing.) Academic teachers in the group developed sample plans for infusing career awareness activities into their academic subjects. (See Appendix D for sample).

At Lynn English, an alternative instructional strategy was used. OCAP staff met regularly with teachers who would be directly involved in OCAP activities. Teachers received hourly pay for their participation; generally, this group explored the same topics and took part in the same kinds of activities as the King Philip group. Some progress was made in compiling skills listings, although less than at King Philip. Some of the academic teachers developed plans for infusing career awareness activities in their disciplines and in some cases used these activities in their classrooms. Lynn teachers also began using some of the OCAP career awareness materials in their classes.

A sample group of 64 King Philip ninth graders participated in an occupational exploratory program in three clusters -- manufacturing, construction and transportation. Each of these clusters is represented by a career selected as best matching employment opportunities in the area, present and projected. The occupational exploratory program includes shop and shop-related instruction in each of these three career fields. The instructors, both shop and shop-related, completed skill listings for their segment of the exploratory program. These listings were coded for matching the performance objectives in the Project CAREER data bank and, in addition, were used to prepare task

charts which were posted in each classroom or shop. By using these charts, students could gain an over-all picture of what they would accomplish in the class and could chart their progress by marking off each task as it was completed. (A sample chart can be found in Appendix E).

In addition, the machine shop and machine-related instructors worked jointly in preparing their skill listings and task charts so that instructional activities in the machine shop were correlated with instructional activities in the machine-related class. For example, as a student learns about the functions of a lathe in machine-related class, he begins operating a lathe in machine shop. Although the other instructors made some informal efforts at correlating their shop and shop-related instruction, these efforts were not incorporated into the skill listings or task charts.

In general, by the end of the first year, instructors in the King Philip ninth grade exploratory program had progressed furthest in implementing instructional components of the OCAP system. Some progress was made among other instructors as well. All King Philip vocational instructors completed a skills listing for at least one of their courses. Lynn teachers made some progress in compiling skill lists, but less progress was made in this area than at King Philip. However, in the terms of introducing career-oriented activities into academic subjects, more progress was made at Lynn, where many of the teachers have reacted to the OCAP career awareness resources with enthusiasm and have begun making regular use of these resources in their classroom activities. Individual teachers at King Philip

have also used these resources, although fewer have done so than at Lynn. Academic teachers at both schools have developed plans for infusing other career activities into their disciplines, but actual use of these plans has been limited.

In terms of OCAP's aims, instructional changes are viewed as one aspect of a more comprehensive system; the other major element centers on guidance. If guidance is to become an integral part of a student's total program, there must be a mechanism for providing the kinds of information essential to an expanded guidance role. During the year, OCAP worked with administrators and counselors in both schools to set up Career Information Centers which would play a crucial role in the implementation of a guidance information system. Both career information centers became operational during the school year. Two aides were hired to staff the centers and coordinate their activities; career information materials were gathered and placed in the centers. In Lynn, the C.I.C. was located in the guidance office; at King Philip, in the Media Center (school library).

A variety of materials are available in the C.I.C.'s for use by all students, teachers and counselors. A large quantity of books, pamphlets and periodicals containing career information was gathered from a variety of sources (government, military, business, academic, etc.), and a limited number of audio-visual resources were obtained. Project CAREER task outlines were placed on file for easy access by students.

The C.I.C.s are more than a place to display job information; they play a pivotal role in an information system. A key element is the computerized student file which will contain interest and ability assessments and, student skills inventories -- all of which can be linked with performance objectives and other information in the Project CAREER data bank. During the past year OCAP has begun to assemble the various elements of the student file system through the C.I.C.s.

OCAP conducted a study of career interest tests which identified currently available tests, examined them in terms of content and purpose and selected the one most appropriate for OCAP's purposes and for the two schools involved. After examining eight different tests in detail, the Harrington-O'Shea Career Decision Making System was selected for use. It was considered valid in terms of identifying interests and relating them to occupational groups; it also provides a wealth of other data in the computerized printout which makes it useful as an assessment tool as well as a test. The Harrington-O'Shea survey was administered to all OCAP sample students in early December. Survey results were followed up and the test print outs were placed in the student files.

Project CAREER developed a variety of career awareness resources for inclusion in the OCAP information system. Perhaps the most important resource developed was the "Careers and Me" Series for Student Career Development (See Appendix F.) Designed for teacher and counselor use

with students, the series offers a sequence of activities for developing student skill in career decision-making. Questions guide the student toward an awareness of his particular values, interests, talents and skills. "Careers and Me" then leads the student through a series of activities in exploring careers to identify those which are compatible with his talents, values, interests, etc. Then student exercises in decision-making lead to a tentative choice and further exploration to determine what educational preparation is required for the tentative career choice. Because it provides a sequence of activities that can be geared to the various stages in career decision-making, "Careers and Me" can be utilized throughout a student's high school years. OCAP staff have included an introduction to "Careers and Me" as part of their C.I.C. orientation visits to classrooms and have provided assistance to teachers and counselors in using these tools with students. As a result, almost all the OCAP sample students in both schools have started the series and many have completed it. The sheets they fill out have been placed in the student files where they can be added to, modified and utilized in conjunction with the Harrington-O'Shea results, the student's skills inventory, Project CAREER performance objectives and other resources. Student feedback on "Careers and Me" has been sought, and some modifications have been made as a result. For example, in the Career Match segment of the series, 6 different personality types are listed and then linked to possible occupations. Students objected to some of the labels and other wording in this exercise. These portions were re-written to reflect the students' input.

"Careers and Me" has proved to be valuable not only as a resource for developing student career awareness, but also as a tool which facilitates active teacher and counselor participation in career - oriented activities. Since the use of "Careers and Me" was first demonstrated by OCAP staff, individual teachers and counselors have begun using it on their own initiative, especially at Lynn where some of the academic teachers have used the series in their classrooms and followed up with individual counseling of students, using "Careers and Me" as a starting point.

The student file system, which functions as a central point in tying other program elements together, is not yet complete, but progress has been made. Each OCAP student has a file containing his schedule, Harrington-O'Shea results and "Careers and Me" sheets. Student skills inventories, an essential part of the system, have been printed for some of King Philip students. When this process is complete, the inventories can be placed in the file for linkage with the Project CAREER data bank.

All OCAP sample students have been introduced to the C.I.C. resources through classroom orientation visits in which OCAP staff explained the resources available in the Centers and provided information on how to use them. Teachers and counselors have begun to play an active part in this process; their participation is essential if the C.I.C. is to function as part of a total system.

Although the OCAP sample students have been the primary target group in planning C.I.C. activities, it is important to note that the C.I.C.s have provided services to many other students as well. OCAP has provided on-going school-wide publicity concerning the resources available in the C.I.C. through bulletin board displays, posters in all classrooms, morning announcement, memos to faculty and administrators, presentations to faculty meetings and department meetings, etc. In addition, classroom orientation visits have been made (on teacher request) to many classes -- from all grades in vocational and academic classrooms. Many non-OCAP students have visited the C.I.C.s on the suggestion of friends, teachers and counselors and on their own initiative. Some non-OCAP teachers have made more extensive use of C.I.C. resources - many have visited the C.I.C.'s with their classes for an introduction to the resources available and some have assigned research projects in which students utilized the career information in the C.I.C.

In general, the C.I.C.'s have been successful at both schools although the Lynn C.I.C. was used more, and by more students, than the C.I.C. at King Philip. Some of this difference resulted from a better C.I.C. location (the guidance office rather than the library) and some from more extensive participation by Lynn teachers.

Because the guidance counselor must play a key role in the system OCAP is developing, OCAP staff have worked closely with guidance personnel throughout the year to explain the aims and components of the project

and to gain their active involvement in OCAP activities. Counselors at both schools have participated in classroom orientation visits concerning the C.I.C. and have referred students to the C.I.C. and helped them in using the Center resources. At King Philip, counselors and OCAP staff met frequently for discussion and planning of guidance roles. The ideas generated in these meetings were incorporated as part of the "Careers and Me" Series. Resource #7 in the series (see Appendix G) outlines a workshop approach to defining counselor roles in student career development. Some of the roles suggested include: counselor as resource to the classroom teacher, counselor as coordinator/administrator of a school career education program, counselor as career information coordinator, counselor as "linker" for career education (with students, parents, teachers, administrators, community, etc.). Counselors have begun to fill some of these new roles, not only by individual choice, but as part of King Philip policy (a Guidance Department Directive was issued which requested all counselors to spend one period per week in the C.I.C. and one in a classroom).

One of the OCAP goals concerns the importance of linking the guidance and instructional aspects of the high school program with other important points -- elementary and junior high school programs and the employment community. Limited progress has been made in this area.

Since a student must start making career-related decisions beginning in about the eighth grade, career education in the high school ideally should be a continuation of earlier education in career awareness and exploration.

OCAP intended to develop as a high school program which would complement existing efforts on the elementary and junior high levels in the two site districts. However, an OCAP study of the Lynn and King Philip school districts showed that no career awareness or career exploratory programs have been developed in any of the elementary schools and only very limited activities are taking place in the junior high schools. Consequently, OCAP has participated in discussions with King Philip and Lynn administrators in an attempt to remedy this problem. In Lynn, OCAP has worked with school administrators in making preliminary plans for establishing Career Information Centers in Lynn's five junior high schools. At King Philip, planning is underway to implement a model career exploratory program at the junior high level.

In addition to linkages with feeder schools, it is important to develop ties with the local community, not only for potential employment opportunities for graduates but also as a potential resource for instructional and guidance activities. Since the emphasis in year one has been on laying the necessary groundwork for the project in the schools themselves, efforts in developing ties with the community did not begin as early as originally scheduled. It was decided that the development of a community resource system would be more appropriate once the OCAP program was underway and began to have a need for community involvement. In Lynn, a task force for identifying community resources was set up; the task force began meetings in May to gather information on potential resources in the community and determine how they might be used. At King Philip, OCAP

has participated in planning a Career Night for next year. Information and speakers from the employment community will be utilized as part of the program.

The opportunity to utilize other Part D projects in the region as an additional resource is being considered. Project CAREER sponsored a November conference of New England Part D Project Directors and state Career Education Coordinators which explored the possibility of developing a regional communications network. A structure for effectively exchanging ideas and information on a more useful level than the distribution of final reports would be valuable for many reasons. Input from other similar projects could be beneficial to OCAP staff, but perhaps more important would be the opportunities for teachers and counselors to learn firsthand what is actually taking place in similar career education programs throughout New England. Further discussion of the proposed communications network has continued throughout the year, and a summer conference is planned.

This review of OCAP activities has outlined the major events and developments that took place during the first year. The next section includes brief descriptions of the progress made in meeting the specific goals and objectives of the project as they were stated in the original proposal.

PART III

PROGRESS IN ACHIEVING GOALS AND OBJECTIVES

Goal 1: To facilitate student access to occupational opportunities through the provision of a guidance system which incorporates student capabilities.

Objective A - Develop an assessment cluster placement system which will aid students in making tentative career choices and facilitate placement in the Skill Outcome Exploratory experience.

To enable the student to make a meaningful tentative career choice, an environment had to be established which allowed the student to interact with cluster-related materials, assess his own interests and capabilities and receive assistance when needed. These three conditions were met in the following ways:

First, a large quantity of career information materials — books, pamphlets, periodicals, audio-visual — from many sources, (government, military business, labor, academic, etc.) were gathered. Also, career awareness materials were developed by Project CAREER. These included:

-- "Careers and Me" Series for Student Career Development

— Career Preparation Analysis Charts (Careerograms) - One-page informational sheets specifying the personal and educational prerequisites of a specific occupation.

-- Project CAREER Task Outlines -- Listings of the major responsibilities of specific occupations and groups of identifiable tasks performed in carrying out those responsibilities.

-- Project CAREER Guidance Pacs -- Contain careerograms and task outlines organized into the 15 U.S.O.E. clusters.

-- Project CAREER Competence Pacs -- Contain careerograms, task outlines and curriculum data related to 80 specific occupations.

All these materials contain suggestions for using them in a variety of ways. For a sample, see Appendix H.

Second, the Harrington-O'Shea Career Decision Making System was selected for use as an assessment tool. In addition, three tests were selected to measure OCAP impact through pre and post-tests on experimental and control students in both schools. These were:

Deciding (College Entrance Examination Board)

Occupational Knowledge Assessment 1974 Test (Massachusetts Department of Education)

Career Maturity Inventory (California Test Bureau/McGraw Hill)

Third, Career Information Centers were set up to coordinate learning processes in career decision-making. Career awareness materials and activities and interest assessment tools were delivered through C.I.C.s to counselors, teachers and students. In addition, student files (see Objective B) were assembled and filed in C.I.C.s.

OCAP sample students have all been introduced to the "Careers and Me" series and other resources through C.I.C. classroom orientations. At Lynn, all target students have completed at least one of the sheets; most have completed the entire series. At King Philip, all OCAP students have filled out the sheets relating to values and skills, and many of them have completed more. The Harrington-O'Shea survey was administered to all OCAP students in early December and was followed up. The three evaluation tests -- Deciding, Occupational Knowledge Assessment 1974 Test and Career Maturity Inventory -- were administered in December for pre-testing and again in June for post-testing.

Objective B - Develop computerized student files which reflect occupational and academic competencies accomplished.

Development of a computerized student file system requires preliminary work in a number of areas. During year one, the following steps were taken:

OCAP teachers at Lynn and King Philip have worked with Project CAREER task outlines and computer print-outs to gain an understanding of how their curriculum can be related to a system of computerized student files. A majority of the teachers have listed skills for their courses and these have been coded to the Project CAREER performance objectives. Project CAREER has developed access programs for computerizing this data. Report forms have been developed and reviewed by industry representatives to ensure that the information is reported in a useful and understandable form.

Objective C - Develop a guidance information system in the proposed clusters.

The major starting point for developing the guidance information system involved the establishment of the Career Information Centers. (See Part II for a description of their activities.)

Student search procedures were developed so that a student can take his skills inventory and relate it to any one of the Project CAREER task outlines and move from there to related occupations by utilizing the C.I.C. reference guides which are organized by clusters or by using the Project CAREER Guidance Pacs, which organize task outlines according to the 15 U.S.O.E. clusters.

During the first year, Project CAREER began printing out student skills inventories. These have been completed for some of the ninth grade exploratory students in each of the three clusters. (For a sample inventory sheet, see Appendix I.) These skill inventories are now ready for use in the information system.

Objective D - Facilitate a Comprehensive Guidance System based on components developed in Objectives A-C.

In order to coordinate the use of career awareness materials, interest assessments, student skills inventories and other aspects of the guidance system, OCAP developed a tracking system which will operate through the C.I.C.s. The tracking system will make it possible to know where every student is in terms of skills achieved, interests assessed, career awareness activities completed, etc.

Most of the components of the comprehensive guidance system have been implemented or developed during year 1; the system should begin operating during year 2.

Goal II: To facilitate student access to occupational opportunities through the provision of industrially validated exploratory programs in occupational preparation.

Objective A - Establish performance objectives for each proposed cluster area from Project CAREER information.

During the early part of the project year, each instructor in the ninth grade exploratory program at King Philip listed the skills which could be learned by the students in his class or lab. These skills were coded for cross-referencing to the performance objectives in the data bank so that the relationship between student achievements and work performed in industry could be established. Once this relationship was established, it was relatively simple to construct a system for sequencing the objectives. At Lynn, teachers have worked on skills listings, but they have not yet been coded for linkage with Project CAREER performance objectives.

In addition to coding and sequencing objectives, a system has been developed for determining the prerequisite learnings for each performance objective. Prerequisite learnings have been identified, listed and coded. The prerequisite information system has been developed but not yet implemented.

Objective B - Establish criterion reference measures to assess student progress in each cluster area.

Each performance objective in the career data bank has been linked to a criterion reference measure. These criterion reference measures can be used to determine if a student has mastered a particular task.

The King Philip machine shop and shop-related instructors developed and tested a model which incorporated their own criterion reference measures for each objective in the machine course. The criterion reference measures which they developed were different from those in the career data bank -- many were more specific and some were more appropriate for classroom use with students (see Appendix J).

Objective C - Assemble learning activities designed to facilitate student progress in each cluster area.

Little interdisciplinary work had been done at either of the two schools prior to OCAP. At the beginning of the school year in-service courses were offered which included teachers from the different academic and vocational subjects. Through the courses they became familiar with the concepts of OCAP, and participated in specifying performance objectives and developing career-related learning activities.

Instructional teams were established consisting of those people having the most direct impact on the ninth grade exploratory student -- these teams were composed of the shop instructor in each of the three clusters, the shop-related instructor, the guidance counselors and the C.I.C. aide, who joined the team later in the year.

Correlation of learning activities within the occupational clusters was attempted in a rather informal way by all the instructors, but in one cluster the instructional activities were planned specifically to correlate shop lab and shop-related learning activities.

Objective D - Develop supplemental instructional activities for each proposed cluster.

Supplemental activities were developed primarily in three ways. Academic teachers developed outlines for activities which would involve students in career exploration in academic classrooms. Occupational and vocational teachers developed a model which encourages students to learn the specified skill through a variety of learning experiences (see Appendix K). In addition, these instructors provided information in their Instructor's Guide on how each task related to actual jobs in industry (e.g. for the task, "Read the 6" scale with No. 4 measurements", occupations listed were machinist, machine operator, tool and die maker and inspector). This type of information can be utilized by the instructor as a career awareness resource.

Objective E - Pilot test three clusters in the interdisciplinary approach developed in Objectives A-D.

Sample and control groups were identified in both schools. At Lynn, the sample group was composed of 70 tenth grade students; the control group also contained 70 tenth graders. At King Philip, 64 ninth graders were selected for the sample group and 80 ninth graders for the control group.

Three tests were selected to assess student decision-making skills, occupational awareness and competencies possessed. The tests selected were Deciding, Occupational Knowledge Assessment 1974 Test, and Career Maturity Inventory.

Pre-tests were administered in December, 1975; post-tests were completed in June, 1976.

Objective F - Initiate Skill Outcome Exploratory Program developed in Objectives A-E.

Not scheduled for year one.

Goal III: To facilitate student access to occupational employment and training opportunities through the development of a comprehensive articulation between curriculum levels, curriculum areas and the world of work.

Objective A - Conduct state of art study of career programs in sending districts.

A survey of career programs in the feeder schools for Lynn English and King Philip was conducted in June, 1975. The survey found that Lynn presented a "rather dismal, albeit all too realistic scene." Students who enroll in an occupational course of study enter the Lynn Vocational-Technical School. "This is done without the assistance of well-structured counseling and preparation... One can only wonder about the variables that affect a student's decision to go this route as well as his/her self-image at the time of this unfortunately somewhat more than tentative decision-making." (See Appendix L for excerpts from this survey.) In the King Philip district, the survey found that the junior high level did offer a formalized course on the "World of Construction" and the "World of Manufacturing" at the eighth grade level. However, many of the eighth graders did not participate in these courses; for example, no girls were enrolled. The survey concluded that little or no career-related activities were taking place in Lynn and only limited activity existed in the King Philip district.

Objective B - Establish linkages between and within schools in the district.

Because complementary programs at different grade levels are so important for OCAP's purposes, OCAP has participated in planning two program efforts for next year.

At King Philip, a model career exploratory will be developed with personnel and materials being provided jointly through King Philip and OCAP. At Lynn, OCAP will assist in the development of C.I.C.'s at all five junior high schools. One person from each of the junior high schools has been selected as a linker to maintain contact with OCAP staff and activities in the high school. Linkers were selected according to specific criteria (e.g., linkers must have made previous efforts to initiate career education) and appointed by the Superintendent of Schools.

Objective C - Establish linkages with employment community and institutions of higher education.

It was decided to postpone the development of ties with the employment community until the program was underway and began to have need of community resources. Efforts began in the spring to identify available resources for the activities of the project and for future employment sites. In Lynn a task force was recruited and began holding meetings for the purpose of identifying potential community resources and determining how they could be utilized.

PART IV

EVALUATION AND ASSESSMENTS

As part of OCAP's first year activities, arrangements were made for an outside evaluation of the Project. First, OCAP developed an evaluation design which specified the objectives and time lines for third party evaluators.

The evaluation design called for the following:

1. Descriptive pre- and post-assessments of occupational exploration, skill development and vocational guidance systems at King Philip and Lynn.
2. Pre and post-tests on sample and control groups of students to determine decision-making skills, occupational awareness and competencies possessed.
3. Structured interviews with teachers and counselors involved in OCAP activities, to determine how well OCAP is meeting its objectives.
4. A report comparing the results of the pre and post-assessments.

A team of third party evaluators was selected early in the year. They conducted pre and post-tests and a series of interviews at both school sites. A preliminary third party evaluation report was completed in late May and a final report by the team was submitted in June. The full texts of these reports can be found in Appendix M and Appendix N.

In addition to the third party evaluation reports, another assessment of OCAP activities was made by a team of U.S.O.E. evaluators following an on-site visit to the project in late May. The full report can be found in Appendix O.

All three reports are summ[illegible]d below.

Preliminary Third Party Evaluation Report

In terms of instructional change, more has been accomplished at King Philip, e.g., development of a model which correlates shop lab with shop-related instructional activities, development of materials which relate shop competencies to career skills and development of a methodology for documenting student skill completions. In the area of guidance, C.I.C.s have been established and properly staffed. Student files have been set up and career data is being developed, filed and made available to students. Guidance information materials have been developed and made available for teacher and counselor use. Teachers, counselors, and students have utilized the C.I.C's. The project has been generally successful at maintaining administrative support and in informing teachers, counselors and students about the project. Two problems were cited: first, limited progress in relating career information to the curriculum in the academic classrooms and second, the absence of a document of the events, progress, failures, etc. which would permit replication of the project elsewhere. Finally, both schools see the project as a valuable resource and wish to continue and expand their involvement.

