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ABSTRACT

Goals of a project to develop a career-oriented curriculum for the Texas School for the Deaf from 1972 to 1975 included the delivery of (1) career awareness, exploration, and preparation experiences, (2) language development activities, (3) avocational-recreational experiences, (4) consumer activities, (5) problem-solving experiences, (6) technical knowledge, and (7) a realistic self-image. Chapter 1 presents a program overview and Chapter 2 consists of the evaluation--elementary evaluation, elementary interview inventory, junior high and high school evaluation, questionnaires, and teacher opinion survey. Chapter 3 describes the development and implementation of the career awareness component for the three project years. In Chapter 4 the two career exploration workshops are described and information is provided about the first year of implementation, the model city concept, and the refinement activities of the final year. Chapter 5 presents information about the summer career preparation workshop, the career education lab, and the modular learning stations. Procedures for program modification and recommendations for the elementary, junior, and high school levels are presented in Chapters 6 and 7. A final chapter discusses career education media and production of a career quiz. Monthly progress reports are appended along with definitions of terms for teacher observations of students. (NJ)

DEVELOPMENT OF A CAREER EDUCATION CURRICULUM FOR DEAF STUDENTS AT THE TEXAS SCHOOL FOR THE DEAF

Final Report
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Texas School for the Deaf

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Special thanks go to the many businessmen in the Austin area; without whose cooperation and interest, this project would have been limited in scope and application.

Also, the project staff would like to thank the students and parents of the Texas School for the Deaf. Without their interest and cooperation this project would have been impossible. The project staff hopes that the information found in this study will ultimately lead to the implementation of a meaningful Career Education program for all deaf youth.

Darrel D. Randall
Project Coordinator

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Chapter I

Program Overview

I. Origins of the Program

II. Description of Texas School for the Deaf

III. Program goals and objectives

- A. Interpertation of goals
- B. Objectives for Career Awareness
- C. Objectives for Career Exploration
- D. Objectives for Career Preparation

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- B. Exploration
- C. Preparation

V. Staff and student participants

- A. Project staff
- B. Student participants

VI. Summary of project development

VII. Project funding

I. Origins of the Program

The Career Education movement at the Texas School for the Deaf (T.S.D.) began in 1972. The catalyst was a study conducted by Bobbye Tutt. This study, "An Employment Analysis of Deaf Workers in Texas", (1) sought to determine what happens to deaf students as a result of their education and to provide occupational information about deaf workers.

In this study Mrs. Tutt noted that there were several recurring deficiencies in job performance and that many of them could be overcome through education.

In the analysis, deaf graduates stated that the type of training they had received at T.S.D. was not relevant to them and did not adequately prepare them to function in life. One of the biggest concerns was the lack of training in daily living skills.

Perhaps more startling information has become available in a recent study, The Deaf Population of the United States, (2) which indicated that there are about twice as many deaf as was thought. A 1930 census found one deaf person per 1000; the updated figue is approximately two deaf per 1000.

The Deaf Population of the United States states that while employment among the deaf is not as good as would be desirable, it does not arouse as much concern

as underemployment. It seems the deaf can find jobs fairly quickly but they reach a plateau early and there they remain. It is quite common to find college graduates operating linotype presses or other automatic machines. Throughout the U.S., normal and above average deaf men and women are performing simple assembly line operations.

The study also shows that deaf are found in all occupations from unskilled through professional, thus indicating that deaf persons can perform at higher levels. And the economic levels of deaf heads of households seem to substantiate this underemployment in that deaf heads of household earn 16% to 27% less than the general population.

Perhaps the most valid reason for a change in curriculum for deaf students is the radical shift in employment anticipated by the U.S. government. The shift will be to service-producing industries. There will be a small rise in goods-producing industries but a decline in their proportion of the labor force. Currently nearly 50% of deaf employees are in manufacturing where they perform unskilled and semi-skilled jobs. Deaf are far behind in professional, technical, clerical, sales, and service positions, the four fastest growing categories.

If the deaf are to maintain their present and anticipated share of the labor force, they must shift to new areas of employment. This shift will mean meeting new

employers who have not employed deaf people in large numbers. This shift will not occur without assistance from education, parents, rehab, employers, and the deaf themselves.

"This evidence points to the urgency for action, now, to avert the potentially dangerous employment situation for the deaf labor force of 1980." (2)

In 1972 Mr. James S. Howze, principal of the Texas School for the Deaf, felt that research into alternative ways of structuring the school's curriculum was necessary to help overcome the problems outlined in the afore mentioned studies. Mr. Howze and Mr. Dean Cunningham developed a propsal entitled "Development of A Career Education Curriculum for Deaf Students at the Texas School for the Deaf." This proposal recommended the development of a curriculum that was career oriented in a manner relevant to the deaf student and took into account the reading and language handicaps imposed by deafness. The Tutt study recommended that an increasing concern be given to the many deaf persons who have difficulty in obtaining and maintaining jobs after leaving school, not only because of the reading and language deficienies, but also because of an insufficient formation of attitudes toward professional work - in other words, a limited experience with job attitudes and responsibilities. For these reasons a three-year plan to develop a Career Education program for the Texas School for the Deaf was begun in a summer workshop in June, 1972.

II. Description of Texas School for the Deaf

At the time this project started, Texas School for the Deaf - established in 1856 - was more than a school to the approximately 715 hearing impaired students enrolled. To five-sixths of the students, T.S.D. was a home for nine months of the year.

Most students come to T.S.D. with limited communcication skills; therefore, the development of a language system was an underlying goal.

T.S.D. was composed of two campuses in Austin, Texas. East Campus housed the younger children, five to twelve years old. The first years on this campus were an adjustment phase for most of the students who found themselves grouped together with other children from across the state. The varied backgrounds and levels of ability presented quite a challenge to the staff as they began teaching the basic skills of reading, writing, mathematics, and language. Students were instructed by the oral method and many used the language of signs in the cottage or in informal situations.

The larger South Campus served children in the third grade through twelfth grade. The school was fully accredited, used a traditional academic curriculum and

utilized state-adopted textbooks. Both campuses were well equipped with media materials and equipment. The South Campus had a television studio with closed-circuit capabilities in both classrooms and cottages. A new lab for computer assisted instruction provided many with ten-to fifteen-minute daily programs in language and math.

South Campus housed an elementary, junior high school, and high school department. The school had two departments in which students received vocational training.

The vocational department's goal was to provide students experiences in a variety of areas, encourage good work habits and attitudes, teach good tool and material handling, and ready students for further vocational training whether on the job or in a school setting. The vocational department offered courses in auto mechanics, baking, business training, cleaning and pressing, drafting, photography, homemaking, grooming, upholstery, woodworking, lithography, printing, and welding. Students were, also, exposed to several related skills in many areas as situations arose. (In auto mechanics, for example, some auto painting, welding, and body repair were taught as jobs came in.)

The general philosophy of the vocational department was to teach students to respect machinery, become familiar with various types of work, and go out with a

proper attitude about the possiblility of in depth training either on the job or in a specialized post-secondary program.

The newer vocational education department had different goals for its students. This department was designed to provide evaluation and job training for multiply-handicapped deaf students. The goal of this department was to allow students to specialize in one vocational area and to be employable upon termination from school. This program was established to meet the needs of students who were unable, because of additional handicaps, to participate in the regular program. The vocational education department offered courses in building maintenance, construction trades, basic electrical repair, commercial art, and horticulture. The general philosophy of the vocational education department was to do extensive evaluation using a modified Tower evaluation system and then follow up with training that would give students a saleable skill in one area.