Ronald H. Fredrickson, Third Party Post-Assessment Report

A summary chart (following P. 4) estimates the progress made in attaining objectives at both schools. Progress has been made in the guidance aspect of the program; the most striking progress made has been in the establishment and operation of the two C.I.C.'s. The information available has increased; more non-print materials would be beneficial for students who read poorly.

The Harrington O'Shea survey provides much valuable information, but the volume of material and complexity of the print-out overwhelmed some students. Follow-up might be improved by providing the print-out in installments. Counselors have utilized OCAP resources and staff; OCAP staff have provided counselors with a valuable model for making contact with academic departments and for making classroom presentations.

Administrative support for OCAP is generally good. Among the teachers, vocational instructors have made excellent progress in developing occupational skills courses, but academic teachers have made only limited progress in developing and implementing career-related activities. The project should not hesitate to provide teachers with curriculum packages that they could use in their classrooms.

The project staff has made progress in communicating the purpose and objectives of OCAP. However, it was not until the staff demonstrated, in actual behavior, the role and functions of the counselor and the C.I.C. coordinator that counselors and teachers began to realize the value of OCAP for their students. Experience so far indicates that OCAP ideas will be accepted and implemented more readily if the desired behavior is demonstrated -- perhaps first by OCAP staff, then by willing teachers and counselors.

Thomas F. Harrington - Pre-Post Student Assessment

Students exhibited progress in this area of attitude toward school and several changes were recorded in the Occupational Assessment Tests. There was little or no change detected in the areas of rationale problem solving and

relating skills acquired to clusters of occupations. This latter observation was attributed to the populations under study and the short length of time the program has been in operation. These data form an excellent reference base for focus of the Project in the remaining year of the grant period. A complete detailed report may be found in Appendix N.

First Year Site Visit Report

Sound planning is underway for expanding project activities in the next two years. At King Philip, the project has been successful in building on prior developmental work on individualization and continuous progress programs; while at Lynn, teachers have developed some creative curriculum interventions for career education purposes. The project should expand its activities to larger numbers of students, teachers, counselors and administrators. The original control groups should be redefined since they have received some of the same project services as the experimental groups. The project should review its own hiring practices and student recruitment practices at King Philip for possible violations of Title IX, Education Amendments of 1972. Finally, more project time should be devoted to articulation activities during the project's second year.

PART V

APPENDICES

APPENDIX A

Part IV Continued

GOALS and OBJECTIVES -- TIMELINES

Goal 1: To facilitate student access to occupational opportunities through the provision of a guidance system which incorporates student capabilities.

Objective A - Develop an assessment - cluster placement system which will aid students in making tentative career choices and facilitate placement in the Skill Outcome Exploratory experience.

1. Assemble career awareness materials which complement existing elementary and junior high programs.
   July 1975 - August 1975 May 1976 - August 1976

2. Assemble test batteries to measure interests and abilities relative to the proposed exploratory clusters.
   July 1975 - August 1975 May 1976 - August 1976

3. Coordinate learning processes for career decision making.
   July 1975 - August 1975 May 1976 - August 1976

4. Apply materials developed in 1 - 3 on sample populations.
   September 1975 - June 1976

Objective B - Develop computerized student files which reflect occupational and academic competencies accomplished.

1. Establish Master File of coded competencies.
   August 1976 - July 1977

2. Develop access programs.
   July 1975 - July 1976

3. Develop report forms with the help of employers identified in Goal III.
   October 1975 - July 1976

Objective C - Develop a Guidance Information system in the proposed clusters.

1. Develop cluster matrices based on USOE job families and an "unskilled to professional" continuum.
   July 1975 - August 1975 July 1976 - November 1976
   July 1977 - August 1977

2. Input information from community, research, the Department of Labor and existing training programs.
   July 1975 - August 1975 July 1976 - November 1976
   July 1977 - September 1977

3. Establish student search procedures which will lead students from a personal skills inventory to relationship with other occupations.
   April 1976 - August 1976

4. Initiate communication of coded information required for system derived in Objective B.
April 1976 - August 1976

Objective D - Facilitate a Comprehensive Guidance System based on components developed in Objectives A-C.

1. Initiate system for coordinating products of A-C.
April 1976 - August 1976

2. Demonstrate on an on-going basis, the Comprehensive Guidance System initiated in 1.
August 1976 - June 1978

Goal II: To facilitate student access to occupational opportunities through the provision of industrially validated exploratory programs in occupational preparation.

Objective A - Establish performance objectives for each proposed cluster area from Project CAREER information.

1. Select and sequence Project CAREER objectives.
   July 1975 - August 1975

2. Expand prerequisite learnings to a generic level and develop into objectives.
   July 1975 - May 1976

3. Sequence the generic level prerequisites in instructional order.
   August 1975 - May 1976

Objective B - Establish criteria reference measures to assess student progress in each cluster area.

1. Identify criterion reference measure for each objective established in Goal II, Objective A.
   June 1976 - September 1976

2. Code each item to appropriate objectives.
   June 1976 - September 1976

Objective C - Assemble learning activities designed to facilitate student accomplishment of objectives.

1. Establish instructional team (interdisciplinary).
   July 1975 - August 1975 September 1976 - June 1978

2. Establish instructional team member responsibilities in the accomplishment of each objective established in Goal II, Objective A.
   July 1975 - August 1975 September 1976 - June 1978

3. Develop correlated instructional activities for regular and special needs students.
   July 1975 - August 1975 Septembr 1976 - June 1978

4. Establish coordination plan for instructions.
   July 1975 - August 1975 August 1976 - June 1978

Objective D - Develop supplemental instructional activities for each proposed cluster.

1. Establish a classification system for supplemental activities.
   February 1976 - April 1976 June 1977 - June 1978

2. Develop supplemental activities.
February 1976 - April 1976 June 1977 - June 1978

Objective E - Pilot test three clusters in the interdisciplinary approach developed in Objectives A - D.

1. Identify a sample population and control population for students in grades 10 - 12 in Lynn and King Philip schools.
August 1975 - September 1975

2. Pre-test - apply process post-test.
September 1975 - April 1976

3. Evaluation pilot on the basis of increased skills and increased occupational knowledge of students.
April 1976 - June 1976

Objective F - Initiate Skill Outcome Exploratory Program developed in Objectives A - E.

1. Select students through assessment program in Lynn and King Philip schools (Goal I).
September 1976 - October 1976

2. Conduct Skill Outcome Exploratory Programs on sample populations.
October 1976 - June 1978

3. Inventory skills and link with Guidance Information System (Goal I).
October 1976 - June 1978

Goal III: To facilitate student access to occupational employment and training opportunities through the development of a comprehensive articulation between curriculum levels, curriculum areas and the world of work.

Objective A - Conduct state of art study of career programs in sending districts.

1. Survey sending districts for program offerings.
   July 1975 - September 1975

2. Input results into the development of Diagnostic Assessment Programs.
   August 1975 - December 1975

3. Input results into the development of program linkages in III - B.
   August 1975 - December 1975

Objective B - Establish linkages between and within schools in the district.

1. Identify in-school programs where coded prerequisites are appropriately taught.
   September 1975 - May 1976

2. Identify in-school programs where coded occupational skills are appropriately taught.
   September 1975 - May 1976

3. Develop program continuums based on skills and prerequisites identified in III - B (1) and III - B (2).
   June 1976 - September 1976

4. Match student files to continuums identified in III - B (3) for Competency Based Career Guidance System information.
   September 1976 - June 1978

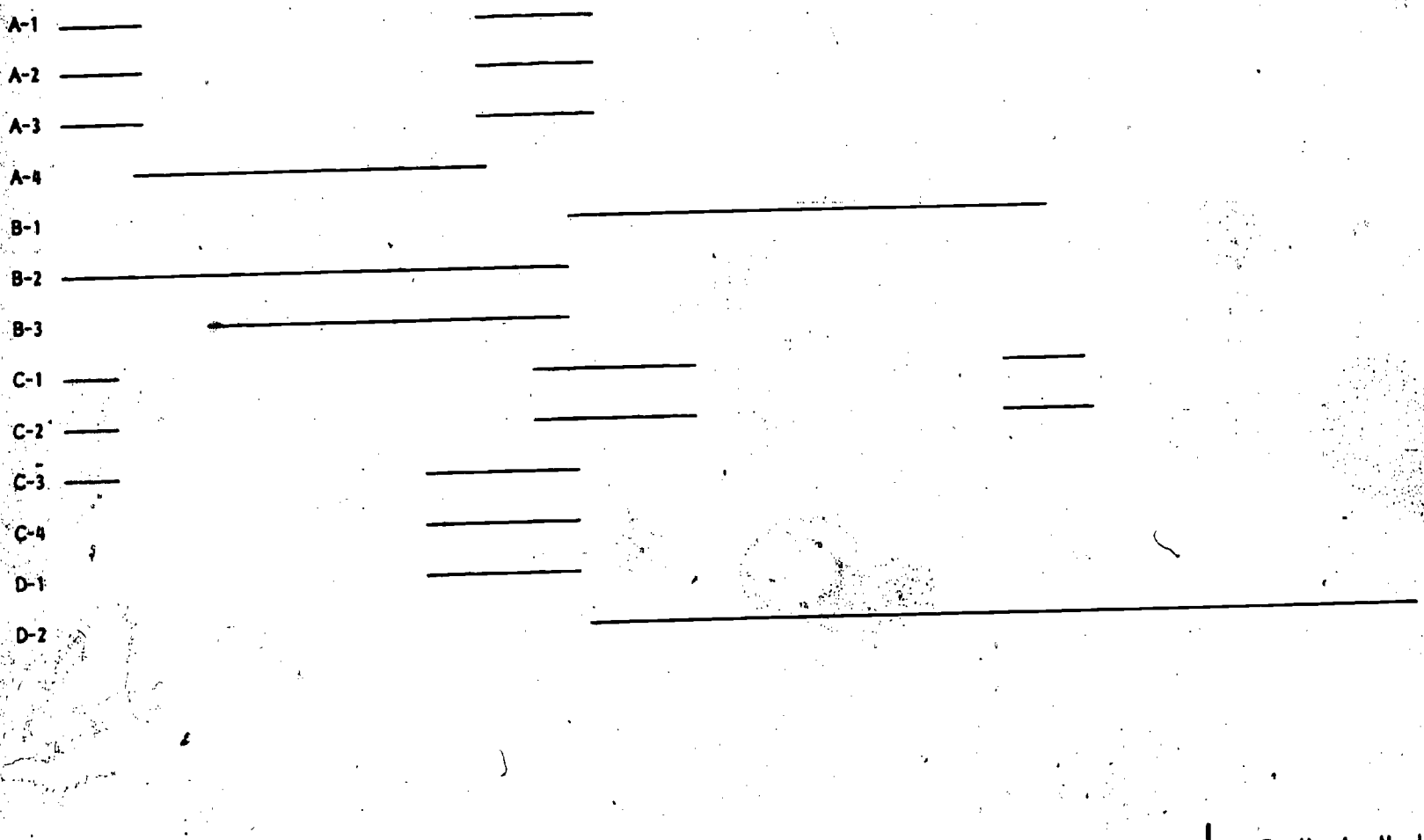
Objective C - Establish linkages with employment community and institutions of higher education.

1. Survey area for employment and higher education sites.
   July 1975 - May 1976

2. Implement New Job Options Model on employers in region.
   September 1975 - June 1978

3. Initiate program linkages with local higher education institutions using coded skill data and Competency Based Guidance Data.
   September 1976 - June 1978

Goal 1


A-1
A-2
A-3
A-4
B-1
B-2
B-3
C-1
C-2
C-3
C-4
D-1
D-2
J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J
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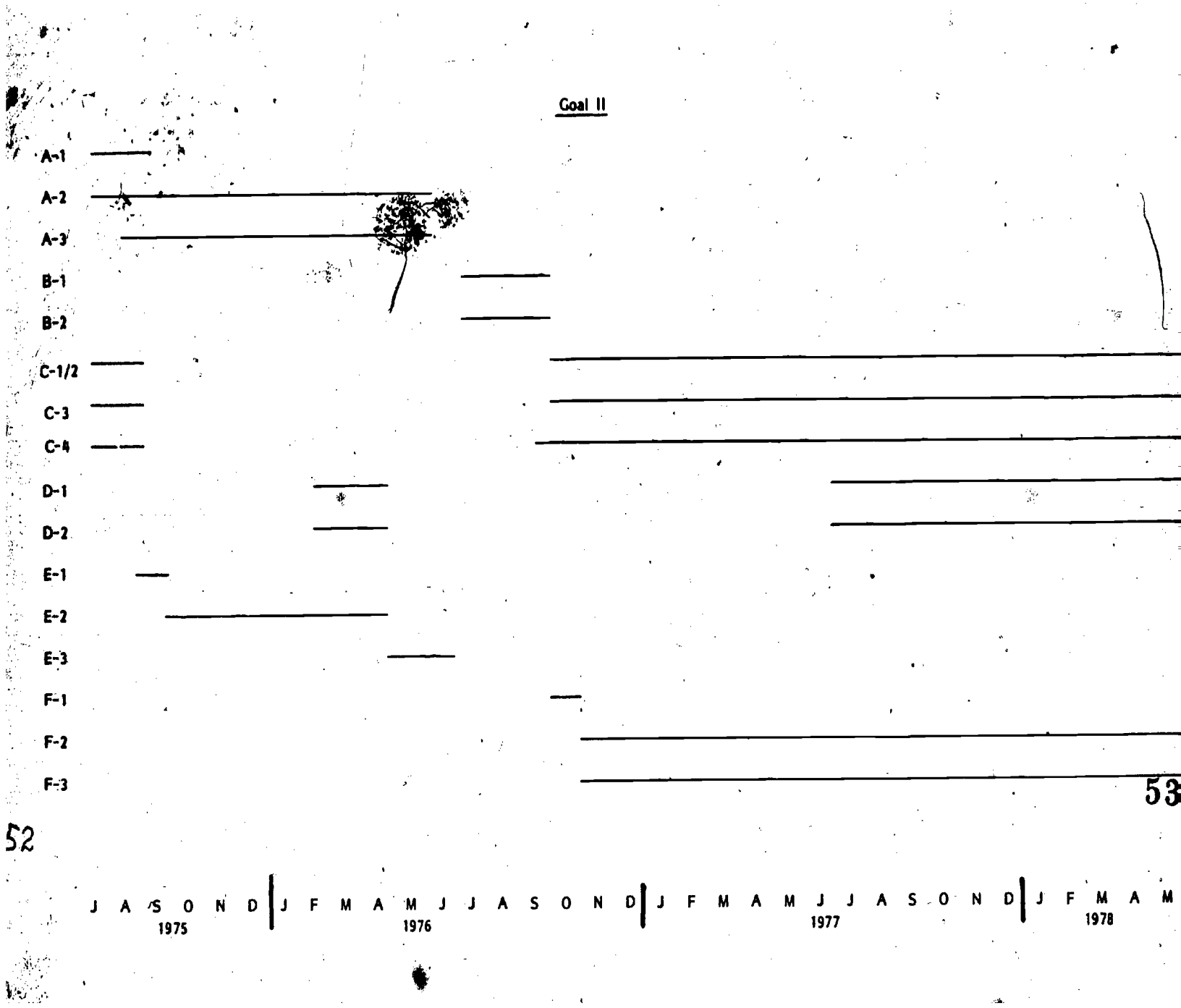
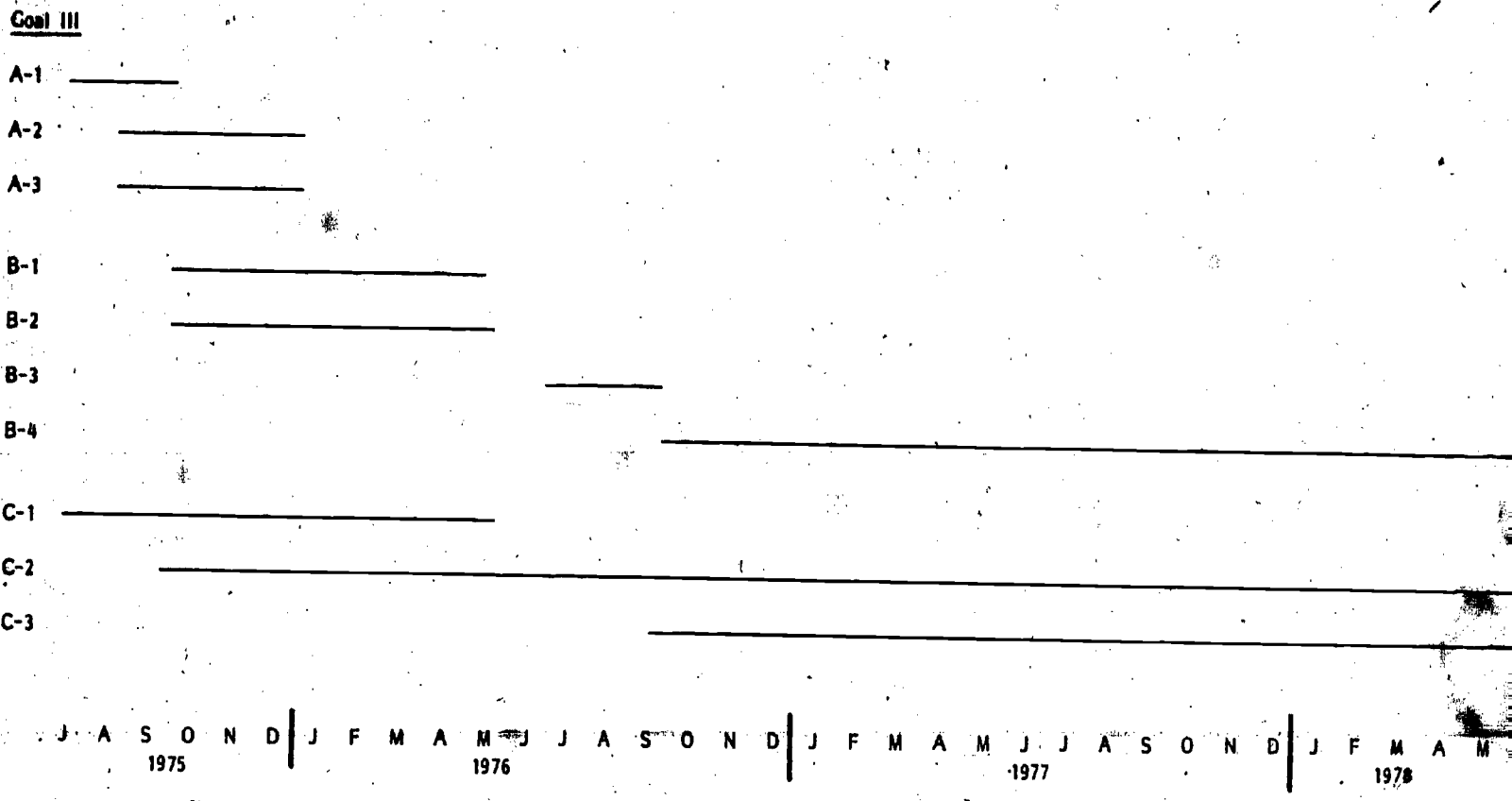
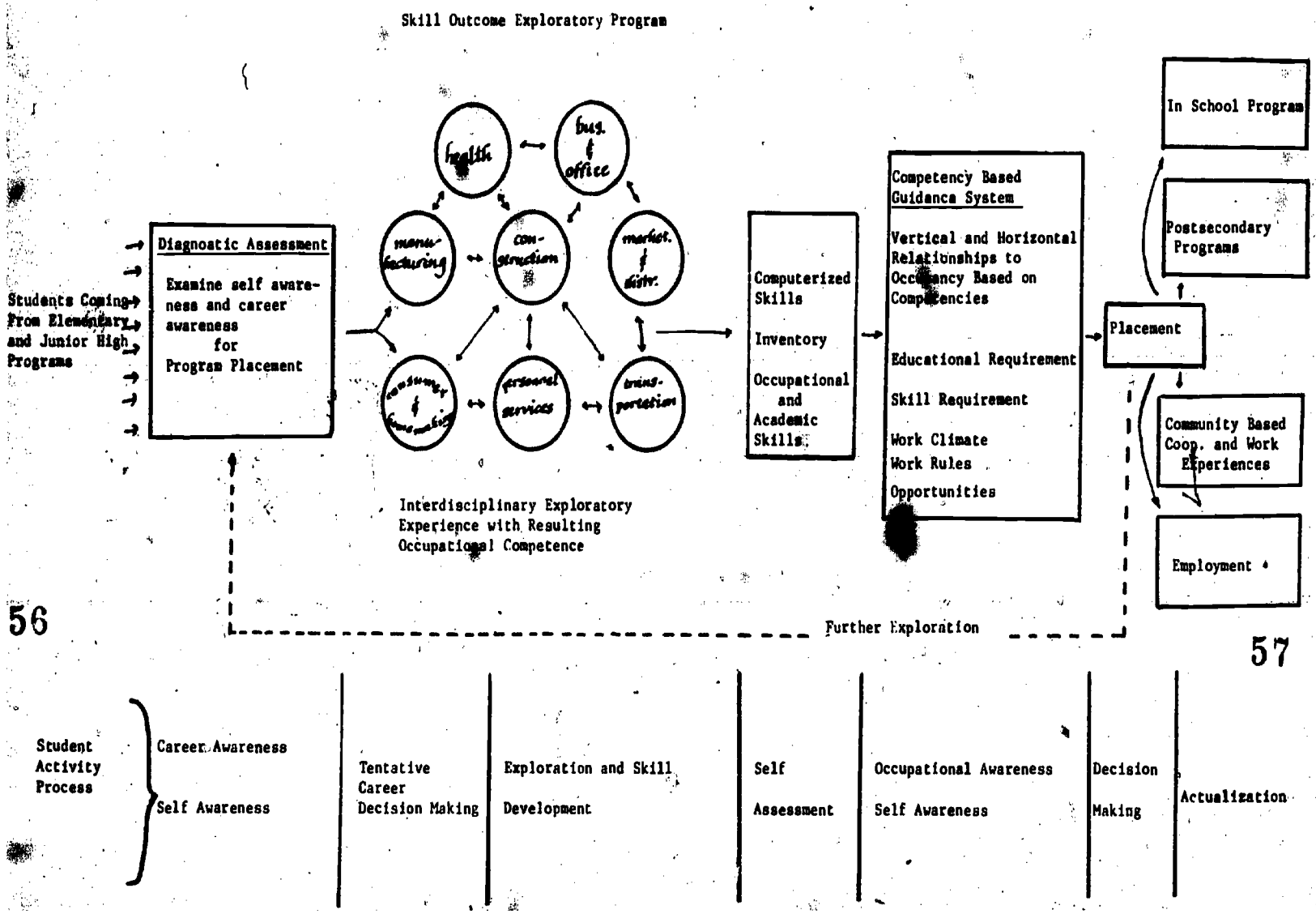
1976
1977
1978


Goal II
A-1
A-2
A-3
B-1
B-2
C-1/2
C-3
C-4
D-1
D-2
E-1
E-2
E-3
F-1
F-2
F-3
J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M
1975
1976
1977
1978


Goal III
A-1
A-2
A-3
B-1
B-2
B-3
B-4
C-1
C-2
C-3
J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M
1975
1976
1977
1978

51

MODEL FOR INCREASED ACCESS TO BENEFITS OF VOCATIONAL EDUCATION



Student Activity Process	Career Awareness Self Awareness	Tentative Career Decision Making	Exploration and Skill Development	Self Assessment	Occupational Awareness Self Awareness	Decision Making	Actualization

APPENDIX B

King Philip Regional
High School

OCCUPATIONAL COMPETENCE ACCESS PROJECT (OCAP) IN-SERVICE COURSE (850)

A. Course Description:

The goal of this course is to expose teachers and counselors to innovative curriculum techniques employed in the delivery of occupational competence education. These techniques include: the introduction of the concept of career decision making into the curriculum, the utilization of Guidance Information Systems which support career development, and the development of such methods as criterion-referenced instruction, continuous-progress instruction, and cluster-based instruction. Teachers and counselors will develop strategies and materials (such as skill listings) for implementing these elements of occupational competence curricula.