Both vocational departments suffered from a lack of prestige because the school placed primary emphasis on academic achievement. Students generally felt that vocational training was not school and it was not necessary to apply one's self. Academic teachers were regarded as having more prestige by both students and other academic teachers than vocational staff.

For these reasons the academic curriculum was more college oriented than career oriented and the vocational departments received little consistent assistance from the other departments in terms of providing students with an organized career development program.

III. Program goals and objectives

The major purpose of the Career Education project was to design a plan that enabled students to be exposed to an evolutionary process of career development. The plan includes continuous orderly stages, each stage building upon relevant and appropriate experiences in earlier stages.

The Career Education program supposes that during a child's formative years, purposeful study of the community world of work will multiply a student's opportunities for choice and eventually success in later life. However, Career Education is not limited to the world of work, rather it deals with the total individual as the individual relates to society.

Goals of the program include the delivery of 1) career awareness, exploration, and preparation experiences; 2) language development activities, 3) avocational-recreational expression; 4) consumer competency; 5) activities to promote problem solving abilities, responsibility,

and good attitudes; 6) technical know-how, and 7) a realistic self-image.

The following paragraphs will discuss each phase of goal one as it is viewed by the project staff. In each phase, goals two to seven will be considered within the body of the discussion. Discussion of goals will be followed by behavioral objective statements for each phase. Student performance objectives will be stated in the form of student outcomes and will be discussed in part two of this report.

A. Interpretation of goals

1. To deliver career awareness, exploration and preparation:

For convenience of structure the program is divided into three phases, each designed to build upon the preceding phase. These phases - awareness, exploration, and preparation - are related to our elementary, junior high, and high school departments, respectively.

The purpose of awareness is to expose the child to many work settings, occupations, and life styles in an organized, sequential curriculum. Information at this level is not highly demanding but is designed to stimulate the child's reasoning ability as he encounters various technologies within our society. Students are permitted to simulate work tasks and utilize simple tools to get a

realistic concept of the occupations under study.

B. Objectives for Career Awareness

A. Provide career-related opportunities in which meaningful work language will occur.

B. Provide opportunities in which students will become aware of and appreciate jobs and clusters of jobs.

C. Provide opportunities which will begin to develop the primary skills required in different jobs.

D. Provide exposure which will enable students to appreciate the paid and unpaid work of others.

E. Provide a fundamental basis for gaining knowledge of earning and managing money.

Exploration goals emphasize the students' gaining a deeper understanding of fewer job clusters. Skill development is stressed more at this level than in Career Awareness. Real experiences with a job and its skills are provided in the Career Exploration program so that students may be better able to determine their career interests. Students at this age wish to do things themselves and enjoy the sense of self-satisfaction after they complete a task on their own. Work orders, requisitions, assembly line work and the responsibility of management are reinforced through student projects during the exploratory phase. The eighth grade units require a combination of skills as students operate their own restaurant, produce their own newspaper, decorate a house, work on an assembly line and study a unit designed to help them evaluate

their skills, abilities and attitudes toward future employment.

C. Objectives for Career Exploration

1. To provide "hands on" and/or job sample experiences in many jobs.
2. To provide a curriculum which will combine vocational skill training and academic presentation in such a way that it is relevant to a job.
3. To provide experience and counseling so eighth grade students will be able to narrow the selection of courses available for study during their high school training.

Recommendations for career preparation will be made to give more specific direction to career training for high school students. The awareness and exploration phases of career development provide a background and assist the individual so he will be prepared to narrow the number of career choices available to him.

D. Objectives of Career Preparation

To provide students with three alternatives:

A. Exit with an employable skill in one area and practical exposure in a second.
B. Exit with skill and capabilities to enter a post-secondary vocational program.
C. Exit with academic achievement prerequisite for college entrance.

In part I of career preparation, career investigation will permit level nine students to do an indepth study of three vocational areas during the year. Level ten students

will then select two areas in which to study. Hopefully, these courses will be two of the courses studied in level nine, but the student will have the option of selecting different courses if he chooses. Level eleven will begin formal specialization in one course followed by level twelve which will offer cooperative specialization, further study of skills and/or on-the-job training.

IV. Major program activities

The following is a summary of the activities conducted in the awareness and exploratory phases of the project and a brief description of plans for the preparation level. Prior to the implementation of these activities, five workshops were held. Teachers from all of the departments participated in planning the development of the project. Workshop details will be explained in another section of this report.

A. Career Awareness

Third, fourth, and fifth grade students become aware of thirty-three different job clusters in a series of three to four-week two-hour-a-day sessions. Eleven general career topics are arranged so that they permit students to progress through three units of each general topic during the third, fourth, and fifth grades. For example, in the business cluster the shopping center is

studied during the third level, personal care business during the fourth and the banking business during the fifth.

The purpose of the awareness program is to develop language, provide job awareness, introduce economic principles and develop community and self-awareness.

All students have a better opportunity to develop language as they are exposed to many activities in the awareness program. Relevant experiences give teachers a chance to practice and reinforce language. A department newspaper call The Little Worker provides a vehicle in which the students can practice their language skills. The stories written and edited by the students also feature cartoons and drawings.

Economic principles are introduced in a department "economy." Students are paid for studying and working in Career Education projects. A student operated bank was established so students could become familiar with and practice banking procedures. A store was also established so students could purchase items with the money they earned. The fifth grade was made responsible for the operation of the bank while the fourth grade was made responsible for the operation of the store.

Community and self-awareness activities include many field trips to various occupational locations. Students become aware of the job, the worker, and the

environment on these visitations.

A TV program, called Career Quiz, allowed each elementary student to participate in at least one program each year.

The combination of all of these activities gives students a better self-awareness as they attempt to develop as individuals.

B. Exploration

Students from the sixth, seventh, and eighth grades explore sixteen different career areas in a series of six-weeks, one-hour-a-day sessions. The purpose of the exploratory program is to provide general information, permit students to be oriented to skill development, and allow students to personally determine their interest. All students are exposed to general information as they discover the basic tools, skills, and language of each job cluster. Units offer everyday practical information as well as information about a possible career. Information varies in units from that which is nice to know like color-coordinating in a home decoration unit to life saving information infirst aid.

Students are oriented to skill development in units such as auto care when they test their skill in disassembling and reassembling motors, changing tires, jumping dead batteries and checking air pressure. Social

skills are taught in the restaurant unit when students prepare food, sell tickets and greet customers. Management skills are practiced when students operate their own florist shop, photo studio, and restaurant. In these units students are responsible for selling items figuring costs, purchasing materials, and paying bills.

After students have experienced each of the six-week units, they are asked to fill in interest inventories on how they feel about the possibility of working in the field they have just studied. These interest inventories are gathered by the Career Education office and later given to the school evaluator to assist her in vocational counseling. The combination of exposures and the analysis of interest give the student a better understanding of himself before he begins high school training.

C. Preparation

The project worked with the high school level for only one year. A workshop of teachers found that material from the "Adult Performance Level study" (APL) (4) was appropriate for our high school students. This study categorizes the skills needed to adequately function in our society into the following areas: consumer economics, occupational knowledge, government and law, community resources, and transportation/health. During the year a test designed by the A.P.L. group was revised by our

school counselor for deaf students and the test was administered to our high school students. The A.P.L. group scored the tests and recorded all of the data on a computer print out for each student.

Two half-day workshops were conducted with teachers to design materials to meet the deficiencies found in the high school students. A proposed lab using the objectives of the A.P.L. study will be explained in more detail in the appendix of this report.

V. Staff and student participants

A. Project staff

The project staff consists of a project director, curriculum coordinator, media specialists, two one-half time media aides and a secretary. The staff members have identified the following as major activities of the project:

1. research new data relating to Career Education
2. plan and conduct workshops
3. develop, revise, and improve units
4. assist teachers and student teachers
5. develop and maintain media
6. coordinate people, data, and things
7. maintain constant evaluation and revision

The director is responsible for establishing the direction and priorites of the project. He is responsible

for utilizing the skills of the other staff to bring about the goals of the projects. The curriculum corrdinator is responsible for assisting the teachers with devcloping and improving units, planning field trips, and correlating Career Education activities with the internal activities of other departments. The media specialists and one media aide develop instructional materials for the teachers. These include black and white photographs, slides, and classroom-made TV programs. They are responsible for developing the materials used for the Career Quiz program. A second media aide works primarily with junior high school teachers, developing units and materials and writing interest inventories for the units.

The secretary has a variety of responsibilities, a number of them out of the ordinary, such as serving as the moderator for the TV quiz program. The staff works together as a team; members often disregard their special title and work in the area of greatest need to accomplish the seven identified activities.

B. Student participants

The following classes were scheduled for Career Education treatment two hours a day in our elementary school during 1974-1975. The students in these classes were exposed to ten to thirteen units with an average of two to four weeks per unit.

3.1 - (8) students	5.1 - (8) students
3.2 - " "	5.2 - " "
3.3 - " "	5.3 - " "
3.4 - (7) "	5.4 - " "
4.1 - (7) "	5.5 - (9) "
4.2 - (8) "	5.6 - " "
4.3 - " "	6.3 - (10) "
4.4 - " "	6.4 - (7) "

This listing includes all of the students in our elementary department. A similar grouping occurred during 1972-1973 and 1973-1974.

The following classes were scheduled for Career Education treatment one hour a day in our junior high school during 1974-1975. The students in these classes were exposed to six units for six weeks each units.

6.1 - (11) students	7.10 - (7) students
6.2 - (10) "	7.11 - (9) "
7.1 - (8) "	7.12 - (7) "
7.2 - " "	7.13 - (8) "
7.3 - (7) "	8.1 - " "
7.4 - (9) "	8.2 - " "
7.5 - (8) "	8.6 - (9) "
7.6 - " "	8.7 - " "
7.7 - " "	8.8 - (8) "
7.8 - " "	8.9 - " "
7.9 - " "	8.10 - " "
	8.11 - (7) "

This listing includes all of the junior high school students with the exception of three eighth grade classes.

The high school department does not have a specific time assigned for Career Education, but a few classes have had a mixture of Career Education treatment and traditional curriculum. Some teachers in the high school were able to include career education activities that had been developed in the workshop with little assistance from project staff.

VI. Summary of Project development

In the beginning the project had no real objectives other than a general statement to develop a curriculum based on Career Education for the school. Mr. Darrel Randall was selected as Career Education coordinator and given the responsibility of researching and developing in a year a plan to implement Career Education into the school curriculum.

This program began at a very critical time in the history of deaf education in Texas. The state structure was in a process of study and reorganization. This transitory phase has remained during the project's three years of existence. The school has undergone four changes in the superintendency. Each change in administrative organization has heightened the usual degree of uncertainty, anxiety, and assistance incumbent upon a feder-

ally-funded program operating within a state institution. Nevertheless each administration has made its contribution to the present Career Education Program. Surprisingly the national economy and general feeling in the United States are highly correlated to the tone of the school and to the development of the project. Mr. A.W. Douglas was the superintendent when this project started. His expression of assurance and backing gave the project a solid beginning. In the summer of 1973 Mr. Douglas became a consultant at Texas Education Agency, leaving the superintendency open. The workshop participants decided to develop Career Education in three phases with the first phase concentrated on developing Career Education curriculum for elementary grades three, four, and five. Because the year started without a superintendent for the school, a sense of "lets hurry up and get things going" embraced the project staff.

Mr. Gary Curtis was named superintendent and arrived on campus in October. Mr. Curtis quickly assessed the project and noted its potential worth. His attitude was full steam ahead, research as much as you can, as quickly as you can. This attitude, coupled with the availability of federal money for Career Education, prompted the project director to add to his staff a curriculum specialist, a media aide, and to conduct two workshops the second summer of the project.

A revision of the proposal was written to carry out phase II of the project plan by implementing and reinforcing the existing elementary curriculum and by beginning the development of Career Education in the junior high school.

One of the two workshops in the summer of 1973 was conducted for the elementary department. The workshop participants had two assignments. The first was to revise the elementary curriculum, adding, deleting, and rearranging the units used the previous year. The second assignment was to write student booklets for each of the elementary units with text written on three reading levels. These stories were written, printed and compiled that summer and used the next two years by elementary teachers.

The second workshop was conducted to develop an approach and a curriculum for Career Education in the junior high school. Guides emphasizing exploration of careers for each of the grade levels - six, seven, and eight - were written, printed, and collated that summer.

Mr. Curtis was named director of Deaf Education in Texas, leaving the superintendency vacant for most of the second year of this research project. Mr. Howze, serving both as principal and acting superintendent of Texas School for the Deaf, had little time to advise the project, but gave his strong support and approval to work being done by Career Education staff and participating

academic departments.

The elementary projects continued to flourish as more teachers and students became excited about Career Education concepts and approaches. The junior high school, however, experienced a difficult year because of scheduling and because of problems in assigning the responsibility for teaching Career Education.

During the third summer a second junior high school workshop was planned and conducted. This workshop plus the experiences of the previous school year enabled project staff to plan more precise exploration content and to develop a more workable arrangement of responsibilities for Career Education within the department. Later in the summer a workshop was conducted to introduce high school teachers to Career Education. The outcome of the two-week workshop was a wealth of activities, developed by high school teachers, that could be utilized in the preparation phase of the Career Education framework.

Dr. Virgil E. Flathouse, who came to Texas School for the Deaf in June, 1974, was superintendent during the third year of the project. The elementary and junior high school departments were organized so that Career Education could work within the existing school structure. The elementary department moved into its third year with the Career Education curriculum; old units were refined and new units created. All elementary teachers were

involved actively with Career Education. The junior high school department flourished with a new, flexible schedule and revised Career Education curriculum at the exploration level. In high school the preparation phase of Career Education experienced its trial-and-error year. The staff had come to appreciate the need for this difficult year as they learned many valuable lessons while experiencing similar years in both elementary and junior high school departments. Only from such experiences would come practical and workable knowledge on which to base implementation of Career Education concepts the following year and into the future.

Dr. Flathouse recognized the project as a distinct entity within the school and stressed that the project staff members seek effective ways of evaluating curriculum changes they made. Dr. Flathouse's attitude toward evaluation brought some changes in the mode in which the project had previously developed. Isolated cases of involvement in the high school began in November of 1974 and continued until February of 1975.

During the year

The staff designed a student outcome check list and identified twenty-six treatments in the elementary department. Junior high school evaluation sheets were designed for each unit and a file was begun for each student. Most of the high school students were pretested and high

school teachers began to design units.