B. Course Objectives:*

1. To provide a rationale for the need for career education.
2. To provide a practical understanding of the elements and stages of career education (including self awareness, career awareness/exploration, decision-making, and placement).
3. To provide an opportunity for course participants to apply career education elements and activities in their own settings.

C. Course Requirements:

1. Each participant will complete the self-instruction package "Career Education: An Introduction", to be turned in on Friday, July 2, 1976.
2. Each participant will develop a set of learning activity packages which infuse career education concepts into his/her classroom/counseling situation.
3. Each participant will complete a paper which relates the course content to the participant's own role in the King Philip School System.

* For each objective, experiential class activities will focus on relevance to King Philip OCAP program and to individual participants' teaching or counseling roles. Resources will be provided by course instructors.

OCCUPATIONAL COMPETENCE ACCESS PROJECT IN-SERVICE
(851)

Catalogue description - Applying occupational competence curricula and guidance resources to a student-based career education program.

Objectives:

1. To help teachers develop learning activity packages which focus on the evaluation of student performance;
2. To assist teachers in the implementation of this continuous progress instructional system;
3. To assist counselors in applying these resources to high school students.

The goal of this course is to help teachers and counselors complete development of curriculum and guidance strategies for an effective occupational competence program. The participants will then implement these strategies with high school students in counseling instructional settings.

Among the specific types to be covered are occupational decision-making tests, guidance information systems to support career development, development and use of a school Career Resource Center, development of career resources for each OCAP classroom, continuous progress instruction systems, cluster based instruction, learning activity packages, and methods to relate course content to careers.

The students will be asked to develop appropriate individual or group projects as their term assignment.

This course is a follow up to the #850 Occupational Competence Access Project In-Service course.

APPENDIX C

Instructor Richard Pierce

Class Machine Shop

Grade 9

Unit/Project Explore Basic Machine Shop

Student

Project CAREER ID#

1. Identify "Safety Hazards"						
2. Follow Personal "Safety Rules"	4	7	8	0	6	1
	4	7	8	0	5	6
3. Use Equipment "Safely"	4	7	7	0	4	2
	2	1	2	5	4	6
4. Use Handtools "Safely"						
5. Grind Toolbits	4	7	8	1	3	0
	4	7	8	1	3	1
6. Operate Lathe "Manually" (No Power)						
7. Operate Lathe "Under Power"	4	7	8	1	1	5
	4	7	7	0	9	1
8. Set Up Chucks	4	7	8	0	7	4
	4	7	8	0	7	5
9. Face Off Steel	4	7	7	1	0	3
10. Straight Turn Steel	4	7	7	1	0	6
	4	7	7	1	0	5
11. Step Turn Steel	4	7	7	1	0	9
12. Center Drill Steel	4	7	7	1	8	4
	4	7	7	1	8	5
13. Drill Steel	4	7	8	1	4	7
	4	7	8	1	4	0
14. Tap Steel	4	7	7	1	9	3
	4	7	8	1	3	3
15. Angle-Turn Steel (Compound)	4	7	7	0	9	2
	4	7	7	1	1	2
16. Layout Lines, Angles, Radii	4	7	7	0	4	6
17. Use A Combination Square						
18. Read A 1" Micrometer	4	7	8	0	7	0
	4	7	8	0	7	1
19. Read A 2" Micrometer						
20. Read A 1/4 Scale						

APPENDIX D

PACKAGE FORMAT OUTLINE

1. Teacher's Name
2. School
3. Date
4. General Content Description:
   a. Package Title
   b. Package Number
   c. Subject Area(s)
   d. Target Population(s)/Grade(s)
   e. Prerequisite(s) (other package numbers)
   f. Related Career Education Element(s)
   g. USOE Cluster Relationship(s)
   h. Occupation Relationship(s)
   i. Basic Skill(s)
5. Rationale
6. Student Objective(s) (intended student outcomes)
7.

Activities	Resources	Instructor Notes

8. Evaluation
   a. Paper and Pencil
   b. Performance

1. Elizabeth Tolley

2. King Philip Regional High School

3. July 2, 1976

4. Business Management

   a. Selling
   b. # 5
   c. Principles of Business Management
   d. Class size -- 20
      Grades 11 & 12
   e. # 1, 2, 3, 4,
   f. 1. Self-Awareness -- Student would ask himself, "Do I have the personality to get along with people or do I annoy them. Am I a good talker.

      2. Educational Awareness -- Do I need more education to become a salesman.

      3. Career Awareness -- What other jobs would this lead to.

      4. Economic Awareness -- Would I make enough money working solely on commissions. Would I have a slow season.

      5. Decision-Making -- Would my life be fullfilled being a salesman or would I tire from it.

      6. Beginning Competency -- A[illegible] able to persuade people

      7. Employability skills -- Do I get along with people, Do I have a pleasing personality, do I have a command of the English Language.

      8. Appreciations and Attitudes -- Long hours of work, travel -- leaving the home for perhaps months at a time.

   g. Cluster would be Marketing and Distribution
   h. Occupation Relationship -- Sales Manager
   i. Basic Skill would be personality, pleasing

5. Rationale -- Would I like to make a living selling?

6. Student Objective -- To learn all about selling -- different types and techniques.

7. Activities --Select an item to sell and give the class a sales pitch.

Resources -- Text, "Business Principles, Organization, and Management."

Instructor Notes -- Invite a salesman to come as a Guest Speaker,

8. Evaluation -- Pencil and Paper quiz -- 20 true and false questions.

APPENDIX E

KING PHILIP REGIONAL SCHOOL DISTRICT
CAREERS
VOCATIONAL ACADEMIC OCUPATIONAL
THE TRIDENT APPROACH
TEACHING-GUIDANCE-ADMINISTRATION

EXPLORATORY

STARTED

MINIMUM

COMPLETE

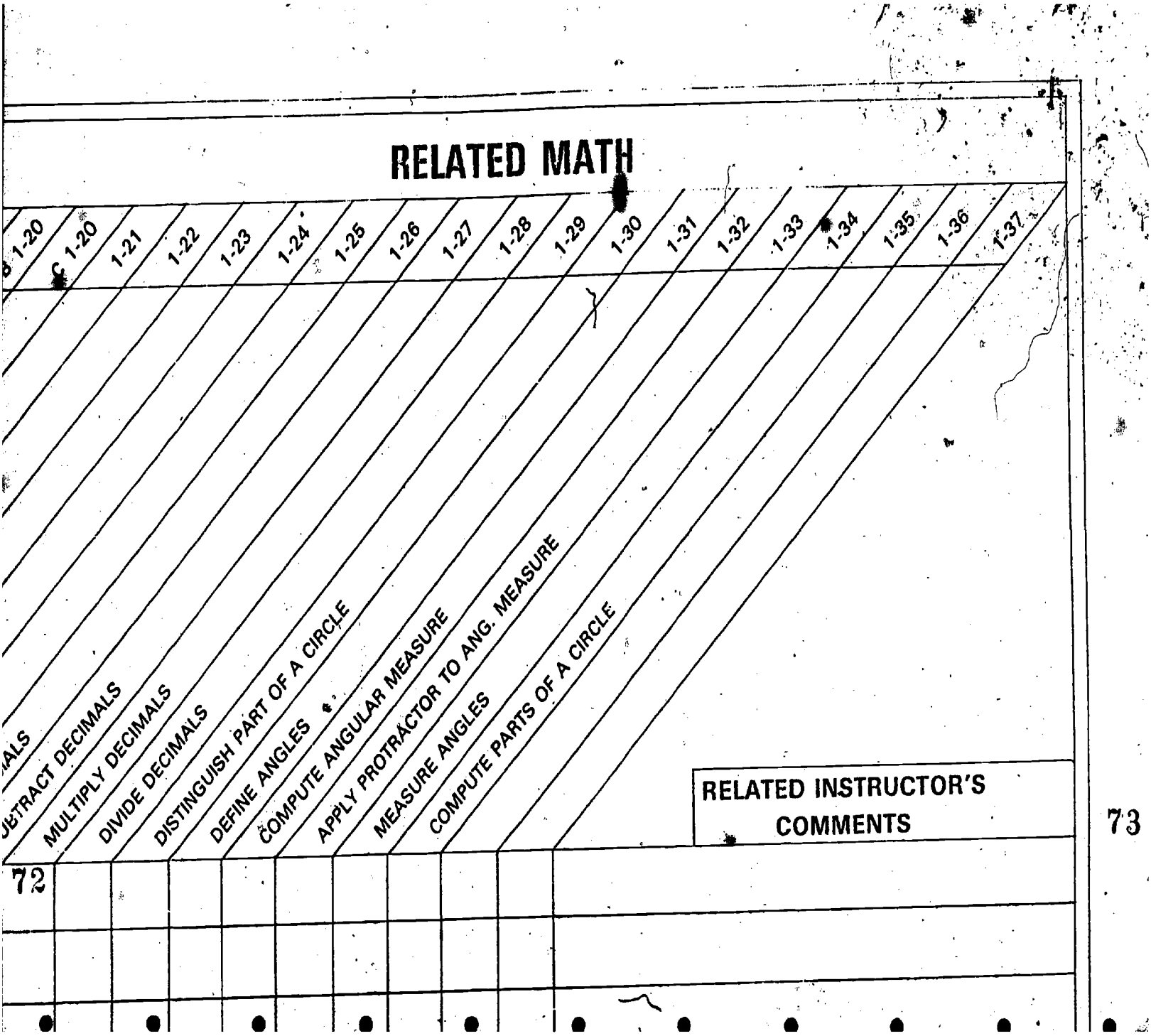
STUDENTS

	IDENTIFY "SAFETY HAZARDS"	SELECT PROPER "SAFETY RULES"	IDENTIFY PARTS OF A LATHE	DESCRIBE USE OF HAND TOOLS	EXPLAIN FUNCTION OF A LATHE	READ A #4 SCALE	READ A 1" MICRO	MEASURE	S
68									69

SHOP SCIENCE

B.P. READING & DRAWING

	1-3	1-4	1-5	1-6	1-7	1-8	1-9	1-10	1-11	1-12	1-13	1-14	1-15	1-16	1-17	1-18	1-19
BITS																	
OP TERMS																	
MPLISH ENGINEERING LETTERING																	
DRAW HIS OWN SHOP PRINTS																	
USE BASIC DWG. INSTRUMENTS																	
SOLVE BASIC BLUEPRINTS																	
SKETCH SIMPLE PARTS																	
DISCUSS NEW INFORMATION TERMINOLOGY																	
RECOGNIZE TECHNICAL WORDS																	
INTERPRET TECHNICAL PHRASES																	
CORRECT MARKED UP PRINTS																	
ADD WHOLE NUMBERS																	
SUBTRACT WHOLE NUMBERS																	
MULTIPLY WHOLE NUMBERS																	
DIVIDE WHOLE NUMBERS																	
ADD FRACTIONS																	
SUBTRACT FRACTIONS																	
MULTIPLY FRAC																	
DIVIDE																	
		70															


RELATED MATH
1-20
1-20
1-21
1-22
1-23
1-24
1-25
1-26
1-27
1-28
1-29
1-30
1-31
1-32
1-33
1-34
1-35
1-36
1-37
ALS
UBTRACT DECIMALS
MULTIPLY DECIMALS
DIVIDE DECIMALS
DISTINGUISH PART OF A CIRCLE
DEFINE ANGLES
COMPUTE ANGULAR MEASURE
APPLY PROTRACTOR TO ANG. MEASURE
MEASURE ANGLES
COMPUTE PARTS OF A CIRCLE
RELATED INSTRUCTOR'S COMMENTS
72
73

APPENDIX F

MCOE
massachusetts center for occupational education
two sun life park, 100 worcester street,
wellesley hills, massachusetts 02181 tel. (617) 235-7020

Project CAREER
1/76

"Careers and Me" Series
Resources #1

CAREER EDUCATION RESOURCES FOR COUNSELORS, TEACHERS, STUDENTS AND PARENTS

The following comprise a beginning list of "how to do it" resources which help students, educators, and parents put into practice the concepts of career education. These resources have been used in Project CAREER's applied research activities.

Title	Author/Publisher	Description
Teenage Jobs* ($.95)	Ruth Lembeck (Dell Publishing - New York)	Excellent resource for students, teachers or counselors; relates students' interests to specific career opportunities (includes careers for travel, art, photography, science, English, social studies, food and many more).
If You Don't Know Where You're Going, You'll Probably End Up Somewhere Else*	David Campbell (Argus Communications - Niles, Ill.)	Written for the high school age (and older); can be useful resource for parents, teachers and counselors; emphasizes importance of planning and developing one's assets (skills, motivation, experience, friends, etc.).
Almanac 18 (journal)* ($2.00)	(Approach 13-30 Corp. - Knoxville, Tenn.)	Annual handbook for students leaving high school; good for students, as well as teachers, counselors and parents; examples of articles are: What is a College Degree Really Worth?, How to Choose a Career, Life in the Military, and Making Marriage a Winning Proposal.

(Continued reverse side)

Title	Author/Publisher	Description
What Color is Your Parachute?*	Richard Bolles (Ten Speed Press - Berkeley, Calif.)	Though aimed at adults, many of the principles can be applied to teenagers; good resource for counselors, teachers and parents; Bolles details a practical process by which people can learn about their skills, explore careers that match these skills, and land the job they decide upon; excellent description of such topics as the current job market, how to use one's experience to identify talents (with several practical exercises), and how to approach the "person who can hire you"; also lists many other resource books in final chapter.
Occupational Outlook Handbook ($6.95)	U.S. Government Dept. of Labor	Good resource for counselors, teachers and students; gives outline of 700 occupations, including future outlook, skills required, training, salary, working conditions, and sources to write for more (usually free) information.
Career Education in the Academic Classroom ($8.95)	(Olympus Publishing - Salt Lake City)	Excellent resource for classroom teacher; gives practical suggestions of how to relate academic subject areas to careers.
Career World (Magazine) ($3.25/year)	(Curriculum Innovations, Inc. - Highwood, Ill.)	Monthly publication written for junior and senior high school students, but also a useful resource for teachers, counselors and parents; teachers guide included with each issue; many articles and features relating to careers; each month Career World examines in depth one of the USOE occupational clusters.

* All titles with an asterisk are in paperback. Many of them are either in stock or quickly obtainable from:

Educational Paperback Services, Inc.
216 Newton Street
Waltham, Massachusetts 02154

Can order by phone at (617) 894-2501

MCOE
massachusetts center for occupational education
two sun life park, 100 worcester street,
wellesley hills, massachusetts 02181 tel. (617) 235-7020

Project CAREER
February 1[illegible]

"Careers and Me" Series
Resources #2

EXERCISES FOR COUNSELORS AND TEACHERS TO HELP STUDENTS DEVELOP "SELF AWARENESS"

This sheet is to be used with the "self" student sheets of the "Careers and Me" series.

The objective of the "self" exercises is for the student to have a clear understanding of his/her talents, interests and values -- an integrated picture of the self and a grasp of how this "self" might relate to career planning.

Listed below are several exercises that counselors and teachers might use to help students develop better self awareness. These activities can take the form of written exercises, open discussion or both.

For best results, the exercises should be used prior to using the Student Sheets.

Sample student exercises to help identify talents, interests and values:

1) What subjects do you find most interesting in school? Why?

2) What paid or volunteer jobs have you had? What did you like/dislike about each? What verbs could you use to describe the work you did?

3) In what extra-curricular activities are you involved? What do you enjoy most about these activities?

4) What hobbies do you have? What skills are you using in them? How else could you use these skills?

5) What kind of life would you like to live as an adult? Describe in detail?

6) What would you like to be doing in 5 years? In 10 years?

7) Describe your "ideal job". What is it about this job that appeals to you?

(Continued on Reverse Side)

a cooperative educational service provided through the affiliation of local education agencies and the division of occupational education, massachusetts department of education.

8) Do you have any secret ambitious? Fantasies about your future? Describe them in detail and see if maybe they could be realistic goals.

9) Pick out 5 (or more) things you have done in your life which you consider your most important accomplishments. These are things you a) did very well, b) enjoyed doing and c) were very proud of. Write about each, telling what you did in detail, how you did it, and why it gave you satisfaction.

10) Before I die I want to _____ or, I want my epitaph to read as follows:

11) Write the autobiography of your life. Go back and try to see what things you like doing and do well. What things are most important to you?

12) Take the values as listed in student sheet #2 and have students write these values on a set of 3 x 5 index cards (or pieces of paper).

Have the class break up into groups of 4. In each group the students will, one at a time, put aside the value cards that are not important to them, explaining to the others why they are not. The goal is for each student to finish with his/her top five value cards, arranged in order of priority. Encourage the students to explain "why" for their rankings.

13) Encourage students (using student sheet #5 - "Summary") to try different ways of presenting himself/herself. Some may draw or visually represent the self. Others may write it in a more creative way (a poem, etc) still others may wish to make an oral presentation of "self" (a "This is Your Life" skit, a song, etc). Try to let students express their unique selves in ways that suit them.

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Project CAREER
2/76

"Careers and Me"
Series
Resources #3

EXERCISES FOR COUNSELORS AND TEACHERS TO HELP STUDENTS EXPLORE CAREERS

This sheet should be used after the sheets on "self". Before students explore careers, it is very important that they have a clear picture of their skills, talents, interests and values.

This sheet may be used in conjunction with the student sheets on "exploring".

Listed below are several activities which a counselor or teacher might use to assist students explore careers. It is most important that the student: (1) learn the process of exploring and (2) learn to expand his/her options by matching careers to identified talents and interests.

Sample activities for exploring careers:

1. Have students use the Occupational Outlook Handbook; ask them to look up their first three tentative career choices and summarize the information found.

2. Have the class do research papers on specific careers; use materials in the Career Information Center; interview job-holders; use newspaper and magazine articles.

3. Pick certain career areas and have students clip the Sunday Classified section for all jobs in that field; discuss these job fields in class (requirements, future, earnings, hours); use this exercise as a basis to invite in an outside speaker.

4. Ask students to search the Sunday Help Wanted section for their "ideal job" and bring it to class, mix up the job descriptions, then ask students to try to guess who picked each one.

(Continued reverse side)

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5. Name for the class a specific skill; (e.g. writing ability); have the class discuss as many jobs as possible that use that skill; do the same with other skills emphasizing that each of their own skills can be used in many occupations; have them discuss their own skills in this manner; re-emphasize how jobs can be clustered by skill areas.

6. Identify the three or four major career interests of your class; plan a speakers program with your class; discuss the occupation before the speaker visits; as a class, make up a list of questions for the speaker and send him/her a copy; when the speaker comes, use the questions as an agenda; after the visit, evaluate both the speaker and the occupation; write a thank you note.

7. Ask the students to describe what things they want from a job (salary, benefits, future, skills used, etc.) and ask them to set up an individual rank-order list; have them now re-examine their top three career choices using this checklist.

8. Ask the students to describe what things they feel jobs demand of them (training, experience, hours, dress, behavior, etc.); discuss the difference between these requirements and #7 above; have the students review once again their top three choices using this checklist.

9. Have students break into smaller groups by preferred occupational area; ask them to describe their occupational choice in the year 1985; how must they adapt to this change between now and then? Have them read the Occupational Outlook Handbook to further explore future changes in their occupational areas.

10. As a teacher or counselor, build up a file of community resource people, cataloging them by career field; you may want to have the students help expand this list.

11. Have students develop strategies (including lists of questions) to conduct on-site interviews with workers in their career fields; emphasize learning exactly what skills the worker needs for success in his job; class discussions can follow each interview; students could also tape interviews with workers.

12. Assign a group of students to a bulletin board display project; let them pick a career area and encourage their creativity (photos, newspaper clippings, brochures, etc.).

13. How many jobs are there in this school? Give the students a set period of time (30 minutes/a day) to explore all non-teaching jobs in the school; have them get signatures and brief job descriptions for each worker; class discussion should emphasize how we too often overlook jobs right "under our noses".