Conclusion

This project has attempted a change in curriculum at a critical point in the history of the Texas School for the Deaf. The many administrative changes that have occurred during this three year period has made it extremely difficult to establish a consistent direction that would enjoy the full support of each administration. We have found, however, through research in this project that Career Education has much potential for developing language and making deaf students more aware of the world in which they live. In this project we have identified education methods that appear to be successful with deaf students. It will be incumbent upon the administrators in this school and of other schools for the deaf to determine the value of our findings.

APPROXIMATE BUDGET

	1972-1973	1973-1974	1974-1975
Salaries	15,200 (2 positions)	41,800 (5 positions)	44,000 (5 positions)
Travel	500	900	200
Workshops (teacher stipends)	6,000	22,000	4,500
Supplies	0	4,000	3,000
Other costs	4,000	8,000	9,000


DELL

Chapter II

Evaluation

I. Evaluation of the Program

II. Elementary evaluation

A. Student outcome questions

B. Program treatments

C. Treatment/outcome matrix

D. Discussion of results

III. Elementary Interest Inventory

A. Procedure

B. Results

C. Use of results

IV. Junior High School Evaluation

A. Student interest inventory sheets

B. Teacher observation form

C. Use of results

V. High School Evaluation

A. Results of H.S. performance

B. Discussion or results

VI. Questionnaires

A. Teacher opinion survey

B. Comments as written by the teachers

C. Parent opinion survey

VII. Discussion of Evaluation

I. Evaluation of the program

Formal evaluation with the deaf population has always presented problems because of a lack of instruments that will adequately assess the real performance of deaf students. Throughout our project close contact was maintained with students and teachers. It was quite apparent if materials were useful by simply observing the activities and getting feedback from the teacher. In the last year of the project more objective ways of evaluation were designed to gather information for comparison purposes, to build data files for students and to design measures that determine the effectiveness of project treatments.

Traditional procedures for evaluation were not feasible in this project because of the following:

1. No pre-post instruments are available for Career Education that are appropriate for deaf students.
2. A control group was not used in our school, rather all of the students were exposed to Career Education.
3. A comparison group is not readily available because the Texas School for the Deaf is the only residential program of the type in Texas.
4. Contamination resulted when several other innovations were introduced or existed within the school concurrently with Career Education, as for example, Computer Assisted Instruction, and educational television.
5. Standardized test comparison was nullified when the form and manner of giving the test was changed each of the three years.

The above problems have presented extreme difficulties in designing an evaluation procedure for this project. During the course of the year we have, however, identified twenty-six treatments that are unique to our elementary program. We have also adopted thirty-three student outcomes as determined by Developmental Associaties as appropriate outcomes for our students. We have pretested our high school students, and we have designed our own instruments for evaluation, comparison, and follow up.

Evaluation became an important part of the project during the final months because, as the research component of this project closes, it will become necessary to reduce staff, thus modifying the methods and approaches offered our students.

Program components will be considered for continuation based on these criteria.

1. What is the benefit to the child?
2. How critical are they to the sequential development of the child?
3. How much administration do they require?
4. How much space do they require?
5. How many tools do they require?
6. How much do they cost to operate?
7. How many service staff do they require?

While questions 3-7 are of a more physical nature and can be determined by the readily available resources in any given year, questions one and two are more of a theoretical nature and require data analysis to determine their value.

A description of methods and instruments we have utilized to gather data will be described in the following sections.

II. Elementary evaluation

The overall goals for the project are stated in chapter I. However, to give this project some degree of conformity to other Career Education projects we decided to follow suggestions set forth in a guide from USOE entitled "Guidelines for the Evaluation of Career Education Programs." (3) This guide, developed by Developmental Associates, was submitted to USOE in August, 1974 to help program directors plan and evaluate their projects.

While our program was in its last year of research development it was felt that the guide was worthy of consideration and emulation. The guide listed thirty-three objectives grouped into nine major categories or outcome areas. Our project staff felt that these

student outcomes would be helpful to use on an experimental basis with our elementary teachers.

A. Student outcome questions

The thirty-three student outcomes represent the current best thinking in regard to objectives for Career Education programs. The objectives, under the direction of Developmental Associates, had been reviewed by individuals of varying backgrounds in the Career Education field.

The project staff took the outcomes and attempted to apply them to our existing program. It was felt that due to the lack of evaluation instruments in both Career Education and deaf education that the teacher would be the best source of information at this time. The staff took the outcomes and established a ranking order from one to five for each of the outcomes. We also had spaces for not appropriate (NA) and not presented(NP).

Teachers were asked to rate their entire class based on the change they could see in their students. Teachers rated their classes for a time period from September to December and again from January to May. Teachers were permitted to use all available information to help them in their rating. Prior to giving the outcomes to the teacher, a staff member went through

the list with the teacher and explained the criteria to use in reacting to the various outcomes. This helped standarize the responses so teachers would react in a more uniform way.

The following form is a copy of the student outcome questions with a rating scale for teachers.

CAREER EDUCATION STUDENT OUTCOME RATING SHEET

I. STUDENTS WILL DEMONSTRATE INCREASED SELF AWARENESS:

A. HAVE STUDENTS INCREASED THEIR ABILITY TO DESCRIBE THEIR OWN CURRENT ABILITIES AND LIMITATIONS?	NP	1	2	3	4	5	NA
B. HAVE STUDENTS INCREASED THEIR OWN CURRENT INTERESTS AND VALUES?	NP	1	2	3	4	5	NA
C. DO STUDENTS DISPLAY MORE POSITIVE ATTITUDES TOWARDS THEMSELVES?	NP	1	2	3	4	5	NA
D. HAVE STUDENTS INCREASED THEIR RECOGNITION THAT SOCIAL, ECONOMIC, EDUCATIONAL, AND CULTURAL FORCES INFLUENCE THEIR DEVELOPMENT?	NP	1	2	3	4	5	NA

II. STUDENTS WILL DEMONSTRATE INCREASED COMPETENCY IN BASIC ACADEMIC/VOCATIONAL SKILLS:

A. HAVE STUDENTS INCREASED THEIR LEVEL OF GENERALLY USEFUL NUMERICAL SKILLS?	NP	1	2	3	4	5	NA
B. HAVE STUDENTS INCREASED THEIR LEVEL OF GENERALLY USEFUL COMMUNICATION SKILLS?	NP	1	2	3	4	5	NA
C. HAVE STUDENTS INCREASED THEIR LEVEL OF GENERALLY USEFUL INFORMATION PROCESSING SKILLS?	NP	1	2	3	4	5	NA
D. HAVE STUDENTS INCREASED THEIR LEVEL OF GENERALLY USEFUL DECISION-MAKING SKILLS?	NP	1	2	3	4	5	NA
E. HAVE STUDENTS INCREASED THEIR LEVEL OF GENERALLY USEFUL INTERPERSONAL SKILLS?	NP	1	2	3	4	5	NA

III. STUDENTS WILL DEMONSTRATE INCREASED AWARENESS OF WORK VALUES AND POSSESS A DESIRE TO ENGAGE IN PAID AND/OR UNPAID WORK:

A. STUDENTS WILL RECOGNIZE THE BASIS OF VARIOUS WORK VALUES	NP	1	2	3	4	5	NA
B. STUDENTS WILL POSSESS POSITIVE ATTITUDES TOWARDS PAID AND UNPAID WORK	NP	1	2	3	4	5	NA

IV. STUDENTS WILL DEMONSTRATE INCREASED AWARENESS OF AND KNOWLEDGE ABOUT WORK:

A. HAVE STUDENTS INCREASED THEIR KNOWLEDGE REGARDING THE MAJOR DUTIES AND REQUIRED ABILITIES OF DIFFERENT TYPES OF WORK?	NP	1	2	3	4	5	NA
B. HAVE STUDENTS INCREASED THEIR KNOWLEDGE OF DIFFERENCES IN WORK CONDITIONS AND LIFE STYLES ASSOCIATED WITH DIFFERENT TYPES OF PAID AND UNPAID WORK?	NP	1	2	3	4	5	NA
C. HAVE STUDENTS INCREASED THEIR KNOWLEDGE OF ENTRY REQUIREMENTS FOR MAJOR TYPES OF PAID AND UNPAID WORK?	NP	1	2	3	4	5	NA
D. HAVE STUDENTS INCREASED THEIR KNOWLEDGE OF THE IMPACT OF SOCIAL AND TECHNOLOGICAL CHANGE IN PAID AND UNPAID WORK?	NP	1	2	3	4	5	NA
E. HAVE STUDENTS INCREASED THEIR KNOWLEDGE OF THE IMPORTANT FACTORS THAT AFFECT WORK SUCCESS AND SATISFACTION?	NP	1	2	3	4	5	NA

V. STUDENTS WILL DEMONSTRATE INCREASED COMPETENCY IN CAREER DECISION MAKING SKILLS:

A. HAVE STUDENTS INCREASED THEIR ABILITY TO ASSOCIATE THEIR OWN ABILITIES AND LIMITATIONS WITH POSSIBLE SUCCESS IN FUTURE WORK?	NP	1	2	3	4	5	NA
B. HAVE STUDENTS INCREASED THEIR ABILITY TO RELATE THEIR PERSONAL INTERESTS AND VALUES TO TYPES OF WORK AND ASSOCIATED LIFE-STYLE?	NP	1	2	3	4	5	NA

C. HAVE STUDENTS INCREASED THEIR ABILITY TO (a) IDENTIFY, (b) LOCATE, AND (c) UTILIZE SOURCES OF INFORMATION TO SOLVE CAREER DECISION-MAKING PROBLEMS?

NP 1 2 3 4 5 NA

D. HAVE STUDENTS INCREASED THEIR ABILITY TO DETERMINE POTENTIAL FOR FUTURE ADVANCEMENT/PERSONAL GROWTH IN WORK OF THEIR CHOOSING

NP 1 2 3 4 5 NA

E. HAVE STUDENTS INCREASED THEIR KNOWLEDGE OF THE STEPS TO BE TAKEN AND THE FACTORS TO BE CONSIDERED IN CAREER PLANNING?

NP 1 2 3 4 5 NA

F. HAVE STUDENTS INCREASED THEIR ACTIVE INVOLVEMENT IN CAREER DECISION-MAKING?

NP 1 2 3 4 5 NA

VI. STUDENTS WILL DEMONSTRATE GOOD WORK HABITS:

A. ARE STUDENTS ABLE TO PLAN WORK EFFECTIVELY?

NP 1 2 3 4 5 NA

B. ARE STUDENTS MORE ADAPTABLE TO VARIED WORK SITUATIONS?

NP 1 2 3 4 5 NA

C. DO STUDENTS HAVE A MORE POSITIVE ATTITUDE TOWARDS THE CONCEPTS OF QUALITY IN RELATION TO A WORK TASK?

NP 1 2 3 4 5 NA

D. DO STUDENTS HAVE A MORE POSITIVE ATTITUDE TOWARDS CONSERVATION OF ENVIRONMENTAL AND HUMAN RESOURCES IN RELATION TO WORK TASKS?

NP 1 2 3 4 5 NA

E. DO STUDENTS HAVE A MORE POSITIVE ATTITUDE TOWAROS RESPONSIBILITY FOR THEIR OWN BEHAVIOR AND COMPLETION OF WORK TASKS?

NP 1 2 3 4 5 NA

F. DO STUDENTS DEMONSTRATE AN INCREASED DESIRE FOR CONTINUOUS LEARNING BOTH IN SCHOOL AND OUT?

NP 1 2 3 4 5 NA

VII. STUDENTS WILL DEMONSTRATE WORK-SEEKING AND WORK-GETTING SKILLS:

A. STUDENTS HAVE INCREASED THEIR ABILITY TO (a) IDENTIFY (b) LOCATE AND (c) UTILIZE SOURCES THAT CONTAIN INFORMATION ABOUT PAID AND UNPAID WORK?

NP 1 2 3 4 5 NA

B. HAVE STUDENTS INCREASED THEIR LEVEL OF SKILLS REQUIRED IN (a) APPLYING FOR, AND (b) ACCEPTING WORK?

NP 1 2 3 4 5 NA

VIII. STUDENTS WHO ARE LEAVING THE FORMAL EDUCATION SYSTEM WILL BE SUCCESSFUL IN BEING PLACED IN A PAID OCCUPATION, IN FURTHER EDUCATION, OR IN UNPAID WORK THAT IS CONSISTENT WITH THEIR CURRENT CAREER EDUCATION:

A. HOW MANY STUDENTS HAVE BEEN PLACED OR ARE ENGAGED IN FUTURE EDUCATION AND HOW DOES THIS COMPARE WITH PRIOR YEARS?

NP 1 2 3 4 5 NA

B. HOW MANY STUDENTS HAVE BEEN PLACED IN A PAID OCCUPATION, AND HOW DOES THIS COMPARE WITH PRIOR YEARS?

NP 1 2 3 4 5 NA

C. OF THOSE PLACED IN (a) FURTHER EDUCATION, AND (b) EMPLOYMENT, HOW MANY CONSIDER THE PLACEMENT TO BE CONSISTENT WITH CAREER PLANS?

NP 1 2 3 4 5 NA

D. OF THOSE NOT PLACED IN FURTHER EDUCATION OR IN A PAID OCCUPATION, HOW MANY ARE ENGAGED IN (a) UNPAID WORK CONSISTENT WITH THEIR CAREER PLANS, AND HOW DOES THIS COMPARE WITH PRIOR YEARS?

NP 1 2 3 4 5 NA

IX. STUDENTS WILL BE AWARE OF MEANS AVAILABLE FOR CONTINUED EDUCATION ONCE THEY HAVE LEFT THE FORMAL EDUCATION SYSTEM:

A. HAVE STUDENTS INCREASED THEIR ABILITY TO IDENTIFY SOURCES OF ADDITIONAL EDUCATION IN MAJOR TYPES OF PAID AND UNPAID WORK?

NP 1 2 3 4 5 NA

B. HAVE STUDENTS INCREASED THEIR ABILITY TO IDENTIFY MEANS TO SUPPORT ADDITIONAL EDUCATION FOR THEMSELVES IN MAJOR TYPES OF PAID AND UNPAID WORK?

NP 1 2 3 4 5 NA

B. Program treatments

The guide from Developmental Associates suggests creating a student outcome/treatment matrix. To do this it was necessary to identify and define project activities and objectives and describe them in common terms which make accumulation and comparison possible. As suggested, the term "treatment" was used to describe unique characteristics of our program and activities that were initiated because of the project.

A list of twenty-six treatments peculiar to and performed by Career Education were identified in the elementary department. This list made it possible to record most of the activity occurring within the department.

Teachers were then given a check sheet on which to tabulate these treatments. Teachers tabulated for the time period from September through December and then were to tabulate on a monthly basis for the remainder of the year.

The following is a check sheet of elementary Career Education treatments used in our elementary department. Following the check sheet is a definition of each Career Education treatment used in the elementary department.