14. Have students list the subjects they are taking at the present time; for each subject, have them list skills they are acquiring; finally, in what career fields are they gaining skills in each of their school courses?

15. Have the students analyze the national and local job market in their top three career fields; the Occupational Outlook Handbook can be used for national information; for local information, encourage their creativity (Chamber of Commerce, D.E.S., local workers, etc.); discuss how this information might affect their future decisions.

16. Have the student review their "self" sheets; now, with increased information on both "self" and "careers", have them re-evaluate their career choices; emphasize the importance of choosing a career that matches the kind of person you are.

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Project CAREER
2/76

"Careers and Me" Series
Self
Student Sheet #2

MY VALUES

Values are the strong beliefs that you live by. They are very important things to keep in mind as you choose a career.

Listed below are some things that people value. Spaces are provided for you to list other values which you may have.

Please mark in order those you value most. For instance, put a "1" by the value of greatest importance to you, a "2" for the value of next importance and so on.

____ power	____ leading others
____ enjoyment	____ love
____ helping others	____ popularity
____ success	____ security
____ money	____ education
____ friendship	____ approval of others
____ possessions	____ expertness
____ independence (freedom to do as I wish)	____
	____
	____
	____

(Continued reverse side)

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Your six most important values from this list were:

(1)

(2)

(3)

(4)

(5)

(6)

Describe the kind of job you think would fit your most important values?

(Counselor/Teacher)

(Me)

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Project CAREER
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"Careers and Me" Series
Self
Student Sheet #3

MY TALENTS AND SKILLS

Your talents and skills are very important in choosing a career. Talents include very general abilities, such as musical, mathematical or athletic talents. Skills are specific abilities such as playing the piano, programming a computer or playing tennis.

Listed below are talents that people have.

Please mark in order those talents you feel you have. For instance, put a "1" next to the talent you feel is your strongest, "2" for the next and so on for each talent. Take into consideration not only what you do well, but what you enjoy doing.

___ Numerical (working with numbers)

___ Verbal (working with words, writing and speaking)

___ Mechanical (working with machines and tools)

___ Physical (working with hands and body)

___ Leadership (planning and organizing)

___ Social (working with people)

___ Artistic (working with color, design)

___ Clerical (working in detail with words and numbers)

___ Musical (singing, playing an instrument)

___ Scientific (ability to study and solve problems)

Now, list your top three talents and name any specific skills in those areas you either have now or plan to develop:

(Continued on Reverse Side)

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Talent	Skills I now have for this talent	Skills I plan to develop
1)		
2)		
3)		

Think of talents as naturally given, skills as something you work to acquire. It obviously makes sense for you to discover where your natural talents lie, then to try to develop specific skills in those areas. The more skills you develop, the more careers (and other activities) you can consider.

What types of jobs, careers or spare-time activities can you think of that would use your most important talents?

(Counselor/Teacher) (Me)

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Project CAREER
2/76

"Careers and Me" Series
Self
Student Sheet #4

MY INTERESTS

Your interests, like your talents and your values, are important to consider as you explore different careers.

Interests are those things you are curious about, as well as the activities you enjoy and that give you satisfaction. Your interests will tell you a great deal about the kind of person you are and also give you clues about what future careers will make you happiest.

Examples of interests include: gardening, writing poetry, playing basketball, fixing cars, studying the weather, painting, taking care of small children, singing in a group, and selling things door to door.

Hint: To help find your interests, finish the following sentences:

At school I often enjoy _____. I've always been curious about _____.
In my free time at home I _____. Some of my hobbies are _____.

Name several interests you have:

(1)

(2)

(3)

(4)

(5)

Others:

Now go back over your important interests and examine them more closely.

(Continued reverse side)

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What talents or skills did you use most often?

What values are present?

What are some careers that might use your interests?

Why do you think your interests are important in choosing a career?

(Counselor/Teacher) (Me)

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Project CAREER
February 1976

"Careers and Me" Series
Self
Student Sheet #5

SUMMARY OF MY "SELF"

Before you explore careers, you should be able to describe the kind of person you are. If you can successfully name those things you most enjoy doing, and the things you do well, your chances are much better for choosing a career that will make you happy.

Taking the Student Sheets you have already completed, fill in the "self circles" below:

My talents:

My values:

My interests:

Other things about me:

Now, you may want to draw (on another piece of paper) a different "picture" of yourself, by using your talents, values and interests in some other shape or arrangement.

(Continued on Reverse Side)

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After you look at your "self", write a paragraph or two describing 1) the kind of person you are and 2) what this tells you about the kind of career you might choose.

Counselor/Teacher

(Me)

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Project CAREER
3/76

"Careers and Me" Series
Exploring
Student Sheet #6

EXPLORING AN OCCUPATION
(Revised)

I understand that any occupation I become interested in should closely match the kind of person I am -- my skills, talents, interests and values.

In a brief paragraph, here are my talents and interests (that I want any job to satisfy):

Now, using written information in the Career Information Center (like the Occupational Outlook Handbook, etc.) I will try to find out if this occupation matches my interests and skills.

A. Name of occupation:

B. What does this person do?

C. What skills and personality are needed for this job?

D. What education and training is necessary?

(See reverse side)

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E. Where do these people work?

F. What is the salary range of this occupation?

G. What are the hours of this job? The benefits?

H. What is the future outlook for this occupation?

I. What are some names for different jobs in this field?

J. Summary: What do I like about this job?

K. Summary: What do I dislike about this job?

L. Here are some places I can write for more information:

M. What do I now think of this job?

(My Name)

CAREER MATCH*

Listed below are six personality types which can be expressed in all careers. Read carefully each of the six types. Then read them each again, marking with a pencil the order in which you prefer them (1, 2, 3, 4, 5, 6) in the blanks in the right-hand column.

We want you to end up with your first, second, third, fourth, fifth and sixth choices from the personality types.

CREATIVE: I like free non-structured activities. I like to create things with my hands. I enjoy art work, such as sketching, drawing or painting. I like activities such as music, design, poetry, plays, or writing. C: ____

REALISTIC: I like and could be good at building, repairing and fixing things. I would like to work with tools, machines and anim[illegible] I like things like manual, mechanical, agricultural, electrical and technical activities. R: ____

SOCIAL: I enjoy being with people, working with people and helping people. I am friendly and get along well with people. S: ____

ENTERPRISING: I like to persuade others to do certain things. I am good at selling ideas and things. I have a lot of energy and enthusiasm. I would like to lead others and sell ideas and things. E: ____

ORGANIZATIONAL: I like to be well organized. I like (and would be good at) such things as doing peper work, typing, and recording information. I like business and office activities. O: ____

INVESTIGATIVE: I like to discover new facts and solve problems. I enjoy reading scientific information, working with scientific projects, solving math problems and taking science courses. I: ____

*Adapted from work of John Holland

INSTRUCTIONS

Take your first three choices (the ones marked 1, 2 and 3) and place the alphabetical letters from the right column in the blank spaces below.

For example, if your first choice is "Social", the letter is "S", if your second choice is "Creative", the letter is C and if your third choice is Investigative, the letter is "I". The letter key would then be S C I.

My three letter keys are: _____ _____ _____

1st choice | 2nd choice | 3rd choice

FURTHER INSTRUCTIONS

Look at the KEYS TO CAREERS to find possible careers for you to look into. First, find your three-letter key and carefully look over those careers. Also, look over your letter keys in different combinations. For example, if your key was SCI, also look at careers under SIC, CIS, IAS, CSI, and ISC. Also, check all careers under all the keys that begin with your first letter (in this case all the codes beginning with "S").

List below any of those suggested careers which you are interested in investigating. Explore these further in the Career Information Center.

1. _____ 6. _____

2. _____ 7. _____

3. _____ 8. _____

4. _____ 9. _____

5. _____ 10. _____

KEYS TO CAREERS

REALISTIC CAREERS

Key: RSC

Baker
Cook
Electrician
Filling Station Attendant
Forester
Glazier
Heat Treater
Industrial Arts Teacher
Jeweler
Loom Fixer
Miller/Foreman
Offset Press Operator
Optician
Power Plant Operator
Powerhouse Repairman
Radio Operator
Skilled Tradesman
Tool and Die Maker
Welder
Wire Drawer

Key: RSE

Barber
Blacksmith
Butcher
Chauffeur
Coal Equipment Operator
Detective
Fireman (Fire Fighter)
Fireman, Locomotive
Fountain Man/Woman
Gas Main-Fitter
Laborer, Guard, Janitor Watchman, Warehouseman
Molder
Motorman (Streetcar)
Pipeman
Policeman
Railroad Conductor
Taxicab Driver
Waitress (Waiter)
Parking Lot Attendant

Key: RIE

Air Traffic Controller
Aircraft Mechanic
Automotive Engineer
Automobile Body Repairman
Automobile Mechanic
Boilermaker

Civil Engineer
Compressor House Operator

Draftsman
Electroplater
Engraver, Machine
Engineer, Mining
Farmer (Rancher)
Forging Press Operator
Garage Foreman
Heavy Equipment Operator
Industrial Engineer Technician
Lineman
Loom Changer
Machine Repairman
Machinist
Machine Operator
Maintenance Man/Woman
Mechanic
Mechanical Engineer
Mechanical Engineer Tech.
Mechanic, Radio
Millwright
Plumber
Roofer
Tool Crib Attendant
Upholsterer
Watch Repairman
Sheet Metal Man/Woman

Key: REO

Laundress
Maid

Key: RIC

Architectural Draftsman
Dental Technician

Key: RIO

Assembler
Drill Press Operator
Dry Cleaner
Elevator Mechanic
Grinder
Grounds Keeper
Inspector
Load Checker
Locksmith
Nuclear Reactor Tech.
Nurseryman
Piano Tuner
Printer
Roller
Shipping/Receiving Clerk
Shoe Repairman
Stone Cutter
Structural Steel Worker
Switchman
Teamster
Tire Builder
Tree Surgeon
Turret Lathe Operator

Key: RCI

Bookbinder
Compositor (Typesetter)

Key: RSO

Bill Collector
Elevator Operator
Kitchen Helper
Stockman

Key: RSI

Gas Appliance Serviceman
Knitter
Vocational Agriculture Teacher

Key: ROI

Carpenter
Instrument Mechanic
Motion Picture Projectionist
Painter (House, Bldg, & Equipment)
[illegible]
[illegible]
[illegible]riter Repairman

Key: CSE

Dancing Teacher
Drama Coach
Drama Teacher
English Teacher
Foreign Language Interpreter
Journalist-Reporter

Key: CSI

Art Teacher
Literature Teacher
Music Teacher
Orchestra Leader
Philosopher

Key: RES

Cattle Rancher
Crater and Packer
Fish & Game Warden
Fisherman
Railroad Brakeman
Railroad Engineer
Stock Clerk
Stock Clerk

Key: ROS

Blaster
Bricklayer
Bus Driver
Cement Mason
Dressmaker
Furnaceman
Industrial Truck Operator
Installer Repairman
Mail Carrier
Meter Reader
Miner
Plasterer

ARTISTIC CAREERS

Key: CIS

Actor-Actress
Critic (Reviewer)
Designer
Interior Decorator
Editor
Fashion Illustrator
Furniture Designer
Furrier
Interior Decorator
Jewelry Designer
Radio Program Writer
Women's Garment Designer
Writer

Key: ROS (con't)

Seamstress
Spinner
Tailor
Tile Setter

Key: REI

Air Conditioning Engineer Mechanic
Foreman
Ship Pilot
Trackman

Key: ROE

Craneman
Fork Lift Operator
Grader
Tractor Operator
Truck Driver

Key: CIE

Decorator

Key: CIR

Architect
Artist
Photograph Retoucher
Photographer
Photolithographer

Key: CES

Advertising Person
Advertising Manager
Entertainer (Dancer, Singer)
Fashion Model
Public Relations Person

ORGANIZATIONAL CAREERS

Key: ORS

File Clerk
Teller

Key: OIS

Accounting/Statistical Clerk
Auto Writing Machine Operator
Bookkeeping Machine Operator
Calculating Machine Operator
Certified Public Accountant
Estimator (book publishing)
Foreign Trade Clerk
High-Speed Printer Operator
Time Study Analyst

Key: ORI

Biller
Duplicating Machine Operator
Key Punch Operator
Tabulating Machine Operator
Timekeeper

Key: OSE

Business (Commercial) Teacher
Personnel Clerk
Receptionist
Sales Correspondent
Telephone Operator
Travel Bureau Clerk

Key: OIR

Accounting Machine Operator
Office Machine Operator

Key: OEI

Finance Expert
Personnel Secretary

Key: OIE

Office Worker
Payroll Clerk
Proofreader
Typist

Key: OSR

Reservations Agent
Traffic Checker

Key: OER

Data Processing Worker
Mail Clerk

Key: OSC

Library Assistant
Medical Secretary
Religious Affair Clerk
Secretary

Key: OES

Accountant
Clerk
Clerk-Stenographer
Credit Manager

Key: OSI

Bookkeeper

ENTERPRISING CAREERS

Key: EOI

Market Analyst
Banker

Key: ERI

Contractor
Farm Manager
Industrial Engineer

Key: ECS

Lawyer, Judge, Attorney

Key: ECR

Radio/TV Announcer

Key: ESO

Administrative Assistant
Apartment House Manager
Branch Manager
Business Manager
Customer Services Manager
Demonstrator
Director, Industrial Relations
Dispatcher, Motor Vehicle
Employment Interviewer
Government Official
Insurance Investigator
Insurance Manager
Labor Arbitrator
Office Manager
Operations Manager
Manager/Administrator
Manager, Restaurant/Bar
Peddler (Huckster)
Personnel Assistant
Personnel Manager
Personnel Recruiter
Production Manager
Salary & Wage Administrator
Sales Clerk
Salesman
Sales Manager
Traffic Manager

Key: ERS

Warehouse Manager

Key: ERO

Postmaster

Key: EIS

Salesman, Technical Products

Key: ESR

Route Salesman
Sporting Goods Salesman

Key: EOS

Art Goods Dealer
Buyer (Purchasing Agent)
Florist
Furniture Dealer
Grain Buyer
Insurance Underwriter
Real Estate Appraiser
Real Estate Salesman
Supervisor, Ticket

Key: ESI

Automobile Dealer
Director of Admin. Service
Director, Compensation & Benefits
Life Insurance Salesman
Encyclopedia Salesman
Gas Station Manager
Gift Shop Manager
Grocer
Importer-Exporter
Manpower Adviser
Retail Merchant
Shoe Store Manager
Systems Analyst, Business

Key: ESC

Airline Stewardess

Key: ESC (cont'd)

Director, Recreation
Guide, Travel
Salesperson, Musical Instruments
Security Salesperson

INVESTIGATIVE CAREERS

Key: ICS

Economist
Internist (Physician)

Key: ICR

Anthropologist/Archeologist
Astronomer
Chemist
Pathologist
Physicist

Key: ISO

Medical-Laboratory Asst.
Production Planner
Repairman, TV

Key: ISR

Biologist
Chiropractor
Mathematics Teacher
Natural Science Teacher
Optometrist
Osteopath

Key: IEO

Actuary

Key: IOR

Computer Operator
Equipment Repairman
Quality Control Tech.
Research Assistant

Key: IRC

Geologist
Mathematician, Statistician
Meteorologist
Surgeon
Weather Observer

Key: IRS

Agronomist
Animal Scientist
Biochemist
Botanist
Engineer Aide
Geographer
Horticulturist
Natural Scientist
Oceanographer
Veterinarian
X-Ray Technician
Zoologist

Key: IES

Bacteriologist
Pharmacist
Physiologist
Research Analyst

Key: IRE

Administrator, Engineer
Aeronautical Engineer
Aerospace Engineer
Technician
Chemical Engineer
Chemical Lab. Tech.
Dentist
Electrical Engineer
Engineer
Metallurgical Engineer
Radio or Television
Engineer
Test Engineer, Aircraft

Key: IRO

Airplane Navigator
Airplane Pilot
Computer Programmer
Engineering Technician
Instrument Repairman
Laboratory Technician
Model Maker
Tester, Electronic Systems
Tool Designer
Tool Maker

Key: ISC

Medical Technologist
Physician
Psychiatrist
Psychologist

SOCIAL CAREERS

Key: SEI

Educational Administrator
Environmental Health Engineer
Historian
History Teacher
Home Service Representative
Training Director

Key: SEO

Bartender
Chamber of Commerce Director
Compensation Advisor
Director Social Service
Dorm Director
Employee Benefits Approver
Employment Representative
Food Service Manager
Funeral Director
Hostess (Hotel, Tea Room, Etc.)
Interviewer
Job Analyst
Ward Attendant

Key: SEC

Community Recreation Administration
Counselor
Foreign Service Officer

Key: SOE

Baggageman (Motor Transportation)
Business Agent, Labor Union
Caterer
Executive Housekeeper
Liquor Store Manager
Order Service Correspondent
Public Health Service Officer
Recreation Director
Restaurant Proprietor
Theatre Manager
Ticket Agent

Key: SER

Claim Adjuster
Health & Welfare Coordinator

Key: SRI

Extension Agent

Key: SIC

College Professor
Group Worker
Political Scientist
Professional Nurse
Rehabilitation Counselor
Sociologist
Social Scientist
Social Worker

Key: SIE

Building Inspector
Customs Inspector
Dietician
Inspector, Public Admin.
Personnel Director

Key: SIO

Food and Drug Inspector
Parole Officer
Politician
Social Science Teacher
School Superintendent
YMCA Physical Director
YMCA Secretary

Key: SCI

Clergyman
Dental Assistant
Dental Hygienist
Elementary Teacher
Librarian

Key: SCI (cont'd)

Licensed Practical Nurse
Special Education Teacher
Speech & Hearing Clinician

Key: SRE

Athlete
Athletic Coach
Building Superintendent
Governess
Housekeeper
Houseparent
Occupational Therapist
Physical Education Teacher

Key: SER

Physical Therapist
Podiatrist (Foot Doctor)
Therapist

Key: SCE

Foreign Language Teacher
Home Economics Teacher
Home Economist
Housewife
Speech Teacher
Teacher

Key: SCO

Cosmetologist
Electrologist
Hair Stylist
Manicurist

APPENDIX G

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Project CAREER
May, 1976

"Careers and Me" Series
Resource #7

DEFINING THE COUNSELOR ROLE(S) IN STUDENT CAREER DEVELOPMENT: A WORKSHOP APPROACH

Listed below is a sequence of steps which lead to a logical definition of the counselor's role in career educaton.

This sheet may be used by guidance departments or by other groups responsible for assisting students in life/work planning.

This sheet should be used in conjunction with Resource Sheet #6, "Counselor Role(s) in Student Career Development".

Following is an outline for the steps leading counselors toward a definition of their roles in career education.

Step 1 - Describing Student Needs:

The counselors should brainstorm for an appropriate period of time, listing what they feel are student "needs" in terms of career development; many issues should surface, such as "more realistic information", "help in decision-making", "speakers", "values clarification", etc.

The group leader should then help summarize these needs, showing that they fall into the broad categories of Self-Awareness (values, skills, interests, etc.), Career Awareness and Exploration, Decision-Making (tentative) and Planning, and Implementation.

Step 2 - Listing Possible Counselor Activities:

Next, the leader should encourage the counselors to examine the list of identified student needs and list (either by brainstorming, small group discussion or large group feedback) possible counselor activities to meet these student needs.

(See Reverse Side)

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Many specific activities should result (e.g. "setting up a Career Information Center", "teaching a mini-course on decision-making", "developing a community resource committee", etc.).

After a wide-ranging list of activities has been accumulated, the leader should encourage the group to try to define a handful of larger counselor roles which encompass these specific activities. The resulting headings may include such roles as:

1. The counselor as resource to the classroom teacher.

2. The counselor as coordinator/administrator of a school career education program.

3. The counselor as a "counselor": provides assistance to students in areas such as values, interests, skills, decision-making, etc; (the developmental aspect of the student's career process).

4. The counselor as career information coordinator: provides information on career fields, post-secondary alternatives, community resources, etc.

5. The counselor as "linker" for career education (with students, parents, teachers, administrators, community leaders, media, etc).

Step 3 - Summary:

The leader should next attempt a summary of what the group has produced so far -- a list of student needs and a roster of possible counselor roles and activities in the students' career development process. Any questions from the group should be dealt with at this time.

Step 4 - Action Plans:

The last activity will depend very much on both the leader's and counselors' commitment. The purpose of this final step is to produce some tangible next steps, so that the previous discussion does not simply become an intellectual exercise.

Step 4 may take many forms. It may result in counselors (a) deciding to meet weekly to further develop their roles in career education; (b) deciding to start a Career Information Center; (c) deciding to set up a "mini-course" on decision-making; see Resource Sheet #6 for other possibilities.

The optimum outcome of the workshop is that counselors will decide to not only take the initiative for developing an overall school career education program, but also commit themselves to some specific first steps, together with a time-table! It is important that the discussion end with agreement on specific follow-up for counselor involvement (when? where? how?).

Note: The time frame for this workshop is open-ended. It need not be completed in one session. One logical follow-up would be to use the "Careers and Me" Sheet (Resource #6) on "Counselor Role(s) in Student Career Development" for planning specific activities.

APPENDIX H

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Project CAREER
3/76

Curriculum Resource
Guide Series #1

SUGGESTIONS FOR USING PROJECT CAREER TASK OUTLINES AND CAREER PREPARATION ANALYSIS CHARTS (CAREEROGRAMS)

A. Overview

Educators will find the Project CAREER Task Outlines and Career Preparation Analysis Charts (Careerograms) to be a more manageable and extensive resource for descriptive information concerning specific occupations and clusters of occupations than most resources available to them. The information is organized to be readily accessible facilitating the search for both specific and general occupational information.

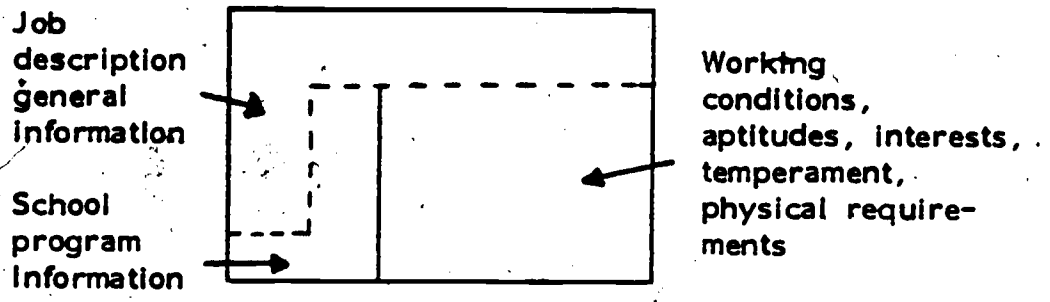
Consequently, the Project CAREER Task Outlines and Career Preparation Analysis Charts (Careerograms) can accommodate many of the resource needs of educators and lend themselves to a number of possible uses.

B. Content Description

1. Career Preparation Analysis Charts (Careerograms)

A single page of information containing both the personal and the educational prerequisites of a specific occupation. This information is derived from the Dictionary of Occupational Titles and the Occupational Outlook Handbook.

Career Preparation Analysis Charts

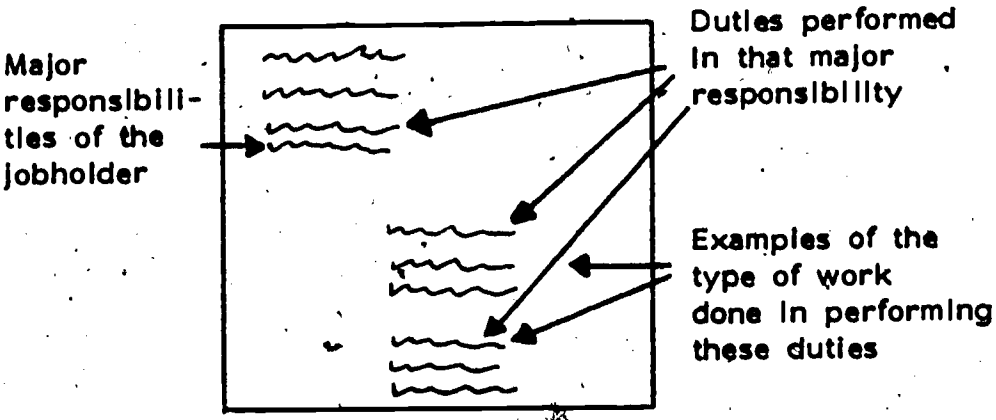


a cooperative educational service provided through the affiliation of local education agencies and the division of occupational education, massachusetts department of education.

2. Task Outline

The major responsibilities and groups of identifiable tasks performed within an occupation arranged in outline.form. The information was derived from a national search of available relevant materials and reviewed by current jobholders for each specific occupation.

Task Outlines



C. Suggested Uses

-- Identify occupations within clusters.

-- Break down an occupation from a broad description into groups of related tasks.

-- As an aid in noting similarities among occupations in a cluster approach.

-- Assist in counseling efforts to describe the requirements and activities of various occupations.

-- As a reference in the development of occupational awareness.

-- Demonstrate a relationship between educational preparation and actual job requirements and responsibilities.

-- Discuss job preparation with employers.

-- Identify with advisory committees and administrators information which should be taught in the curriculum.

-- Illustrate to students the interrelationship between education and work.

-- Help students communicate their career interests to counselors, teachers and parents.

-- Give students an overall view of the requirements of a specific job.

-- Identify comprehensive descriptions of what a jobholder is expected to do on-the-job.

-- Identify specific competencies which could be accomplished within a student's school program.

-- Develop competency checklists. These lists of competencies can become an evaluational tool for monitoring student progress.

-- Prepare students for field trips.

-- Help students understand commonality among occupations in a particular cluster.

-- Help students compare their accomplishments in school to what is expected of a jobholder.

-- Use as a guide to discuss education with employers and other community people.

D. Related Project CAREER Publications

1. Project CAREER Guidance Pacs

-- Contains Project CAREER Task Outlines and Career Preparation Analysis Charts (Careerograms) with suggested useage organized into the fifteen USOE clusters.

2. Project CAREER Competence Pacs

-- Contains Project CAREER Task Outlines, Career Preparation Analysis Charts (Careerograms) and curriculum data material related to eighty specific occupations.

3. Instructions for the Use of Career Preparation Analysis Charts (Careerograms)

APPENDIX I

INDIVIDUAL STUDENT SKILL INVENTORY
RECORD SHEET

1. School: ☐ Lynn English H.S. ☐ King Philip Regional H.S.
2. Grade Level: ☐ 9th ☐ 10th ☐ 11th ☐ 12th
3. Marking Period: From _____ To _____
4. Students Name: _____
5. Teachers Name: _____
6. Subject Area: _____
7. Skill Inventory:

Skill	Degree of Proficiency	Project CAREER I.D. #

Skill	Degree of Proficiency	Project CAREER I.D. #

APPENDIX J

MACHINE - RELATED

DEV'L W. MOORE

D'W'N' BY R. DANIEL

KING PHILIP VOC. H.S.

— INSTRUCTOR'S GUIDE 1-7 —

TASK

READ A 1" AND/OR 2" MICR.

TOOLS:

1 MICR. PER STUDENT

1 STEP GAGE PER STUDENT

MATERIALS: (OPTIONAL TYPES)

WALL CHART SHOWING PARTS OF MICR.

O.H. TRANSPARANCY " " " "

PASSOUT SHEETS " " " "

PAMPHLETS " " " "

INFORMATION SHEETS

QUIZ SHEETS

TAKE HOME EXCERCISE SHEETS

EVALUATION POINTS:

PARTS OF MICROMETER

THREADS PER INCH

CARE AND HANDLING

ACCURACY OF VARIOUS BRANDS

COST " " "

CHECKING FOR ACCURACY

OCCUP. RELATION:

MACHINIST

TOOLMAKER

DIEMAKER

INSPECTOR

AUTO MECH.

MACHINE - RELATED

CLUSTER: MANUFACTURING

DEV'L. W. MOORE.
DW'N. BY R. TOBEY

KING PHILIP VOC. H.S.

— EVALUATION 1-7 —

TASK

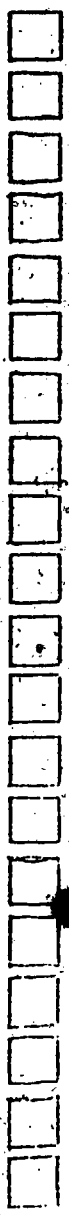
— READ A 1" (AND/OR) 2" MICR. —

— SET A 1" MICR. TO 5 DIFF. READINGS —

— TO ±.002 ACCUR. —

— "MIKE" 6 DIFF. DIA'S OF STEEL GAGES —

STUDENTS



Appendix K containing a sample of supplemental activities specified in student's guide was not reproducible and was removed from this document prior to its being submitted to the ERIC Document Reproduction Service.

APPENDIX L

Excerpts from A Survey of

Existing Career Exploration Activities in
The Lynn and King Philip Regional School Districts

LYNN

On June 23, 1975, a visit was made to Lynn to meet with Dr. Fred Cole, Director of Federal Programs, and the person in charge of the project with which Project CAREER will be affiliated. We spent approximately two hours discussing the Career Awareness Project, Project CAREER's role in it, and the present state of the art relative to career awareness/ occupational education in Lynn.

The interview, although general in nature, did have a loosely structured format. Against a background of trying to determine the nature of a pre-assessment phase for the Project CAREER-Lynn Project, a primary purpose was to assess the extent of articulation between the various programmatic levels concerning career awareness and any specific testing for awareness, interest, aptitudes, skills, etc. Five specific questions were asked and responded to:

1. What kind of specific, formalized career awareness programs presently exist at the elementary and junior high levels?

2. What kind of specific, formalized self-awareness testing programs presently exist at the elementary and junior high levels?

3. What kind of career exploration presently goes on at the elementary and junior high levels?

4. How do students enter existing occupational programs? What kind of assistance do they receive?

5. What kind of information do those responsible for vocational programs have on students entering their programs?

Dr. Cole, although somewhat removed from the classroom and actual guidance environment, demonstrated extensive knowledge about the existing situation and problems. It was concluded at the termination of the interview that no additional persons within the Lynn School System had to be approached for further information.

It was quickly determined that little or nothing is being done regarding career exploration/awareness. There was definitely nothing at the elementary level; career education has not yet come to Lynn in the lower grades! There are no elementary counselors and apparently teachers have not formally integrated conscious self-awareness activities into the curriculum.

There does seem to be some attempt at "vocational" testing at the junior high school. A basic problem here, however, is the limited number of counselors as well as the real role expectation these people must face. In reality, junior high school counselors are adjustment counselors, perhaps a euphemism for disciplinarians, who must be primarily concerned with a high rate of truancy, anti-social behavior, etc., at the expense of more meaningful activities. Consequently, the potential good to be gained from the meager amount of testing conducted is almost entirely lost because of a lack of follow-up discussions, interpretations, and planning between counselor and student.

The role expectation and limited number of guidance counselors in the Lynn School System poses potential danger for future efforts involving Project CAREER. The role of guidance counselor for career exploration, awareness, and future planning is at the heart of the emerging vocational program. Drastic changes are needed in role and attitude, and training seems in order before the anticipated contributions to the program from guidance staff will be realized. It is foolish to think that more personnel will be forthcoming in an environment where the school budget represents 28% of the total city budget. The use of counselors and the needed ingredients for realizing extensive benefits from their services must be closely examined by those involved in the program.

II. The Present Situation

Painting a picture of the present situation regarding career awareness/exploration and training, even with the broadest of strokes, depicts a rather dismal, albeit all too realistic scene. Nearly all students desiring an occupational course of study enter the Lynn Vocational-Technical School. This is done without the assistance of well structured counseling and preparation, as mentioned above. One can only wonder about the variables that affect a student's decision to go this route as well as his/her self-image at the time of this unfortunately somewhat more than tentative decision-making. Some local businessmen are invited occasionally to speak about their job roles and an infrequent visit is made by junior high students to a local industry, but this by and large has been the extent of formalized exposure to the world of work within the school system.

Several "alternative" programs do exist within the school system, primarily to salvage the potential drop-out: Junior high students (grades 7-9) with academic problems participate in a trade-industrial arts program in which they are introduced to four occupational areas: (1) machine shop, (2) electrical shop, (3) metal fabrication, and (4) carpentry. For those old enough, a P.M. (12:00 - 5:30 pm) program has been introduced which

attempts to prevent student withdrawal by combining academics with vocational education and some cooperative education. In both of these instances, students appear to select these programs primarily through their own initiative.

King Philip Regional School System

King Philip Regional School is the receiving high school for the towns of Wrentham, Norfolk, and Plainville. Students from these three towns come to King Philip through one common junior high school. The present educational structure includes a vocational school, with its own director, within the Regional High School complex, but the philosophy has changed to that of restructuring onto a comprehensive school plan. A rather large wing is presently being added to the existing facility. This addition will represent a significant expansion of the school's vocational program, which is in keeping with the district's growing and firm commitment to providing maximum exposure to career education for all students. The vocational program is being expanded from five areas to approximately eighteen as a result of the present construction.

In addition to the growing vocational curriculum, the King Philip Regional High School has a varied and interesting number of programmatic alternatives for its students. These include a strong business education component, an emerging distributive education option, college preparatory, and general education. The changing curricular philosophy emphasizes the elimination of the general education option, the expansion of the vocational/occupational program, and the belief that the college directed avenue is part of a larger career education/preparation perspective.

Cooperative Education and Work Study programs appear to be well established at King Philip. Seniors involved in these programs work in the field on alternate weeks. Approximately 80% of all seniors are placed on jobs within the school's labor market area (Lynn/Worcester-New Bedford).

Many of the occupational course offerings at King Philip include both terminal and enabling performance objectives. Vocational faculty were provided with an in-service program on the development of job competencies. While there is the expected variance as to quality and quantity within each area, both the vocational administration and Dr. Glen Neifing, special consultant to the training program, are due high praise for what seems to be an extremely successful developmental program.

Existing Career Education and Testing Programs

There is a formalized career exploratory program in the junior high school. Eighth graders are exposed to a structured course focusing on the world of construction, world of transportation, etc. Not all of the students at this grade level, however, are able to participate in this offering. The reasons for this, as well as information as to the criteria for determining which students are admitted to the exploratory program, were unavailable during my visit to the school. Further information is needed regarding the eighth grade exploratory unit.

Junior high counselors do no interest testing at the seventh and eighth grade levels. General aptitude (DAT) and intelligence (Iowa, Ottis-Lennon) data appear to be the primary types of individual information sought. Perhaps what seems to be a reluctance to undertake additional testing is due to parental concern about excessive probing by the schools. This is a sensitive issue at King Philip and the need for and use of additional testing by Project CAREER must be evaluated completely before final plans in this facet of the program are consummated.

There is apparently good rapport and close cooperation between junior and senior high guidance staffs within the King Philip School System. three counselors in the junior high and the five at the high school maint continuous communication concerning the well-being of students progressing through the system. This is very important in that high school program selection and, therefore, significant career decisions are presently made at the end of the eighth grade. Because of this, the one vocational counselor at the high school is involved primarily with only those students who have chosen this programmatic direction.

There is a limited career awareness library at present in the high school, and the materials that do exist are housed mostly in the counselors' offices. A Student Resource Center is being added as part of the new complex, however, and plans are being made to use this as the primary repository for the anticipated major expansion of materials in this area. There is evidence to suggest that the counseling staff is aware of and supports the need for career exploration as a vital part of the curriculum. These staff members probably know little or nothing, however, about Project CAREER and would most likely welcome additional exposure to career education in general and competency-based education in particular. This type of spade work by Project CAREER staff at the outset of involvement with King Philip personnel would seem most important and would reap significant benefits in the long run.

Although productive, the value of my visit to King Philip was limited somewhat by the fact that those to whom I spoke had not yet been thoroughly

exposed to the intent of the new vocational project with which Project CAREER will interface. It is my understanding that a meeting shortly involving personnel from Project CAREER and the Regional School will cover much of the ground over which this report was intended to trod. Everyone being comfortable with the meeting's agenda, this consultant has not sought further for additional information on existing career efforts or preliminary plans for future activities in this area.

APPENDIX M

THOMAS F. HARRINGTON
119 Sprague Street
Dedham, MA 02026

June 9, 1976

Dr. John Post
Director, Project CAREER
Mass. Center for Occupational Education
Sun Life Executive Building 2
100 Worcester Street
Wellesley Hills, MA 02186

Dear Dr. Post:

Enclosed is a preliminary report of the findings of Drs. Fredrickson, Hayes, Kates and myself, which was requested on May 28, 1976 by the Federal Evaluation Team. The full report will be available in approximately one month.

Sincerely,

Thomas F. Harrington, PhD

j
enc.

Preliminary Third Party Evaluation Report
of
Project CAREER/OCAP
June 9, 1976

The following is a preliminary report of the third party evaluation team concerning the activities of Project CAREER at Lynn English High School and at King Philip Regional High School. Below is a relatively terse summary of visitation results on a pre- post basis in November, 1975 and May, 1976 at both schools. The following is provided for grant request considerations; a more complete analysis will follow. The report below focuses primarily on the achievements of Project CAREER, and is organized to correspond with the four basic areas of consideration: A. Instructional Change, B. Guidance Activities, C. Administrative Activities, and D. Informational Considerations. For convenience' sake, the report is divided by each school under each category.

A. INSTRUCTIONAL CHANGE

King Philip Regional High School

1. Project CAREER has been successful in developing a model to relate shop-related instruction with shop laboratory work. There is evidence that the career information materials developed in shop-related instruction is being carried over into the lab situation.
2. There is evidence that Project CAREER has developed materials relating shop competencies and career (job) related skills. Within the shop courses, charts and competency graphs have

been developed relating the shop competencies to specific job related skills.

3. The shops have developed a methodology for documenting student skill completions, and are using this in both a motivational way and as an alternative to other types of competency measures.

4. There have been some limited attempts in the academic subjects to infuse occupational information and career information into curriculum plans.

5. There have been attempts to use the Project CAREER data base as a framework for developing lists of common skills that cut across vocational areas: i.e., grades on task completion other than courses taken, etc.

Lynn English High School

1. Project CAREER has developed a teacher awareness of the career implications of subject matter courses. Teachers in the instructional areas have been using the Career Information Center, and seem more aware of certain subject matter/career implications. Teachers seem to be aware of the motivational value of the relationship of careers to academic subjects. There is some information that students who perceive career implications for subjects are responding more positively to them.

2. There is evidence that teachers are utilizing the Project CAREER resources, both staff and material.

B. GUIDANCE ACTIVITIES

King Philip and Lynn English High Schools

1. An adequate Career Information Center has been established and properly staffed.
2. A career information file has been set up on each experimental student, and career data is being developed, filed, and made available to the students.
3. A relationship has been established with the guidance staff, i.e., the guidance counselors' utilization of the Career Information Center.
4. Project CAREER has developed guidance information materials for career match and classroom use.
5. There have been classroom presentations by the Project CAREER staff concerning the usage of the Career Information Center, and an introduction to other career information.
6. There is evidence of student usage of the Career Information Center on an expanding basis.

C. ADMINISTRATIVE ACTIVITIES

King Philip High School

1. Project CAREER has maintained support for the project, which is now being translated into not only personnel and idealogical support, but actual expenditures of funds.
2. Project CAREER has developed the support of administration at all levels.
3. Project CAREER has successfully developed the awareness of all administration as to their program goals and activities.
4. Project CAREER is working closely with the Vocational Director to identify key faculty who might be used in expanding materials for Project CAREER students.
5. The administration is aware of the Project CAREER data base

and its potentialities, i.e., task analysis, competencies, and special needs coding.

6. Project CAREER has successfully disseminated information concerning their program to the community.

Lynn English High School

1. Project CAREER has developed a good relationship with central administration and limited support at the building level.
2. Project CAREER has maintained administrative support for the project, not only in physical and idealogical support, but in funds expended.
3. An awareness has been developed of the Project CAREER objectives and materials by all of the feeder schools in the Lynn system.
4. Project CAREER has been successful in disseminating information concerning their programs to the general community.

D. INFORMATION COORDINATION

Lynn English and King Philip High Schools

1. Teachers have been informed of Project CAREER through the departmental visitations and by other means.
2. Counselors have been oriented and informed of Project CAREER, and were utilizing Project CAREER materials and resources.
3. Students were aware of Project CAREER, particularly the Career Information Center, and many were using the Career Information resources.
4. The general community has been informed by newsletter and through public information activities, i.e., newspaper stories, etc.

E. RECOMMENDATIONS.

We would like to bring to attention two objectives of Project CAREER for 1975-76 that we find have not met the expectations of the Project CAREER staff or ours.

1. Many of the teachers to date have not been able or desireful of making the link between career objectives and career skills with their academic classroom curriculum plans, i.e., in science, math, English, etc. Very little progress has been made in relating career objectives to the formal curriculum objectives in academic classrooms. The correct modality for moving in this direction may not be available at this time and the project should give heed.
2. There has been an absence of a formalized document of the events, progress, failures, etc., that would permit another person to replicate the project in another setting. Fragmented pieces exist of the ongoing detailed analysis of the process through which one would begin to develop a model for a change agent; however, the lack of such a manual must be addressed fairly immediately before the experience from this initial year is lost.

A major accomplishment of the year is that both school systems see Project CAREER as a valuable resource and wish to continue and expand the project's involvement next year. As we indicated at the beginning of the report, this is only a brief summary of our findings, and a more complete report will follow, detailing the objectives and the degree of success that Project CAREER has had in attaining them at this point. It is, however, our considered and

unanimous opinion that sufficient progress has taken place to warrant the continuation of Project CAREER's endeavors in these two schools for the coming year. While cost-effective analysis is always a difficult situation, and we will not attempt it, we feel that significant changes in student life and student opportunities both directly and through teacher and counselor involvement is obvious. Based upon these observable facts and our session with the Project CAREER staff concerning their goals and projected activities for next year, we suggest that significantly greater impact can be made, both at the pilot schools and in developing a model that may be utilized in other situations.

Ronald H. Fredrickson
Robert W. Hayes
Robert J. Kates
Thomas F. Harrington, Director

APPENDIX N

PROJECT CAREER

PRE-POST TEST RESULTS

1975 - 1976

Thomas F. Harrington, Ph.D.
July 25, 1976

TABLE OF CONTENTS

PURPOSE:

To assess the impact of Project CAREER's curriculum - guidance program in two school systems - a pre-post test research design was utilized. The design also established the use of an experimental and control group within each school. The two systems are representative of two distinct kinds of communities. They are identified by the Massachusetts Department of Education as an industrial suburb and a regional vocational technical school. This report will detail the selection of the assessment instruments, describe the populations, and cite both pre and post test results and conclusions. Appendix A is a policy statement adopted by the Third Party Evaluators concerning revelation of pre test results to deal with the problem of contamination in post testing.

Three objectives of this evaluation were to assess base line data and assessment of any change for the four identified populations in the following areas:

Decision-making skills
Occupational awareness
Competences possessed

INSTRUMENT SELECTION:

The process of determining the evaluation devices to be used involved three groups of people examining from their different perspectives the range of assessment devices available. It is obvious that Project CAREER had to examine the instrumentation in terms of a proper match with their objectives. The local guidance staff kept in mind both necessary administrative considerations as the length and number of tests to be given and judgements as to whether the test content would be suitable to its own geographic student population. The Third Party Evaluators set forth criteria which would enable the results of the Project to be evaluated in terms of comparison on both a national and state level. Credibility of the instruments was also considered very important. Tests which also had sound theoretical bases and acceptability among vocational development experts were desired. Thus from these needs, the following criteria for instrument selection were established.