CAREER EDUCATION TREATMENT CHECK SHEET

1. FILMSTRIPS, SLIDES, AND MOVIES (COMMERCIAL OR CAPTIONED FILMS).				
2. TEXTBOOKS AND OTHER PRINTED MATERIALS TO TEACH C.E. CONCEPTS.				
3. SPECIAL CAREER MATERIALS (COMMERCIAL MATERIALS, KITS GAMES ETC).				
4. FIELD TRIPS WITH STUDENT INTERVIEWS.				
5. FIELD TRIPS (OBSERVATION) ALSO WALKING TRIPS.				
6. FIELD TRIPS PLANNED BUT CANCELLED.				
7. CAREER EDUCATION STUDENT BOOKLETS DEVELOPED IN C.E. WORKSHOPS.				
8. CAREER EDUCATION TEACHER GUIDES DEVELOPED IN C.E. WORKSHOP.				
9. CAREER EDUCATION TEACHER-STAFF PRODUCED TV PROGRAMS. (Observation of Career Quiz, News etc.)				
10. TEACHER MADE MATERIALS DESIGNED TO TEACH C.E. CONCEPTS.				
11. PARTICIPATION IN CAREER EDUCATION TV PROGRAMS. (Career Quiz, News etc.)				
12. CAREER EDUCATION PRODUCED PHOTOGRAPHS OF STUDENT EXPERIENCES.				
13. CAREER EDUCATION PRODUCED PHOTOGRAPHS AND MATERIALS FOR INFO. (ex. pictures of car parts, workers or posters)				
14. EXPERIENCES WITH REAL TOOLS, EQUIPMENT AND SUPPLIES. (ex. carpentry, sewing, cooking, photography)				
15. CLASS CONTRIBUTIONS TO CAREER EDUCATION STUDENT NEWSPAPER.				
16. PARTICIPATION IN CAREER EDUCATION ECONOMY. (go to bank and store, sell items to store, spring spirit)				
17. RESOURCE PEOPLE--INFORMATION--slides, speeches, ex dairy man speaker				
18. RESOURCE PEOPLE--DEMONSTRATION--show tools ex policeman, electrician				
19. RESOURCE PEOPLE--DEMONSTRATION WITH STUDENT PARTICIPATION (ex. first aid-bandaging, hort flower arranging)				
20. ROLE PLAYING				
21. SIMULATED BUSINESS ACTIVITIES (classroom banking, classroom greenhouse, car wash, classroom restaurant)				
22. SIMULATED BUSINESS OPERATED WITH REAL WORK EXPERIENCE				
23. CONSUMER EDUCATION CONCEPTS WITH CAREER EDUCATION (comparative buying, care of personal items, consumer cooking				
24. PRESENTATION OF CAREER INFORMATION FROM THE TEACHER. ex teacher tells student how to change a tire, how milk gets to dairy)				
25. INFUSION OF CAREER EDUCATION CONCEPTS INTO OTHER SUBJECTS.				
26. PARTICIPATION IN PROJECT SHARE.				

Career Education Treatment

1. Filmstrip, slides, movies - Commercial or captioned films used to reinforce Career Education units. Slides made of Career Education activities on campus or in the community on work sites.

2. Textbooks and other printed materials - Textbooks or other printed educational materials used to teach Career Education concepts.

3. Career materials - Commercial materials other than books or printed matter (ex., kits, games, etc.)

4. Field trips with student interviews - Field trips to business and work sites - school bus, city bus, car, or walking (on or off campus). Students plan before going to interview workers about their jobs, etc.

5. Field trips (observation) - Field trips to work sites (by any means of transportation where students observe and ask questions spontaneously and where the experience, for the most part, is explained by the teacher.

6. Field trips planned but cancelled. - Field trips planned and expected by the student but cancelled for any one or more reasons.

7. Career Education student booklets - Booklets written on three elementary reading levels accompanied by a set of photographs for each subject area. There is a booklet and a folder for each child.

8. Career Education teacher guides - Activity guides with goals and behavioral objectives for units in 3, 4, 5, 6, 7, 8 grade levels.

9. Career Education - teacher - staff produced T.V. programs (observation) - Observation by class of Career Quiz, student news with Career Education content, video taped programs made by the teacher on a unit.

10. Teacher-made materials - Materials made by teachers- ex. games, photographs, stories, charts, transparencies, dittos, etc. - to teach Career Education concepts.

11. Participation in Career Education T.V. programs - Script for Career Quiz or news or other T.V. programs developed by the teacher and/or class. The class appears on the tape as contestants or participants.

12. Career Education produced photographs - Photographs (black and white or colored slides) of students' experiences. Photographs taken by staff, teachers or students, and used as a follow up, etc.

13. Career Education produced photographs and material for information. - Photographs, and materials, not of student experiences, but for information (ex. workers pictures, pictures of car parts, posters, transparencies).

14. Experiences with real tools. - Students work with tools, equipment and supplies relevant to job areas studied (ex. carpentry tools, sewing equipment, leather tools, photographic supplies and equipment).

15. Class contributions to Career Education student newspaper. - Career Education staff edites and produces a newspaper, The Little Worker. The students write all articles that appear in the newspaper.

16. Participation in Career Education economy
- Students earn money in Career Education classes, use all the banking services, buy merchandise at the T.S.D. store, sell items to the store, participate in Spring Spirit.

17. Resource people information
- Resource people come and present slides or talks to reinforce C.E. units in their area of work.

18. Resource people demonstration
- Resource people give demonstrations using their tools and equipment (ex. a policeman, electrician, carpenter bring their tools and explain their use).

19. Resource people demonstration with student participation
- Resource people give demonstrations and teach a class a set of skills with their trade tools or allow the class in some other way to participate in the demonstration.

20. Role playing
- Students pretending in a role situation relating to a career area being studied.

21. Simulated business activities
- These experiences differ from traditional role-playing in that they are longer in term and strive to simulate, as near as possible, a total business experience within the confines of the classroom and among students in that class.

22. Simulated business real work experiences
- These experiences duplicate real businesses as much as possible and involve people outside a student's classroom. Real money or T.S.D. money is used as ex-

change (e. restaurant, florist, Spring Spirit, doughnut shop as well as the bank and the store).

23. Consumer education concepts
- Career Education activities that involve such things as comparative buying, care of personal items, reading directions for cooking, care of an automobile, mathematics of consumer education and functional language involved with consumer education.

24. Presentation of information from the teacher
- The Career Education teacher gives students information by lecture, research assignments or any other information-giving technique.

25. Infusion of Career Education into other subject areas
- Career Education teachers infuse Career Education concepts into the other subject areas they teach (ex. language, mathematics, science, or reading).

26. Project Share
- A class learns a set of skills or how to make a product then teaches another class these skills. This may involve other classes at T.S.D. or at the Austin State School, a public school or regional school for the deaf.

C. Treatment/outcome matrix

The rating sheets on the student outcomes were filled out by twelve of the elementary teachers and then correlated to the utilization of each of the twenty-six treatments by means of the SPSS computer using the Pearson Correlation coefficient. (Four classes were not used because of incomplete data.) Bill Beane assisted project staff with data analysis.

The result of the treatment/outcome correlation produced several hundred sets of relationals. It was impractical to record all of the correlations in this report so twelve of the twenty-six treatments will be listed as an example of the data collected.