Suitable emphases to Project CAREER's objectives
Suitability of content to the grade level of student populations
Current content especially in the Occupational Knowledge area
Availability of national, state, and local norms
Instruments professionally accepted
Test administration features satisfactory

Three instruments were selected. To measure students' decision-making abilities, the instrument used to field test, Deciding, published by the College Entrance Examination Board (CEEB), was chosen. This instrument was developed by CEEB to assess the impact of their curriculum based program of decision-making, which is the largest single program in use

within schools nationally. Since the Deciding program was originally designed to be used in junior high schools, the reading level was adjudged acceptable for these two high school populations.

To measure occupational awareness, the Occupational Knowledge Assessment 1974 Test prepared for the Massachusetts State Department of Education for its statewide Massachusetts Educational Assessment Program was chosen. The rationale for its inclusion is powerful. It is rare when you have a test which is as comprehensive and whose construction is as good as any nationally developed device with statewide norms provided by the State Department of Education of your state specifically geared to each school in your population. Valuable also is the large number of content domains which can be derived and for which applicable norms exist. The purpose of this instrument is to measure how well students know the world of work, i.e., preparation requirements, future manpower trends, types of functions involved in occupations, salary levels, etc.

To measure competences possessed, i.e., self appraisal, goal selection, planning and problem solving, the Career Maturity Inventory (CMI), published in 1973 by the California Test Bureau/McGraw Hill, was chosen. The CMI was authored by John Crites, Ph.D., who is one of the most recognized national authorities in career development. The Competence Test of the CMI measures the cognitive variables involved in selecting an occupation. The competences include: how well a person can appraise his/her job related capabilities, i.e., strengths and weaknesses; how adept one is in matching personal characteristics with occupational requirements; how foresighted one is in planning for a career and how effectively an individual can cope with the problems which can arise in the course of career development. The purpose of the CMI is to "provide both an extensive and intensive inventory of the critical behaviors in mature career decision making and development."

The assessment devices used were:

> Deciding, College Entrance Examination Board
> Occupational Knowledge Assessment 1974 Tests, Massachusetts State Department of Education
> Career Maturity Inventory, California Test Bureau/McGraw Hill

In formulating the total assessment package, the following adjustments were made. In the CMI the Occupational Information Competence Test was substituted with the Occupational Knowledge Assessment Test which provides a much more comprehensive treatment of the subject area as well as affording the availability of local Massachusetts norms. The Deciding test was used for it included features not available in the CMI. The Deciding test did not consist of all multiple choice questions as the other two did and collected direct student input through the use of short essay type questions. More significantly, this test assessed the self ratings of ability in various aspects of the decision-making process. This feature is especially significant to evaluate in terms of

self concept and self competence with those typically non-college bound - business, general, and vocational curriculum populations. More will be detailed on this aspect in the Population Description Section. In the case of Lynn, an additional test was administered in an attempt to specifically tap what the influence of attitudes prevalent in the local community might impact the student body. To achieve this goal, the Attitude Scale of the CMI was chosen. Its objective is to elicit the feelings, the subjective reactions, the dispositions that individuals have toward making a career choice and entering the world of work. Specifically assessed were: Is work seen as a meaningful focus of life or is it viewed as drudgery? How involved and independent is the individual in the choice process? What considerations are made in selecting a career? The content domains relating to Making Career Decisions on the Occupational Knowledge Assessment Test were deleted for these areas were more reliably evaluated in the CMI.

TEST ADMINISTRATION:

The actual administration of the pre test ideally should have occurred earlier. Extenuating circumstances, however, were judged to outweigh the ideal and favored an eight week delay. Namely, three important considerations were deemed critical. First, local involvement of the guidance personnel in the test selection process was desired. The late starting date of the Lynn school system, due to a teachers' strike, precluded their earlier involvement. Second, the use of an experimental and control group in each school, which is an extremely desirable design format, also required considerable planning. This design necessitated the total disruption of the school's normal daily schedule for two days. It needed organization to make accommodations for physical facilities to provide for satisfactory test administration procedures and necessitated time for allowing for the human factors involved in communicating the rationale for this assessment task with both school faculties and students. Third, the identification of a matched control group is a time demanding task requiring detailed organization. The time period in which this process should occur is the late winter and early spring of the preceding school year when student course scheduling typically is done. Even if the organization of this process had been done earlier, the fact that many schools experience a twenty-five per-cent adjustment of the student course schedules within the first three weeks of school would work against an early final selection of "the control group". The task of establishing a control group is also made more difficult with ninth graders who are entering a school for the first time and experiencing a vocational curriculum newly selected but perhaps only tentatively chosen. An additional contamination factor is that the physical plan of one school is brand new with construction still occurring at the beginning of the school year, plus the fact that the administrative leadership is new without long experience in the scheduling process of these students. In reality, the derivation of a truly matched control school population, considering the human factors involved, is extremely difficult to achieve.

The three instruments were administered during early December 1975 (See Appendix B). Provision was made to accommodate the make-up testing of absentees (see Appendix C for testing time schedule).

Post testing took place during the week of June 7, 1976 in both schools. Provision was made for make-up testing. This later retest date than desired was necessitated when the Federal Evaluation Team delayed its on-site visitation.

POPULATION DESCRIPTION

A. King Philip

The experimental and control groups were selected primarily on the basis of comparable academic performance in English. The low level of performance in this fundamental skill was considered characteristic of typically non-college bound students. When the analysis of the demographic information occurred it revealed considerable differences between the two groups. The experimental group was all male mostly enrolled in a vocational exploratory program, while the control group was composed of slightly more females than males. It might be postulated for many of these ninth graders, especially those in the control group, that their curriculum choice was related to a tentative occupational preference area.

The parental backgrounds of the head of household of the control population showed a higher level of education and were more likely to be employed in professional occupations and not as likely to be working in service positions or semi or unskilled jobs. These are two indices typically used in assessing socio-economic status. The experimental group had a greater proportion of their members currently holding a regular paid position. The future aspirations for the experimental group were for mostly work upon graduation., while half of the control population envisioned some form of post secondary education.

Specific Details (in percents)

	Experimental	Control
1. Sex		
Male	100	43
Female	-	57
1. Parental Highest Educational Attainment		
Less than High School	22	10
High School Graduate	27	22
Specialized Post Secondary or Some College	22	27

	Experimental	Control
College Graduate	5	22
Don't Know	24	19
3. Occupation of Head of Household		
Professional	7	16
Managerial, Proprietor, Official	17	19
Clerical	2	3
Technical	10	5
Sales	3	6
Service	10	3
Skilled	27	21
Semi-skilled	10	6
Unskilled	2	-
Don't Know	12	21
4. Student Work Experience		
Regular job at least one day or evening	37	21
Summer job	27	44
No work during the last year	36	35
5. Future Plans		
Attend college	2	32
Get specialized post-secondary training	17	19
Get a full-time job	47	14
Undecided	34	35

B. Lynn

The experimental and control groups were all female and in the tenth grade taking the business curriculum. The parental background of the control population in terms of educational level was more variable than the experimental group with more parents not having attained a high school diploma and a few more parents having graduated from college. The head of household of the control group was more likely to be involved in managerial, proprietory or an official position and unskilled work, while more of the experimental group's parents were professionals and worked in service positions. The students' work experience was almost identical. The future plans of the groups differed only in that the control group aspired to more specialized post-secondary training and a few more of the experimental group perceived college as a viable goal.

Specific Details (in percents)

	Experimental	Control
1. Sex		
Female	100	100
2. Parental Highest Educational Attainment		
Less than High School	21	33
High School Graduate	37	30
Specialized Post-Secondary or Some College	13	5
College Graduate	16	20
Don't Know	13	12
3. Occupation of Head of Household		
Professional	11	5
Managerial, Proprietor, Official	8	23
Clerical	3	2
Technical	-	2
Sales	3	2
Service	8	-
Skilled	26	28
Semi-skilled	5	3
Unskilled	5	10
Don't Know	13	20
4. Student's Work Experience		
Regular job at least one day or evening	32	32
Summer job	21	20
No work during the last year	47	48
5. Future Plans		
Attend college	11	3
Get specialized post-secondary training	26	45
Get a full-time job	26	25
Undecided	37	27

TEST RESULTS

The attitude of the student body was judged to be a critical precondition for having any significant impact upon curriculum change. Table 1 below examines whether any differential change existed after a treatment period. It is noted for King Philip that substantial improvement occurred for the experimental group in its attitude toward school with a decrease from initially 51 percent of the students disliking school to 27 percent currently. The change within the control group was negligible; however, more of these students dislike school currently than those in the experimental group. For Lynn the attitude toward school did not change noticeably for either group and both groups' current attitude toward school is approximately the same.

Table 1
Feelings Toward School by Percent

	King Philip				Lynn			
	Control		Experimental		Control		Experimental	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Like School	35	41	20	37	47	43	45	42
Neutral	32	27	29	36	33	37	37	34
Dislike School	33	32	51	27	20	20	18	23

Another measure of change in student behavior was the number of times that students discussed their career plans with a guidance counselor during the school year. Table 2 displays these results. First, there was greater involvement in career planning among the experimental group than occurred with the control group. Second, the King Philip experimental group showed a far more substantial level of involvement in the career counseling process.

Table 2
Frequency of Career Counseling by Percent

	King Philip				Lynn			
	Control		Experimental		Control		Experimental	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
None	55	68	78	34	72	55	81	60
Once or Twice	40	22	17	42	15	33	8	29
Three Times or More	5	10	5	24	13	12	11	11

The Lynn school system desired another measure of student attitude toward work. Table 3 reports the scores on the CMI Attitude Inventory and shows that a change did occur for the experimental group in an improved disposition toward making a career choice and entering the labor force. The scores went from the 28th to the 52nd percentile on post testing for the experimental group; whereas, for the control group the change went from the 39th to the 42nd percentile on post testing. The CMI Attitude Inventory scale is a measure assessing two major problem areas in choosing an occupation with low scores reflecting indecision and unrealism. The initial level of the pre-test scores of both the control and experimental groups is suggestive of "less socio-economically favored adolescents."

Table 3
Lynn CMI Attitude Raw Scores

	Pre	Post
Control	X33.5	34
	SD 4.5	4.5
Experimental	X31.5	35
	SD 5.5	5.0

Table 4
Selection of New Occupational Titles at King Philip by Percent

	Listed Same Occupations	Named One New Occupations	Named Two New Occupations	Listed All New Occupations	Choices Indicated Focus by Elimination
Control*	8	30	38	17	5
Experimental	12	34	34	15	5

*2 percent indicated no occupations on post-testing

Table 4 shows the percent of change during a six-month period in the number of new occupational titles listed for "possible life work." The procedure was to ask each person on two separate occasions to list three occupations that he/she thought about entering. The table shows a substantial amount of quantitative change, especially in the King Philip experimental group if you consider this group as tentatively having selected a vocational or technical area of occupational preparation. Examination of the actual job titles, however, shows a qualitative change which is most desirable. Post-testing revealed a decline in the number of students indicating broad curricula areas as automotive and carpentry and a significant increase in the number of actual occupational job titles. This focusing on viable post-training occupational job opportunities matches the overall Project's objectives. On the post-test there was a 44 percent increase in the overall number of occupations listed for the experimental group. Illustrative of the newly selected eighteen occupational titles are: refrigerator repair, draftsman, bulldozer operator, cabinet

maker, farmer, plumber, boat mechanic, Peace Corp worker, motorcycle mechanic, tool and die maker, oceanographer, diesel mechanic, and auto body repairman.

While substantial change occurred also for the King Philip control group when they listed their occupational aspirations, the change was of a different nature. First of all, there was a 5.5 percent decrease in the number of occupational titles listed in the post-testing situation. Second, the range of the new nineteen occupations listed was very diverse, covering many career clusters, for example, plumber, fabricator, naval architect, policeman, telephone repair, x-ray technician, recreational therapist, model, photographer, parole officer, guidance counselor, travel agent, store assistant, record keeper, and public relations. Thus, the shift in the number of occupations deleted on the post-test for the control group was greater than the experimental group, perhaps indicative of a larger degree of uncertainty for the control group.

Table 5
Selection of New Occupational Titles at Lynn by Percent

	Listed Same Occupations	Named One New Occupations	Named Two New Occupations	Listed All New Occupations	Choices Indicated Focus by Elimination
Control	13	53	20	7	7
Experimental	17	36	28	8	11

The Lynn population, as was true with King Philip, experienced considerable change in the types of jobs that they were considering. Overall the quantity of actual job titles selected by both groups was approximately the same on post-testing. The control group generated a ten percent gain in the overall number of occupational titles in comparison to six percent for the experimental group. The main significant difference was a qualitative nature. While on pre-testing a non specificity existed for the experimental group's work preferences as: work with teenagers, help disabled people, airlines, telephone company, on post-testing viable occupational titles were generated as: social worker aide, receptionist, job interviewer, child care center worker, computer operator, and psychologist. The current list of occupational titles for the experimental group had 31 percent new jobs listed, while the control group generated only 16 percent new occupational titles. The number and quality of occupational titles not relisted on post-testing was comparable for both groups.

The various skills and abilities involved in making "important decisions" are set forth in Tables 6 and 7. Inspection of both tables reveals that first, the control groups in pre-testing rated themselves superior to the experimental groups in every aspect of decision-making, second, the experimental groups made the greatest overall change in decision-making; and third, the experimental groups' rate of development was superior to the control groups in each of the decision-making skills. In each group a substantial number of students did not know sufficient information about themselves to rate their abilities and consequently left some of the rating blank. These were considered as "Don't Know."

Generalizations are that a re-evaluation of unrealistically high perceptions of abilities occurred in the post-testing for the King Philip control group, while the King Philip experimental group and both Lynn groups expressed greater self-confidence in every aspect of their decision-making skills in the post-test.

Table 6

Major Components in Decision-Making for King Philip by Percent

	Excellent	Very Good	Good	Fair	Poor	Don't Know
I. Know My Personal Values						
Control Pre	11	46	27	5	-	11
Post	8	33	40	8	2	9
Experimental Pre	-	32	32	10	-	26
Post	5	24	54	7	-	10
II. Ability to Use Information						
Control Pre	14	35	32	8	2	9
Post	6	25	46	13	2	8
Experimental Pre	10	27	29	34	-	-
Post	-	27	51	10	-	12
III. Ability to Consider the Risks						
Control Pre	6	30	46	3	2	13
Post	11	32	30	17	2	8
Experimental Pre	2	17	37	12	3	29
Post	2	24	54	10	-	10
IV. Ability to Develop Alternative						
Control Pre	8	27	37	8	-	20
Post	9	30	35	14	2	10
Experimental Pre	12	15	34	7	-	32
Post	7	22	56	3	-	12
V. Ability to Develop Clear Personal Objectives						
Control Pre	13	25	30	8	2	22
Post	7	30	38	11	3	11
Experimental Pre	5	17	37	12	29	-
Post	2	24	54	10	-	10

Table 7
Major Components in Decision-Making for Lynn by Percent

	Excellent	Very Good	Good	Fair	Poor	Don't Know
I. Know My Personal Values						
Control Pre	2	30	35	25	3	2
Post	10	35	37	18	-	-
Experimental Pre	2	16	32	24	-	26
Post	-	16	55	29	-	-
II. Ability to Use Information						
Control Pre	5	30	35	28	-	2
Post	7	33	27	33	-	-
Experimental Pre	-	13	34	27	-	26
Post	-	10	66	21	-	3
III. Ability to Consider the Risks						
Control Pre	5	35	35	18	-	7
Post	12	23	47	18	-	-
Experimental Pre	3	18	42	10	3	24
Post	3	21	55	16	-	5
IV. Ability to Develop Alternatives						
Control Pre	7	23	30	28	-	12
Post	2	28	45	25	-	-
Experimental Pre	-	8	45	21	-	26
Post	-	16	60	18	3	3
V. Ability to Develop Clear Personal Objectives						
Control Pre	7	28	20	33		12
Post	2	25	35	35		3
Experimental Pre		11	34	24		31
Post		18	58	13		11

Tables 8 and 9 report the pre-post findings on four measures of competence in career development. No substantial change is noted after a six-month period on any scale in either population. An obvious significant difference exists between the King Philip experimental and control groups' performance in both the pre- and post-testing. The Lynn populations are shown to be comparable performing groups both on the initial evaluation and the late Spring assessment.

Table 8
Career Maturity Inventory - Competence Tests for King Philip
by Mean Raw Score

	Control		Experimental	
	Pre	Post	Pre	Post
Self Appraisal	11.4	11.8	7.0	7.8
Goal Selection	11.2	12.0	7.8	7.2
Planning	11.2	11.8	7.2	6.6
Problem Solving	9.0	8.6	5.8	5.6

Table 9
Career Maturity Inventory - Competence Tests for Lynn
by Mean Raw Score

	Control		Experimental	
	Pre	Post	Pre	Post
Self Appraisal	12.8	11.4	12.2	11.2
Goal Selection	11.2	11.0	10.8	10.8
Planning	10.8	10.2	10.2	10.6
Problem Solving	10.0	9.6	9.6	9.6

Local and national norm tables are presented in Tables 10-13 for the CMI - Competence Test. The percentiles presented for the two populations are the results of the post-testing, since they were felt to have the most meaning at this time. The King Philip control group exceeded the performance of the national norms in all four tests, whereas the experimental group was below the national average performance. The performance of both Lynn groups was superior in the area of Problem Solving. Examination of the item analysis would indicate a level of self sufficiency and confidence in risk taking and a determination that if one wants something, one works harder at the task. In the author's experience this sometimes unrealistic optimism has characterized low socio-economic populations.

Table 10

CMI - Knowing Yourself (Self Appraisal) - Percentiles

Raw Score	King Philip Control	King Philip Experimental	Nat'l. Ninth Grade	Lynn Control	Lynn Experimental	Nat'l. Tenth Grade
20						99
19	99		99	99	99	97
18	98		96	97	97	94
17	93		92	94	92	87
16	85	99	88	92	89	77
15	74	95	83	87		
14	68	90	75	74	84	56
13	57		65	72	78	49
12	50	85	54	69	63	41
11	42	82	44	49	52	35
10	36	80	36	37	36	30
9	28	73	30	24	28	27
8	20	63	24	19		23
7		51	18	14	[illegible]	19
6	14	36	14	9	10	15
5	11	19	10		7	11
4	9		6	2		8
3	3	17	3			5
2		9	1		2	3
1		2	1			1
0						
N	63	41	261	40	38	336
Mean	11.8	7.8	11.1	11.4	11.2	12.1
SD	5.2	4.8	4.2	3.4	3.6	4.8

Table 11

CMI- Choosing A Job (Goal Selection) - Percentiles

Raw Score	King Philip Control	King Philip Experimental	Nat'l. Ninth Grade	Lynn Control	Lynn Experimental	Nat'l. Tenth Grade
20			99			99
19	99		98	99		97
18	98		95			92
17	95		91		99	86
16	85		83	97	97	78
15	79	99	74	92	92	68
14	69	97	66	87	81	58
13	60	95	59	79	76	51
12	50		53	67	65	47
11	39	90	48	49	55	43
10	33	85	47	42	47	39
9	26	75	45	19	39	35
8	22	63	42		23	32
7	14	53	39		10	29
6	7	43	34	12		
5	4	24	26	7	7	21
4			18		4	16
3		19	10	4		11
2	1	12	5			6
1		2	3			3
0			1			1
N	63	41	166	40	38	319
Mean	12.0	7.2	10.1	11.0	10.8	11.1
SD	4.8	3.4	5.5	3.2	3.2	5.6

Table 12

CMI - Looking Ahead (Planning) - Percentiles

Raw Score	King Philip Control	King Philip Experimental	Nat'l. Ninth Grade	Lynn Control	Lynn Experimental	Nat'l. Tenth Grade
20						
19	99		99		99	99
18	93		96	90		95
17	90		92	97	97	88
16	84		89		92	81
15	77	99	83	87	86	75
14	69	95	77	84	78	70
13	61	92	72		73	64
12	57	87	69	74	65	58
11	46	85	67	62	52	53
10	39	82	63	57	44	49
9	30	80	59	44	42	46
8	23	70	55	34	34	42
7	14	63	50	27	26	38
6	12	53	44		21	33
5	9	41	35	14	13	27
4	4	34	24	9		21
3	1	24	15	4	2	13
2		12	9			7
1		2	3			3
0			1			1
N	63	41	156	40	38	263
Mean	11.8	6.6	8.4	10.2	10.6	9.9
SD	4.0	3.6	5.3	4.0	4.0	5.6

Table 13

CMI - What Should They Do? (Problem Solving) - Percentiles

Raw Score	King Philip Control	King Philip Experimental	Nat'l. Ninth Grade	Lynn Control	Lynn Experimental	Nat'l. Tenth Grade
20						
19						
18						
17					99	99
16			99	99		96
15	99		98	94		93
14	96	99	96	89	97	90
13	90	97	92	82	92	86
12	82		87	72	78	80
11	73	95	80	64	57	74
10	65	92	75	62	52	69
9	60	90	69	52	42	64
8	46	87	60	47	34	57
7	39	80	54	27	23	50
6	31	63	46	12	21	43
5	22	51	35	9	18	35
4	15	34	23	7	13	26
3	9	24	13	4	7	18
2	3	14	6		2	11
1		4	2			5
0		2				1
N	63	41	140	40	38	253
Mean	8.6	5.6	7.2	9.6	9.6	7.5
SD	3.4	2.8	3.8	3.4		4.5

The pre- post-testing results on the Massachusetts Occupational Knowledge Assessment Test are reported below. Tables 14 and 15 report the median percentage of students selecting the correct answer for the questions in each of the content domains listed. For comparison purposes the Massachusetts Assessment Program classified each school district within the state by Kind of Community (KOC). Lynn was classified as an Industrial Suburb and King Philip as a Residential Suburb. Each community was compared to its proper norm group by location BUT NOT AGE. The KOC's available are only for 17 year olds. King Philip should be considered as 14 year olds and Lynn as 15 year olds in making comparisons. It is expected that one's knowledge of the world of work increases with age.