The following pages show the matrix of outcomes to treatments. The significance is shown in the lower numbers. The lower the number the higher the coorelation. The letter N indicates the number of classes considered in the correlation.

OUTCOME QUESTION/TREATMENT GROUP MATRIX

Outcome Questions \ Treatment	FIELD TRIPS	TV PROGRAMS (observation)	TV PROGRAMS (participation)	CE PHOTOGRAPHS (student exp)	EXPERIENCE WITH TOOLS	STUDENT NEWSPAPER	CAREER ECONOMY (go to bank & store	RESOURCE PEOPLE	ROLE PLAYING	BUSINESS ACT (in class)	BUSINESS ACT (real work exp)	CONSUMER ED CONCEPTS
I. Increased Self-Awareness	N 12 Sig .002	N 12 Sig .220	N 12 Sig .461	N 12 Sig .006	N 12 Sig .055	N 12 Sig .108	N 12 Sig .072	N 12 Sig .013	N 12 Sig .055	N 12 Sig .104	N 12 Sig .096	N 12 Sig .124
A. Have students increased their ability to describe their own current abilities and limitations?	N 12 Sig .002	N 12 Sig .220	N 12 Sig .461	N 12 Sig .006	N 12 Sig .055	N 12 Sig .108	N 12 Sig .072	N 12 Sig .013	N 12 Sig .055	N 12 Sig .104	N 12 Sig .096	N 12 Sig .124
B. Have students increased their ability to describe their own current interest and values?	N 11 Sig .106	N 12 Sig .244	N 12 Sig .286	N 12 Sig .072	N 11 Sig .305	N 11 Sig .100	N 12 Sig .037	N 12 Sig .089	N 12 Sig .149	N 12 Sig .052	N 12 Sig .022	N 12 Sig .051
C. Do students display more positive attitudes toward themselves?	N 11 Sig .007	N 11 Sig .094	N 11 Sig .042	N 11 Sig .437	N 11 Sig .058	N 11 Sig .267	N 11 Sig .193	N 11 Sig .084	N 11 Sig .466	N 11 Sig .355	N 11 Sig .385	N 11 Sig .283
D. Have students increased their recognition that social, economic, educational, and cultural forces influence their development?	N 12 Sig .036	N 11 Sig .355	N 11 Sig .166	N 11 Sig .166	N 11 Sig .246	N 11 Sig .462	N 11 Sig .368	N 11 Sig .035	N 11 Sig .212	N 11 Sig .059	N 11 Sig .228	N 11 Sig .385
II. Increased Basic Academic/Vocational Skills	N 12 Sig .191	N 9 Sig .048	N 9 Sig . 272	N 9 Sig .254	N 12 Sig .241	N 9 Sig .469	N 12 Sig .227	N 9 Sig .129	N 9 Sig .360	N 9 Sig .180	N 9 Sig .262	N 9 Sig .495
A. Have students increased their level of generally useful numerical skills?	N 12 Sig .191	N 9 Sig .048	N 9 Sig . 272	N 9 Sig .254	N 12 Sig .241	N 9 Sig .469	N 12 Sig .227	N 9 Sig .129	N 9 Sig .360	N 9 Sig .180	N 9 Sig .262	N 9 Sig .495
B. Have students increased their level of generally useful communication skills?	N 9 Sig .055	N 8 Sig .061	N 8 Sig .428	N 8 Sig .035	N 8 Sig 021	N 8 Sig . 286	N 9 Sig .211	N 8 Sig .072	N 8 Sig .165	N 8 Sig .114	N 8 Sig .082	N 8 Sig .035
C. Have students increased their level of generally useful information processing skills?	N 11 Sig .023	N 10 Sig .022	N 10 Sig .214	N 10 Sig .141	N 10 Sig .075	N 10 Sig .267	N 11 Sig .049	N 10 Sig .236	N 10 Sig .193	N 10 Sig .162	N 10 Sig .233	N 10 Sig .184
D. Have students increased their level of generally useful decision-making skills?	N 12 Sig .092	N 11 Sig .169	N 11 Sig .075	N 11 Sig .168	N 11 Sig .445	N 11 Sig .417	N 12 Sig .213	N 11 Sig .493	N 11 Sig .288	N 11 Sig .263	N 11 Sig .386	N 11 Sig .550
E. Have students increased their level of generally useful interpersonal skills?	N 11 Sig .149	N 10 Sig .022	N 10 Sig .147	N 10 Sig .094	N 10 Sig .077	N 10 Sig .476	N 12 Sig .030	N 10 Sig .100	N 10 Sig .194	N 10 Sig .031	N 10 Sig .053	N 10 Sig .074

Outcome Questions \ Treatment	FIELD TRIPS	TV PROGRAMS (observation)	TV PROGRAMS (participation)	CE PHOTOGRAPHS (student exp)	EXPERIENCE WITH TOOLS	STUDENT NEWSPAPER	CAREER ECONOMY (go to bank&store	RESOURCE PEOPLE	ROLE PLAYING	BUSINESS ACT (in class)	BUSINESS ACT (real work exp)	CONSUMER ED CONCEPTS
III. Increased Awareness of Work Values A. Have students increased their recognition of the bases of various work values?	N 9 Sig .001	N 9 Sig .076	N 9 Sig .179	N 9 Sig .115	N 9 Sig .352	N 9 Sig .435	N 9 Sig .469	N 9 Sig .192	N 8 Sig .279	N 9 Sig .131	N 9 Sig .110	N 9 Sig .141
Increased Desire to Engage in Paid and/or Unpaid Work B. Do students possess more positive attitudes toward paid and unpaid work?	N 8 Sig .001	N 8 Sig .098	N 8 Sig .330	N 8 Sig .077	N 8 Sig .207	N 8 Sig .441	N 8 Sig .244	N 8 Sig .171	N 8 Sig .279	N 8 Sig .256	N 8 Sig .212	N 8 Sig . 141
IV. Increased Awareness of and Knowledge About Work A. Have students increased their knowledge regarding the major duties and required abilities of different types of paid and unpaid work?	N 4 Sig .207	N 4 Sig .067	N 4 Sig .120	N 4 Sig .495	N 4 Sig .495	N 4 Sig .423	N 4 Sig .032	N 4 Sig .034	N 4 Sig .413	N 4 Sig .060	N 4 Sig .027	N 4 Sig .070
B. Have students increased their knowledge of differences in work conditions and life styles associated with different types of paid and unpaid work?	N 5 Sig .027	N 5 Sig .237	N 5 Sig .159	N 5 Sig .072	N 5 Sig .410	N 5 Sig .275	N 5 Sig .029	N 5 Sig .407	N 5 Sig .271	N 5 Sig .416	N 5 Sig .274	N 5 Sig .324
C. Have students increased their knowledge of the impact of social and technological change in paid and unpaid work?	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed	Not Computed
D. Have students increased their knowledge of the impact of social and technological change in paid and unpaid work?	N 5 Sig .246	N 5 Sig .427	N 5 Sig .450	N 5 Sig .367	N 5 Sig .215	Not Computed	N 5 Sig .338	N 5 Sig .406	N 5 Sig .472	N 5 Sig .413	N 5 Sig .430	N 5 Sig .415
E. Have students increased their knowledge of the important factors that affect work success and satisfaction?	N 8 Sig .153	N 8 Sig .434	N 8 Sig .441	N 8 Sig .221	N 8 Sig .450	N 8 Sig .078	N 8 Sig .152	N 8 Sig .446	N 8 Sig .103	N 8 Sig .189	N 8 Sig .224	N 8 Sig .442