Table 14
Content Domains for King Philip by Median Scores

	Control		Experimental		
Background Information	Pre	Post	Pre	Post	KOC
Tools-Objects-Concepts	49	41	41	37	69
Occupational Trends	41	42	54	39	41
Satisfaction Derived from Work	22	24	20	22	35
Entry Salaries	10	5	10	12	13
Vocational Areas	64	69	66	58	76
Job Requirements					
Occupational Levels and Education	22	24	25	37	39
Training Programs for Occupations	43	52	30	32	63
Abilities, Interests and Occupational Levels	35	38	29	32	50
Aptitudes and Skills	58	54	35	38	60
Knowledge of Mathematics	67	65	63	63	77

At King Philip increased scores were obtained in six occcupational knowledge content domains for both populations, as noted in Table 14 above. In Table 15 below the Lynn experimental group achieved increases in four occupational knowledge areas, whereas the control group experienced increased scores in only two content domains.

Table 15
Content Domains for Lynn by Median Scores

	Control		Experimental		
Background Information	**Pre**	**Post**	**Pre**	**Post**	**KOC**
Tools-Objects-Concepts	45	37	53	45	61
Occupational Trends	42	36	45	40	40
Satisfaction Derived from Work	22	17	29	21	43
Entry Salaries	7	5	3	11	12
Vocational Areas	60	56	53	71	72
Job Requirements					
Occupational Levels and Education	16	31	28	23	37
Training Programs for Occupations	50	42	38	45	58
Abilities, Interests and Occupational Levels	32	32	29	32	45
Aptitudes and Skills	42	37	42	34	53
Knowledge of Mathematics	65	77	76	74	80

DESCRIPTION OF CONTENT DOMAINS

1. Tools-Objects-Concepts. This domain is concerned with the student's general knowledge of basic components as knowing the meaning of technical terms involved in an occupation.

2. Occupational Trends. The need for workers in some occupations change with time, i.e., increasing, decreasing or remaining constant. Job opportunities are better in occupations with increasing needs. This kind of information can be helpful in planning which career to enter.

3. Satisfaction Derived From Work. This scale measures the student's awareness that occupations differ in providing various kinds of satisfaction such as income, influence over others, responsibility for others or independence on the job.

4. Entry salaries. This is an assessment regarding the awareness of the beginning salary levels in a range of occupations.

5. Vocational Areas. This domain concerns itself with the student's knowledge of the classification of jobs by the types of activities performed, i.e., crafts, sales, etc.

6. Occupational levels and Education. This scale measures the student's awareness of the amount of education required for different jobs as well as the range of career options that are available to a person with the kind of education he expects to have.

7. Training Programs for Occupations. A measurement of the awareness that different occupations require various kinds of training.

8. Abilities, Interests, and Occupational Levels. This domain is concerned with the student's understanding of specific combinations of abilities (as verbal and math), interests, and level of prepration (unskilled, semi-skilled, skilled or professional) required for various occupations.

9. Aptitudes and Skills. This scale assesses the knowledge of the kinds of aptitudes and skills that are needed in different jobs.

10. Knowledge of Mathematics. This domain determines whether students know which jobs need general or advanced mathematical knowledge.

CONCLUSIONS

These results indicate that it is possible to bring about change with a group of students who are not apparently overtly motivated toward school and whose poor school attending behaviors exceed the norm for their respective communities (See Appendix D). These findings also show that when a program is offered to students that meet their needs, positive attitudes toward education and training do develop. Project CAREER's involvement in both schools with selected populations demonstrated that greater focus in the selection of an occupation resulted from specialized training. Project CAREER's training also produced greater self-confidence in an important life coping skill - decision-making - with a group of students whom the teachers at Lynn unanimously described as consistently neglected by the school system. Also following the recommendations of such nationally recognized experts as Marland, Perrone, Herr, and Cramer for evaluating Career Education programs with measures as the CMI Attitude Scale, these findings revealed an attitudinal change did occur within the experimental group tested.

The Deciding test is one which reflects more student perception and is best conceived in terms of assessing necessary pre-conditions for student motivation. The CMI - Competence Test measures more comprehension, synthesis of facts, and implementation of the process which may account for the lack of any change occurring on these tests at this time. The CMI reading level and testing format of a case situation followed by correct ordering of priorities or steps to achieve a goal or objective may be too difficult a task for the King Philip experimental group. Separate analyses of both populations' data examining only the lowest and highest quartile groups with their performance on post-testing revealed that low achievers were consistently low in their performance, while high achievers were very variable in their performance. The author

suspects however basic cognitive ability to be more of a factor with the low CMI achievers, while non-cognitive factors are precipating causes in the variability of the high achievers' performance.

Effective career development requires the knowledge of factual material and the sequencing of this information in order to attain a planned objective. It may be necessary that for some of the student body to be able to comprehend and make use of the occupational material presented, differential teaching methodologies will be required with the low achievers and also in those cases where non-cognitive variables are suspected impeding performance.

The Massachusetts Occupational Knowledge Assessment Test revealed in those curriculum areas where Project CAREER placed emphases change occurred. The benefits of the Occupational Resource Centers (ORC)., materials and simulation techniques utilized did have an impact upon students. The availability of the ORC and career materials cannot help but benefit other non Project students who also come in contact with the resources.

Most importantly these findings make available base line data to Project CAREER which were heretofore unavailable. The studying of these results should help the Project plan more pointedly in those areas where greater emphases is desired for this forthcoming year. The current level of awareness of various occupational knowledge areas has been assessed, which also will enable the planners to estimate how much effort will be needed to be invested to bring students up to a desired level of occupational competency.

Another year will be beneficial in better assessing whether extended treatment or at least a full-year school program, which was impossible this year, will achieve better results.

APPENDIX A

Appendix A

Policy
on
Disclosure of Test Results

The results of the pre testing will be communicated to the Project in terms of only total and major sub scale scores in order to minimize error contamination in post testing. Item analysis will be made available at the time of the final report.

APPENDIX B

MEMORANDUM

TO: All Faculty Members

FROM: Alvin Tagney, Principal

DATE: December 1, 1975

Project CAREER, an activity of the Massachusetts Department of Education, is working with several schools across the state to help them develop career education systems which involve both curriculum and guidance programs.

English High School is one of two Massachusetts schools in which Project CAREER is helping develop a federally-funded Occupational Competence Access Project (OCAP). As a result of this program, we hope to help our students to develop better awareness of their skills, to better understand the "world of work", to improve their saleable skills and to be able to make more realistic career decisions.

In the first stage of this three-year project, a group of teachers and counselors at English High School will be involved this year with a targeted number of students, using both classroom and guidance resources. Ultimately, it is planned that OCAP will reach all students and faculty at English High School

On Tuesday, December 9 and Thursday, December 11, a group of students will be given career awareness surveys, in order to help determine areas of greatest student need for the OCAP program.

Attached is a list of students who will, therefore, be absent from your classes on December 2 and December 4.

List "A" will be absent from classes on December 9 until sometime during fourth period and on December 11 will have lunch 5A and will be absent from afternoon classes until sometime during the seventh period.

List "B" will have lunch 5A on December 9 and be absent from afternoon classes until sometime during 7th period and again on December 11 (Thursday morning) until sometime during fourth period.

In addition, there will be a brief (no longer than 15 minutes) explanatory meeting of the entire group in the auditorium, on Wednesday, December 3 from 1 - 1:15 pm.

We apologize for the inconvenience to your classroom activities and appreciate very much your cooperation.

APPENDIX C

Third Party Testing

	Instrument	Approximate Time
A.	Occupational Knowledge Assessment	40 Minutes (maximum)
B.	Decision-Making	40 Minutes (maximum)
C.	Career Maturity Inventory	
	1. Knowing Yourself	20 Minutes
	2. Choosing a Job	20 Minutes
	3. Looking Ahead	20 Minutes
	4. What Should They Do?	20 Minutes
	5. Attitude Survey	20 Minutes
D.	Harrington-O'Shea Career Survey*	40 Minutes

* This will be given only to the 70 OCAP students.

TOTAL:

1. 3 hours, 40 minutes for OCAP students (5½ class periods).
2. 3 hours, (4½ class periods) for control group.

APPENDIX D

M E M O R A N D U M

TO: Greg Martin

FROM: Jill Cohen

SUBJECT: Comparison of Statistics - King Philip, Lynn English

DATE: June 25, 1976

Listed below are the statistics for the tenth grade students in Lynn and the ninth grade students at King Philip. These statistics do not include the students participating in the OCAP program. Topics reviewed are the total number of days dismissed, tardy and absent.

LYNN			KING PHILIP	
		DISMISSED		
Students	487		Students	258
Days Dismissed	759		Days Dismissed	148
Average	1.27 Days		Average	.519 Days
		TARDY		
Students	487		Students	258
Days Tardy	3951		Days Tardy	833
Average	8.55 Days		Average	3.59 Days
		ABSENT		
Students	487		Students	258
Days Absent	6124		Days Absent	2439
Average	12.3 Days		Average	9.11 Days

Listed below are the students from both schools that are participating in the OCAP program.

Students	51	Students	56
Days Dismissed	77	Days Dismissed	9
Average	1.26 Days	Average	.16 Days

TARDY

Students	51	Students	56
Days Tardy	542	Days Tardy	330
Average	10.32 Days	Average	5.50 Days

ABSENT

Students	51	Students	56
Days Absent	851	Days Absent	719
Average	16.35 Days	Average	12.47 Days

THIRD PARTY POST-ASSESSMENT REPORT

of

PROJECT CAREER

at

KING PHILIP REGIONAL HIGH SCHOOL
WRENTHAM, MASSACHUSETTS

and

LYNN ENGLISH HIGH SCHOOL
LYNN, MASSACHUSETTS

Prepared by

Ronald H. Fredrickson, Ph.D.

June 14, 1976

Project CAREER Third Party Post-Assessment

Purpose

The purpose of this final assessment report is to describe differences in the attainment of Project objectives as compared to pre-assessments made at King Philip on October 31, 1975 and Lynn English High School on November 3, 1975. The focus of comparison between pre and post-observations was not on the staffs of the repective schools but on Project CAREER staff and the accompaning delivery system. The basic sources of the data were from interviews and personal observations at both sites. The Project objectives were ambitious especially in light of the fact that at one school, opening was delayed for construction and the other experienced a teachers strike at the beginning of the school year. It was actually not until the last of October 1975 that the project got seriously underway in delivering services to teachers and students. The exception to this was the workshops for the teachers.

This report then will assess the changes that occurred in both schools over a seven month period.

	Pre-Assess.	Post-Assess.
King Philip Reg. H.S.	October 31, 1975	June 4, 1976
Lynn English H.S.	November 3, 1975	June 9, 1976

Objectives of Project CAREER

The three major objectives of Project CAREER were:

1. Integrate occupationally valid course content throughout the academic disciplines.

2. Establish a comprehensive guidance system incorporating diverse components such as student capability records, cluster awareness information, and assessment-placement factors. (OCAP - Occupational Competence Access Project)

3. Articulate objectives one and two and intertwine all of these in school activities as well as to establish linkages between the school and the community, employment, and institutions of higher learning.

Further enumeration of these objectives is made in the initial proposal and will not be repeated here to avoid redundancy.

Criteria

The ultimate criteria for the attainment of Project CAREER objectives will rest with changes in the students' behavior. While the seven month time period does not include sufficient time to assess behavior following high school

graduation for the students directly involved, students will be interviewed and their reports of the value of experiences provided by school and Project CAREER staff will be used. A certain number of activities and tasks are seen as logically relevant for the eventual attainment of productive employment and education. Progress and involvement in these activities will be assessed as compared to fall 1975 observations. Student and teacher awareness, involvement and evaluation of Project CAREER activities will form the basis of this assessment. Appropriate activities for the Project CAREER model will be identified from the project proposal and from the judgment of the evaluators.

Both of these schools did not start at the same place and after the first year did not end at the same place. Progress has been different. An attempt will be made to allow for this differentiation as the schools in question are uniquely different. Comments about the local implementation of Project CAREER were sought. It was considered crucial that plans be made early for what the school would be doing when the federal funds end two years from now and that plans be made to assume total responsibility of the Project when Project CAREER staff is withdrawn.. Inquiries were made as to administrative support and how the Project CAREER staff was maintaining this support. Special emphasis was placed on the awareness and emergence of a competency oriented guidance service in which teachers, counselors, and career information specialists work as a team. Reactions to inservice preparatory workshops conducted by Project CAREER staff were also sought.

Procedures

Based on the Project CAREER proposal, a standardized interview format was developed. This interview format appears in Appendix (A) and provided a consistent way of collecting personal observations at the pre and post assessment interviews.

Interviews were conducted with Project staff, Dr. John Post, Program Director; Richard Benner, Guidance Coordinator; Diane Hayes, Career Information Center Coordinator-King Philip; and Monica Sullivan, Career Information Center Coordinator-Lynn. Local guidance personnel, teachers and students were interviewed. About 60 percent of the personnel interviewed individually, the rest, mostly students, were done in small groups. The verbal responses were recorded by the interviewer on the standardized format. Verbal statements were verified whenever possible and backup statistics sought.

Personnel interviewed in the Post-assessment at King Philip Regional High School included:

John Young - Counselor

Robert Gieb - Guidance Director

Dan Keleher - Counselor

Two classroom teachers

Ten students.

Personnel interviewed at Lynn English High School included:

Allan Tattle - Counselor

Joan Russell - Counselor

Don Twomey - Counselor

Five teachers

Eight students.

Interviews were conducted by Dr. Ronald H. Fredrickson and Doren D. Fredrickson.

Findings and Recommendations

The remaining part of this report will be divided into four parts: first, a summary chart showing pre and post progress in attaining objectives of the Project by school; second, general observations which are applicable to both schools; third, observations of differences pre and post at King Philip; and fourth, those observations of differences pre and post applicable to Lynn English.

The observations are further divided as appropriate into four categories--instruction, guidance, administration and information coordination. A number of the comments may overlap into more than one category and should be read accordingly. Close attention was given to the guidance component of the Project CAREER program.

The format used in this post-assessment is similar to the pre-assessment report dated November 8, 1975, and should be read in concert. In order to provide a capsule view of the pre and post assessment of the progress toward the three main objectives, a chart is utilized to summarize the findings. Comments made in the narrative section of this report will corraborate these ratings and attempt to explain them. (See chart on the following page.)

PRE AND POST PROGRESS RATING INDICATED BY ARROWS

Project Career Objectives	LYNN					KING PHILIP				
	None	Awareness	Started	Good Start	Accomplished	None	Awareness	Started	Good Start	Accomplished
1. Occupationally Valid Curriculum										
a. Performance objective for each cluster		X→					X→			
b. Student criteria reference measures	X→					X→				
c. Assemble learning activities		X→						X→		
d. Instructional activities for each cluster		X→						X→		
e. Pilot test 3 cluster interdisciplinary courses		X→							X→	
f. Skill outcome exploratory program		X→							X→	
2. Comprehensive Guidance Service										
a. Assemble career awareness materials		X→					X→			
b. Computerized student competencies	X→					X→				
c. Develop Guidance Information System		X→					X→			
d. Facilitate Comprehensive Guidance System		X→					X→			
3. Interphase Curriculum and Guidance with Placement										
a. Conduct study of career education programs in sending districts	X→						X→			
b. Identify programs where coded occupational skills taught	X→							X→		
c. Establish links with employment/higher education		X→					X→			

General Observations of Both Schools

Guidance

1. EXPERIMENTAL DESIGN - SATISFACTORY PROGRESS

Progress has definitely been made with the 70 target students. The 120 matched control students should be listed in Project files and assurances made that they are a matched group. Records will be needed to assess grades, transfers, drop-outs and other information on each of these students.

2. LOCAL STAFF ASSIGNMENT - APPROPRIATE

Both Mr. Tattle and Mr. Young still remain enthusiastic about Project CAREER and serving the target population. The assigned counselors were most supportive of Mr. Rick Benner, Diane Hayes and Monica Sullivan and the value of the Career Information Center (CIC).

3. PROJECT CAREER'S SUPPORT - DEFINITELY IMPROVED

Mr. Benner spending two days a week in each school and the employment of two CIC coordinators assigned to each school made significant impact in the last seven months. It was important that the two schools could rely on Mr. Benner's presence and the model he provided for the counselors in making contacts with academic departments and presentations in the classrooms.

4. and 5. COMPETENCY BASED CAREER GUIDANCE SYSTEM - SOME PROGRESS, STUDENT COMPETENCY FILES - ESTABLISHED

A file has been established for each of the target students which contains Careers and Me sheets, schedules, and for most youngsters the Harrington and O'Shea computer guidance print out. The Career Data Bank which will detail job skills and skill inventories of each student's competencies is still in the infant stage. But definite progress has been made. The files have been established and are located in the Career Information Center where they are maintained by the counselor and the CIC coordinator.

6. CAREER INFORMATION CENTERS (CIC) ESTABLISHED - EXCELLENT PROGRESS

Probably the most striking progress made has been in the establishment of the Career Information Centers. Two well qualified individuals have been employed out of the Project funds to develop and maintain the Centers. Diane Hayes and Monica Sullivan have done excellent work in providing services and information for not only the 70 target students but for all students and teachers in the school. Teacher, counselor and student reaction was most complimentary

and appreciative. These Centers have been established on less than $500 for materials) each and a large amount of free material. The coodinators have been very resourceful in collecting material and advertising their Centers. Both coordinators have conducted orientations to the Center for classes who have visited. More work may be needed to add audio visual material in the form of filmstrips and cassett recordings; also high interest and low reading level material. Using volunteer students as assistants in the Centers is an excellent idea and the students have profited from it and also attracted other students into the Centers. A good start has been made in distributing Newsletters to teachers and parents about the CIC. Accurate, timely career information which is of interest to students is being provided.

7. and 8. CIC PLANNED LOCATIONS - APPROPRIATE
STAFFING AND UTILIZATION - EXCELLENT PROGRESS

There appears to be more use of the CIC at Lynn High School. Much of this has to do with the location off the main corridor near the main entrance of the school and near the guidance counselors. Consideration should be given to locate the CIC in King Philip for frequent drop-in and more immediate referral by the guidance counselors. Involving counselor, teacher, student and administrator on an advisory committee for the CIC might be a fruitful way to establish procedures and services which would involve more counselors and teachers in using the CIC. Since the present coordinators are on Project funds, every effort should be made to gain local monetary input for salaries next year. Every effort should be made now if the present coordinators cannot stay with the schools to identify and train a new person to develop and coordinate the CIC. It is crucial that this person be able to relate to students well and be closer to their age if possible. It does not have to be a professtional but can be a paraprofessional person with some clerical and interpersonal skills and a high energy level for extending the services of CIC. Simply collecting the information is a minor part of the task, but attracting and helping students and teachers and even parents in using the CIC is a critical part of the job description of the CIC coordinator. Frequent guidance department meetings with the counselors and CIC coordinator will facilitate the exchange of information and greatly expand the schools' use of both the CIC and the guidance counselors themselves. An effective CIC in other schools has done wonders for the image of the guidance department with students and teachers.

9. and 10. OCCUPATIONAL INFORMATION AVAILABLE - IMPROVING
INFORMATION ORGANIZED FOR CLUSTER AWARENESS -
IMPROVING

It was very encouraging to see the drastic increase and display of materials about different occupations besides information about colleges to attend. College oriented students need to be very much aware of the careers which are

available and relate to their academic interests. While the printed career information is not organized around clusters, Guidance Pacs are available which are organized on a cluster basis and cross referencing can be done. The files are organized using the Bennett filing system which provides immediate access by alphabetical order with some common clustering. The additions of non-print materials will greatly aid these young people for which reading is more difficult. The Harrington-O'Shea computer based decision making process is very sound professionally and the print-out is very complete and comprehensive. However, based on the students interviewed, they had spent 15-30 minutes going over the print-out which was insufficient. Some of the students had gone to the CIC on their own and reviewed the complete print-out. Most, if not all, students were overwhelmed by the volume of the material and had difficulty in sorting it all out in terms of their next step in their career plan. The use of the summary sheet seemed helpful for many. Perhaps the print-out could be provided in installments following the exploration process. It is recognized that some risks will be taken in reducing the volume of material and the steps included, but perhaps this will be balanced by greater student use and understanding of the information that is provided. It would be helpful if the family could have gone over the print-out with their son or daughter. Maybe this could be done on a trial basis with a small population to test out possible problems in sending them home. The quality of the Harrington-O'Shea statements is good and the interaction is beneficial, but some effort is needed to reduce the size of the print-out and the heavy reading requirement.

Administration

1. LOCAL SCHOOL ADMINISTRATIVE SUPPORT - (TOP LEVEL) GOOD

Administrative support at the Superintendent level still remains strong for both schools. At King Philip the Vocational School Director's office has been moved to be near the Principal's office. The Vocational School counselor's office is now in the guidance suite. Counselors are beginning to share all students - academic and vocational. The support of Mr. Carl Palombo, Deputy Superintendent in Lynn, remains strong. There is a tentative commitment of $500 for the CIC from King Philip Superintendent. There appears to be strong approval for greater integration of the academic and vocational curricula. Greater administrative support and sanction in having the counselors make presentations in classrooms on career choice should be considered. This would appear more advisable for Lynn then King Philip as the Guidance Director at King Philip has already requested direct participation of his counselors.

2. AWARENESS OF PROJECT CAREER WITHIN THE SYSTEM - GOOD PROGRESS

Mr. Benner and the respective CIC coordinators have visited each department in both schools to discuss the CIC and Project CAREER. Two Newsletters have been distributed to the faculty. Introductions have been made of Project staff at faculty meetings. Continual efforts should be made by the Project

director and staff to meet with the principals of both schools to keep them informed and gain their active support.

3. ABILITY TO MEET THE TIME LINES - IMPROVED

The active involvement of the Project staff in establishment of the CIC and employing the CIC coordinator was critical in gaining time lost at the beginning of the school year. Continued coordination and planning by the Project staff is also important this summer so that in September 1976 activities can begin immediately. On site activities of Project staff on a regular weekly basis will be important as objectives for the second year are enumerated and priorities and personnel responsibilities are established.

Instruction

1. INTERDISCIPLINARY TEAMS - SOME PROGRESS

Involvement of the academic teachers has primarily been through the activities of Mr. Benner, Diane Hayes, and Monica Sullivan in making presentations in classrooms on their program Careers and Me. Through this program and orientation to the CIC, extended contact has been made with about 25-30% of the teachers in both schools. Interdisciplinary teams have not been developed as yet although teachers who are directly involved with the 70 target students are frequently contacted especially in King Philip. Excellent progress has been made by the vocational teachers at King Philip in developing occupational skills courses open to all students in the high school. These courses will be increasing from two this year to approximately seven next year. Interdisciplinary cooperation is slow but the efforts of the CIC staff has been most fruitful in laying the foundation for further development in this area.

2. INSERVICE INTERDISCIPLINARY TRAINING - LITTLE PROGRESS

Academic teachers had mixed reactions while vocational teachers responded much better to the training program. Most academic teachers interviewed commented that the inservice training was more for vocational teachers. With some exceptions, the course of study outputs appeared to be limited. In the case of the academic teachers, Project staff may have to provide more actual models, direct leadership, materials and classroom resources rather than having these teachers involved in a range of planning, designing and developing functions. Readiness among the academic teachers for this different instructional approach will require that the Project set more delimited and well defined objectives during future inservice training programs.

3. JOB RESPONSIBILITIES - PROGRESSING

Teachers had communicated during the pre assessment visit that they wanted to know more about what their role was in the Project in terms of concrete tasks. A newsletter especially for the teachers may be useful if it contains sug-

gestions and ideas on how they can implement career education in their respective classrooms. The Project staff should not be hesitant about providing complete curricular packages and units that teachers can use in their classrooms. Their successful use of such materials will probably greatly expand their interest and knowledge of career education and Project CAREER.

4. COMMUNICATION WITHIN THE COMMUNITY - SOME PROGRESS

It was reported that a story appeared in one local newspaper, two newsletters have been printed and Project CAREER was described in one radio program in Lynn. Project CIC staff is planning to cooperate with Mr. Tattle in a Career Night planned for November 1976. A similar activity has been conducted at King Philip. More effort is needed for press releases about activities, and a speakers list for classroom use would be valuable service for the community and the teachers. This could be done by the CIC Coordinator. Direct contact with a major employer, such as General Electric in Lynn might be valuable.

Observations Applicable to King Philip

Administration

. LOCAL LEADERSHIP INVOLVEMENT - PROGRESSING

The top administration and the vocational side of the house is a strong supporter of Project CAREER. More effort is still needed to inform and gain the cooperation of the principal of the academic side of the house. The slowness in gaining this latter acceptance is a characteristic problem of occupational education and not limited to Project CAREER.

Instruction

1. INTERDISCIPLINARY COURSES - EXCELLENT PROGRESS

King Philip has done an excellent job integrating curriculum and students between the vocational and comprehensive sections of their school. The expansion from two to seven occupations skill courses for any student in the schools is very commendable. King Philip will soon be the model program for the state if this progress continues.

2. COMPREHENSIVE STUDENT BODY - PROGRESSING

Homerooms are mixed-vocational and comprehensive students. Counselors are beginning to have students from both sides of the house. There are still some image problems for vocational students. Because of scheduling, most vocational students tend to be in the same academic classes together. It will take a few years to break down the stereotypes of vocational and comprehensive students, but a good start has been made.

3. SKILL OUTCOME EXPLORATORY PROGRAM - PROGRESSING

The Careers and Me program will provide a good basis for the explorations of career information, the assessment of interests and abilities and the scheduling of courses to develop occupational and educational skills. Assistance in the administration of the California Occupational Preference Survey to all juniors and relating these results to material in CIC will be a significant contribution by the CIC coordinator.

Guidance

PROJECT CAREER STAFF INVOLVEMENT - EXCELLENT IMPROVEMENT

The guidance director and his staff were most complimentary about the direct regular involvement of Mr. Benner and Diane Hayes. Their efforts led the way for the Guidance Director to request that each counselor spend one period per week in the CIC and one period per week in a classroom. Except for Mr. Young, these presentations in the classroom by the school counselors are still limited (two or three times per counselor). However, significant progress has been made and the counselors were quick to recognize the value of such experience. The Project staff (Mr. Benner and Miss Hayes) have made presentations in about 20 classrooms. Students interviewed indicated that about 50% of the students knew about the CIC. Student evaluations of the Careers and Me program have been maintained and changes have been made to respond to these student suggestions. One counselor who puts out the Guidance Newsletter is including one page on occupational information. Efforts to place the CIC in the Guidance Suite may be quite advantageous for students and counselors alike. Mr. Young has done an excellent job with the target students throughout the year.

Observations Applicable to Lynn English

Administration

LOCAL LEADERSHIP INVOLVEMENT - PROGRESSING

The Project director's contact with the system and school leadership will pay dividends for local acceptance of the Project. The Project staff should provide tangible material, units, courses of study to the principal and other administrators. The CIC provided direct evidence of the Project's ability to deliver services to students and teachers.

Instruction

1. INTERDISCIPLINARY TEAMS - SOME PROGRESS

Teachers of the OCAP students have had the CIC orientation and Careers and Me presentations in their classes. Since there is limited or no contact with the Vocational School in day-to-day operations of the CIC, the integration of

career information into the classrooms will rest primarily with the academic teachers. A number of teachers were interviewed (contacted in a teacher's lounge) and about 20% said they did not know what the Project was about; most had heard of the Project but had not inquired any further. Most were receptive to personal contact by the Project staff as to making their classes available. The output of the 6-8 teachers who were initially involved in the workshops was minimal according to some teachers interviewed. Certainly more teachers are aware of Project CAREER now than in November 1975.

2. SKILL OUTCOME EXPLORATORY PROGRAM - PROGRESSING

The Careers and Me program has been started and is being developed by the Project staff. It was utilized by one counselor in an evening course. The program is not as yet fully developed to form the basis for inservice workshops for teachers and counselors. A good start has been made. Greater use due to the Harrington-O'Shea computer guidance process may be useful for some students.

3. COMMUNICATION WITH THE COMMUNITY - PROGRESSING

The Project's involvement with Lynn's Occupations Education Coordinator did not materialize as planned. Mr. Tattle has provided some assistance in this area. The Project staff may have to assume more responsibility in this area than originally planned. Lynn continues to have a high unemployment rate, according to counselors: 20%. The expansion of the P.M. program for general students at the Vocational school is critical if Lynn students are to enter the job world some day with marketable skills. Apparently cooperation with another funded project in Lynn for career orientation for grades 7-12 has not materialized.

Guidance

LOCAL STAFF ASSIGNMENT - IMPROVEMENT

The work of Mr. Benner and Monica Sullivan has been excellent. If it had not been for their direct delivery of services, limited progress would have been made. The direct involvement of the counselors in making presentations in classes has not been as successful here as in King Philip. Administrative sanction may be needed to expand the roll of the counselor in career education to reach a large number of students. Mr. Benner's continued efforts two days per week and Monica's full-time and energetic efforts have paid big dividends. It is interesting to note the referral sources of students who have used the CIC at Lynn.

Recommended By	No.	Percent
Counselor	14	16%
Teacher	22	25%
Student's own idea	34	39%
Other	17	20%

Systems Change

A basic thrust of Project CAREER is a change in the school system. A change in role and function of guidance counselors, a change in curriculum to provide integration of career information in the classroom, a change in teaching practices which respond to relevant issues in the world of work and the needs of students for occupatuional skills. If the Project CAREER staff is successful, they will have communicated the model to school personnel, demonstrated how it can be implemented and what is to be gained from such a project, and passed the responsibility for operating the Project on to permanent staff members.

The Project staff has made progress in communicating the purpose and objectives of Project CAREER. However, even though local staff could verbally describe the Project and accept it, it was not until the Project staff demonstrated in actual behavior in the school the role and functions of the counselors and the Career Information Center coordinator that the counselors and teachers began to realize the value of Project CAREER for their students. Teachers and counselors seemed unsure whether Project CAREER would be another fine sounding project or whether it would produce tangible outcomes which could be of concrete assistance to them. The school staff wanted to have something they could implement Monday morning during first period. The credibility of the Project was enhanced by the staff being on the firing line along with the school staff.

This approach to system change seems counter to the notion that one has to take part in developing, organizing and implementing a new idea to assure possession and responsibility for it later. While the final chapter on this project will not be written for two years, experience so far indicates that acceptance and incorporation of Project CAREER ideas will relate to the ready visibility and modeling of the new desired behavior. Agricultural extension learned the principal years ago that when a farmer could see someone he knew adopt a new idea on the farm down the road, he was much more likely to change his way of doing things. Agricultural pamphlets were not enough. If this agricultural extension model is appropriate for changing school systems, it would appear that the next important step would be to identify willing teachers and counselors who are sanctioned by the school administration to also demonstrate these new behaviors. This, hopefully, would be followed by recognition of their improved performance by students, teachers and administrators.

Every system is different and the readiness to change is also different. King Philip is further along in adopting the Project CAREER model. Lynn English does not have ready access to a connected vocational school with qualified instructors and appropriate laboratories and shops. These differences will have to be considered in producing system change.

It may be advantageous in one school system to focus on the guidance counselors as "change agents." In another, it may be a small group of teachers. However, the scope of Project CAREER would appear to indicate that the respective guidance departments should be exerting leadership next year in further implementation of Project CAREER. This leadership will probably not occur without the strong support and guidance of Project CAREER staff.

SUMMARY

Excellent progress has been made in establishing Career Information Centers and employing and training coordinators for them. Guidance counselors are beginning to visit classrooms and make presentations on career exploration. The model has been demonstrated by Project staff. Seven Occupational Skills courses will be available at King Philip next year - a 300% increase in such courses. Students and teachers are much more informed about Project CAREER now than in November 1975. More attention is needed to expand the number of academic teachers involved at both schools. Rapid progress has been made in certain areas in the last seven months.

INTERVIEW FORMAT

For

PROJECT CAREER THIRD PARTY EVALUATION

Objectives A & D — Dr. R. Fredrickson

Person Interviewed _____ Date _____

Position _____ School _____

1. What is your understanding of the purpose of Project CAREER in your school?

2. To what extent do you think students in this school can identify their educational and occupational competencies?

3. Do you think the teachers are interested in interdisciplinary course of study relating their courses to occupational preparation?

   English

   Social Studies

   Science

   Mathematics

4. Do members of your school view occupational preparation as a plan of college preparation?

Students	YES	NO	DON'T KNOW
Guidance Counselors	YES	NO	DON'T KNOW
Parents		NO	DON'T KNOW

5. What do you see as the chief assets of a Career Data Bank on each student's accomplished prerequisite learnings and occupational skills?

6. A competency-based guidance system helps students identify exploratory experiences common to occupational clusters, providing a wide variety of information, and guide students toward areas where they show greater expertise.

What plans have been made to accomplish this?

A. To what extent is the Guidance staff receptive and anxious to implement the competency-based Guidance System?

B. What do you see as major programs in the guidance component?

7. Are the students and teachers aware of the objectives of Career Education?

Students

Teachers

8. Is administrative support given? How?

9. What is the time schedule for full implementation of Project CAREER.

Guidance

A. Career awareness

B. Coordinating learning processes with tentative career decision making

C. Acquisition of skill inventory

Instructional

A. Have the teachers been meeting, workshops held, units developed?

B. Have the teachers used Project CAREER's information network of performance objectives?

10. What discussions or contacts have been held with employers in the community?

Other Comments:

PROJECT CAREER THIRD PARTY EVALUATION

Student Interview Format

Student Interviewed_____ Date_____

Grade_____ Male____ Female____ School_____

1. What have you heard, if anything, about Project CAREER?

2. What courses are you taking in school?

3. What courses, if any, have you taken this year that were occupationally related?

Title of Course	Instructor

4. What have been your reactions to such occupationally related courses?

5. Has a guidance counselor worked with you in assessing your occupational skills and making career plans?

   Who was the counselor?

   How was it helpful?

6. Would you see career education as just for those not going on to college?

7. How many of your teachers have spoken about occupations which relate to their subject?

   Which subjects?

8. How have you used the Career Resource Center?

What has been your reaction?

9. How have you used the computerized guidance system?

What has been your reaction?

10. What are your career plans?

11. Is there additional information you might add which points to ways your high school could be improved?

APPENDIX O

First Year Site Visit Report

Title: Occupational Competence Access Project (OCAP)

Project Number: 502A150002D
Grant Number: G310-75-0010

Grantee: Massachusetts State Department of Education
2 Sun Life Park
100 Worcester Street
Wellesley Hills, MA 02181

This report is made subsequent to an onsite visit May 26-28, 1976 to Boston, Massachusetts. The evaluation team was comprised of:

Ms. Susan Klaiber, Part D Project Director
Somersworth, NH
Mr. Pasquale Di Lego, Part D Project Director
Burlington, VT
Ms. Annette Miller, Program Assistant, U.S.O.E.
Washington, D. C.

On the last day, the team was joined by Mr. Ken Franks, Contracts Officer, U.S.O.E., Boston, MA.

PURPOSE OF SITE VISIT: To determine funding for second year of a possible three-year project.

DESCRIPTION OF SITE VISIT:

Contact People:

Massachusetts Department of Education:

John Post, Jr., Director, OCAP
Gregg Martin, Associate Director, OCAP
Richard Benner, Associate Director, OCAP
Vincent Lamo, Director, Center for Occupational Education
David Cronin, Director, Occupational Education
Patrick Weagraff, Associate Commissioner, State Dept. of Education

Third-Party Evaluators:

Tom Harrington
Bob Hays

King Philip Regional School:

William Costa, Superintendent
John Robbin, Vocational Director

English High School:

Fred Cole, Coordinator of Federal Programs
Allan Tuttle, Guidance Counselor
Carl Palambo, Principal

PROGRESS ON MEETING TIMELINES: This project represents a joint effort among the King Philip Regional Vocational/Technical School in Wrentham, English High School in Lynn, and Project CAREER at the State Department of Education.

At King Philip, the target group is composed of ninth grade students, and at English High School, the target group is tenth grade students. At each school there are 65 students in the "experimental" group and 65 student in the "control" group.

The false start at Classical High School in Lynn, occasioned by a fire and a subsequent teachers' strike, resulted in a switch of project activities to English High School and therefore, in a lesser level of development, in English High than in King Philip. English High School, however, has some strengths such as a better balance of coeducational involvement and a better balance of minority involvement that makes it almost an essential complement to the King Philip site.

Each school has established a Career Information Center (CEC). This center has a library of hundreds of handbooks on trades and professions that outline qualifications, provide job descriptions, discuss salaries and benefits and offer reference sources and cross indexes for further investigation. At King Philips the CEC is located in the school library. At English, it is located in the guidance office.

The evaluation team cited the following aspects of the OCAP project as being outstanding:

1. The OCAP project staff has been very sensitive to the area of process documentation. This documentation, along with measures of student outcome as the project matures, will contribute greatly to the transportability of the cluster curriculum activities being undertaken here both to other districts in Massachusetts as well as to interested States and districts across the country. These aspects coupled with sophisticated plans for the dissemination of materials and outcomes is to be commended.

2. Sound planning strategies have been developed for the expansion of the project activities into the 7th and 8th grades at the King Philip site and to additional administrators, counselors, and teachers in both sites during the second year of the project. This will contribute positively to what may currently be termed a weakness in program articulation. In addition, new students will be added each year as the current participants move on to a higher grade level. Students who progress on to the next levels will be followed with continuing evaluation measures.

3. Administrators and teachers at the King Philip site have been able to build, very effectively, on already-established curriculum efforts to install individualized and continuous progress programs that stress accountability for the level of skill competency achieved.

4. At the English High site, by comparison, the project has been quite successful at initiating innovative curriculum practices within the overall career education effort. This success is evidenced by the enthusiastic participation of the teachers in developing their own creative ideas and lesson plans for the delivery of career education activities.

5. The enthusiasm, commitment and dedication of the experienced staff which has been assembled for Project OCAP is commendable.

6. The degree of visibility being given the OCAP project both at the local sites and in the Massachusetts Department of Education will contribute not only to its future success, but also to the ultimate use of its results by other districts across the State. Similarly cooperative relationships being maintained between the project, the business/industrial community and the public institutions in the area being served will likely contribute greatly to the continuation of project activities past the period of Federal funding.

7. The project has been so successful in building on previous research and development work and on the previous practices of the local schools that it is frequently difficult to isolate which aspects of the current educational environment are attributable to the project and which are not. While this presents problems for evaluators, it is in the decided best interest and intent of the Part D Exemplary Projects program.

While a two-day visit provides limited observational opportunities, the evaluation team felt that the OCAP project will want to give attention to strengthening the following aspects of the project during the second year:

1. The evaluation team notes that only 65 students are identified as being in an experimental group in each of the two project sites. The admission of project staff that services to the same number of students in the two control groups are almost equal does not alleviate a concern of the team for (1) an expenditure of approximately $171,818 per year is a high level of funding for only 130 experimental group students and (2) if services across the experimental and control groups are almost equal, the project will have problems in measuring significant differences in student outcome that can be attributed to the project. If these observations are correct, the team is concerned that the project staff take steps to (a) increase the numbers of students, teachers, counselors and administrators in the experimental group; and (b) seek to identify a group of students either in the project sites or in other comparable communities in the State who can be tested as a control group and who have not been afforded the services of the project.

2. The evaluation team notes that of the eight positions (professional and clerical) to which the Federal funds of this project make a contribution, the five professional positions represent four men and only one woman, while the four paraprofessional (library aides and secretarial/clerical) positions are represented by four women. This staffing pattern appears to reflect an imbalance in hiring practices; which, depending on the ability of the grant award recipient to document recruiting and selection procedures used, may represent a violation of Title IX of the Education Amendments of 1972. It is urged that the State-level administrators assuming responsibility for this grant award review the provisions of Title IX in this respect. If, after a thorough review, it appears that inadequate documentation exists of the recruitment and/or consideration of qualified women for professional positions, then it is requested that steps be taken to correct the currently imbalanced staffing ratio.

3. While not necessarily related to the staffing imbalance within the project itself, the evaluation team also notes that they were advised that the King Philip Regional School enrolls a very low level of both women and minorities; and that, as a result, there is quite an imbalance in the involvement of these groups in the Part D project. While the low level of minority enrollment may be attributable to the ethnic composition of the communities being served, this cannot be said to be true of the enrollment of females. Therefore it is requested that the responsible State administrator for this grant award review both the recruitment and enrollment practices of the school with respect to Title IX as well as the affirmative action undertaken by the Part D project staff to recruit a higher level of women and/or minority students who should receive the benefits of the Federal funds made available for use at the King Philip Regional School.

While the evaluation team cited only the three areas listed above to which, in their perception, the project needs to turn attention, the U. S. Office of Education calls to the attention of the project staff the following provision of the funding guidelines under which the project was funded and the proposal response to that provision.

The guidelines for the Part D program in 1975 called for the articulation of the occupational cluster programs with existing career education programs at the elementary, junior high, and postsecondary levels to the end that a young person's transition from one level to the other is facilitated.

The proposal from Massachusetts which was funded by the U. S. Office of Education, on page 12, (Part IV Continued) states as follows:

"Goal 1: To facilitate student access to occuptional opportunities through the provision of a guidance system which incorporates student capabilities.

"Objective A - Develop an assessment - cluster placement system which will aid students in making tentative career choices and facilitate placement in the Skill Outcome Exploratory experience.

"1. Assemble career awareness materials which complement existing elementary and junior high programs.

"2. Assemble test batteries to measure interests and abilities relative to the proposed exploratory clusters.

"3. Coordinate learning processes for career decisionmaking.

"4. Apply materials developed in 1-3 on sample populations."

The U. S. Office of Education, then, expects that the project will, in fact, "assemble career awareness materials which complement existing elementary and junior high programs" and will "apply materials developed in 1-3 on sample populations." This aspect of the project is obviously behind schedule as reflected on the chart of timelines in the initial proposal and, therefore, must be addressed in its entirety in the second year of the project.

Based on our evaluation visit to the project, we understand that "career education programs," per se do not currently exist at the elementary level in our project site; therefore, we would expect that the ongoing "general education elementary program" would be complemented by the assembled materials, as the project is committed in the initial proposal, and that the "materials will be applied on sample populations."

Summary and Recommendations:

To summarize, the evaluation team cites the following areas as aspects of the project which are highly commendable:

(a) Efforts of the project to document, carefully, the processes undertaken toward the achievement of the project objectives;

(b) The sound planning underway for the expansion of project activities during the remainder of the project;

(c) The King Philip School's ability to build on prior developmental work on individualization and continuous progress programs;

(d) The ability of teachers in the English High School site to develop and implement creative curriculum interventions for career education purposes;

(e) The enthusiasm, commitment, and dedication of the experienced project staff;

(f) The degree of visibility being achieved by the project; and

(g) The utilization of prior research and developmental activities and the previous practices of the local sites in the overall project strategy.

The team did feel, however, that the project staff should now turn their attention to:

(a) The expansion of project activities to considerably more students, teachers, counselors, and administrators;

(b) The redefinition of a control group to be used for the purposes of evaluating student outcome;

(c) The review of project hiring practices as these relate to conformance with Title IX of the Education Amendments of 1972; and

(d) The review of student recruitment and student enrollment practices in King Philip School and in this project as these relate to Title IX.

In addition, the U. S. Office of Education requests that more project time during the next year be devoted to meeting the commitments of the project with respect to articulation activities.

In conclusion, the project has more than met the vast majority of its commitments during the first year and where weaknesses are suggested, it is felt that mitigating circumstances existed which slowed its progress. It is the recommendation of the evaluation team that the project be continued for the second year of operation and at approximately the same level of funding as was allocated for the first year.