Outcome Questions \ Treatment	FIELD TRIPS	TV PROGRAMS (observation)	TV PROGRAMS (participation)	CE PHOTOGRAPHS (student exp)	EXPERIENCE WITH TOOLS	STUDENT NEWSPAPER	RESOURCE PEOPLE	CAREER ECONOMY (go to bank&store)	ROLE PLAYING	BUSINESS ACT (in class)	BUSINESS ACT (real work exp)	CONSUMER ED CONCEPTS
V. Increased Career Decision-Making Skills	N 10 Sig .039	N 10 Sig .329	N 10 Sig .312	N 10 Sig .469	N 10 Sig .430	N 10 Sig .167	N 10 Sig .080	N 10 Sig .007	N 10 Sig .209	N 10 Sig .107	N 10 Sig .103	N 10 Sig .225
A. Have students increased their ability to associate their own abilities and limitations with possible success in present or future paid and unpaid work?												
B. Have students increased their ability to relate their personal interests and values to types of paid and unpaid work and their associated life-styles?	N 10 Sig .073	N 10 Sig .114	N 10 Sig .362	N 10 Sig .303	N 10 Sig .393	N 10 Sig .275	N 10 Sig .080	N 10 Sig .035	N 10 Sig .439	N 10 Sig .128	N 10 Sig .114	N 10 Sig .256
C. Have students increased their ability to (a) identify, (b) locate, and (c) utilize sources of information to solve career decision-making problems?	N 10 Sig .351	N 10 Sig .255	N 10 Sig .383	N 10 Sig .222	N 10 Sig .393	N 10 Sig .461	N 10 Sig .171	N 10 Sig .190	N 10 Sig .232	N 10 Sig .078	N 10 Sig .304	N 10 Sig .425
D. Have students increased their ability to determine the potential for future advancement/personal growth in work of their choosing?	N 10 Sig .037	N 10 Sig .070	N 10 Sig .314	N 10 Sig .022	N 10 Sig .043	N 10 Sig .268	N 10 Sig .064	N 10 Sig .037	N 10 Sig .080	N 10 Sig .040	N 10 Sig .145	N 10 Sig .294
E. Have students increased their knowledge of the steps to be taken and the factors to be considered in career planning?	N 9 Sig .440	N 9 Sig .076	N 9 Sig .377	N 9 Sig .318	N 9 Sig .461	N 9 Sig .461	N 9 Sig .393	N 9 Sig .020	N 9 Sig .425	N 9 Sig .231	N 9 Sig .298	N 9 Sig .456
F. Have students increased their active involvement in career decision-making?	N 5 Sig .051	N 5 Sig .136	N 5 Sig .027	N 5 Sig .444	N 5 Sig .432	N 5 Sig .269	N 5 Sig .136	N 5 Sig .269	N 5 Sig .228	N 5 Sig .323	N 5 Sig .077	N 5 Sig .041

Outcome Questions \ Treatment	FIELD TRIPS	T V PROGRAMS (observation)	TV PROGRAMS (participation)	CE PHOTOGRAPHS (student exp)	EXPERIENCE WITH TOOLS	STUDENT NEWSPAPER	CAREER ECONOMY (go to bank&store)	RESOURCE PEOPLE	ROLE PLAYING	BUSINESS ACT (in class)	BUSINESS ACT (real work exp)	CONSUMER ED CONCEPTS
VI. Improved Work Habits A. Are students able to plan work effectively?	N 4 Sig .258	N 4 Sig .048	N 4 Sig .287	N 4 Sig .011	N 4 Sig .172	N 4 Sig .241	N 4 Sig .385	N 4 Sig .349	N 4 Sig .166	N 4 Sig .204	N 4 Sig .450	N 4 Sig .469
B. Are students more adaptable to varied work situations?	N 3 Sig .167	N 3 Sig .333	N 3 Sig .333	N 3 Sig .089	N 3 Sig .033	N 3 Sig .297	N 3 Sig .366	N 3 Sig .333	N 3 Sig .333	N 3 Sig .333	N 3 Sig .256	N 3 Sig .301
C. Do students have a more positive attitude towards the concepts of quality in relation to a work task?	N 4 Sig .230	N 4 Sig .276	N 4 Sig .342	N 4 Sig .101	N 4 Sig .236	N 4 Sig .383	N 4 Sig .067	N 4 Sig .371	N 4 Sig .452	N 4 Sig .407	N 4 Sig .276	N 4 Sig .331
D. Do students have a more positive attitude towards conservation of environmental and human resources in accomplishing work tasks?	N C	N C	N C	N C	N C	N C	N C	N C	N C	N C	N C	N C
E. Do students have a more positive attitude towards responsibility for their own behavior and accomplishment of self-imposed work tasks?	NOT											
F. Do students demonstrate an increased desire for continuous learning both in school and out?	APPROPRIATE FOR											
VII. Increased Work Seeking and Work Getting Skills A. Have students increased their ability to (a) identify, (b) locate, and (c) utilize sources that contain information about paid and unpaid work?	ELEMENTARY SCHOOL											
B. Have students increased their level of skills required in (a) applying for, and (b) accepting work?	STUDENTS											

Outcome Questions	
VIII. Placement	
A. How many students have been placed or are engaged in further education and how does this compare with prior years?	NOT
B. How many students have been placed in a paid occupation, and how does this compare with prior years?	APPROPRIATE
C. Of those placed in (a) further education, and (b) employment, how many consider the placement to be consistent with their career plans	FOR
D. Of those not placed in further education or in a paid occupation, how many are engaged in (a) unpaid work consistent with their career plans, and how does this compare with prior years?	ELEMENTARY
IX. Increased Awareness of Means for Continued Education	SCHOOL
A. Have students increased their ability to identify sources of additional education in major types of paid and unpaid work?	
B. Have students increased their ability to identify means to support additional education for themselves in major types of paid and unpaid work?	STUDENTS

D. Discussion of Results

The data gathered in this report is a primitive attempt to effectively evaluate Career Education in terms of data. This was the first experience for teachers in gathering data. The chance for human error is high both in staff judgements of establishing a criteria and with teacher tabulation. The data does show some interesting description of our treatments and does give us another dimension to consider in recommending the direction of this program.

Field trips seem to be the most valuable treatment having more significance across more outcomes than any other treatment. the elementary economy scored high in career decision making skills, self awareness and knowledge about work. Academic/ Vocational skills for example in numerical did not score as high as expected but interpersonal skills and information processing skill results show this treatment to be a beneficial part of the elementary program.

We found outcome categories one through five and three questions in category six to be appropriate for elementary students. The objectives seem to follow a chronological order and we had fewer classes responding to the upper level questions.

Perhaps the real value of this evaluation at this point lies in the effect it has on our teachers in this process in that we were able to stir their thinking about their teaching. Many of the outcomes are objectives that could be taught or

presented to students if teachers are aware of their importance.

Ideally a test instrument for each outcome question should be designed for deaf students. This would help the teacher a great deal in making her decision about the student and eventually give program designers more reliable data.

III. Elementary Interest Inventory

In addition to checklists and overall evaluation by the teacher of the student's response to career education, we felt a need existed to determine what the child had enjoyed most and in what areas he had developed the most interest. Sucessful employment in adult life depends on combining interests and vocational aptitudes and channeling the student into job areas for which he is best suited. However, interests are difficult to develop, let alone measure, unless experiences and exposure to various "life situations" has taken place.

Our school evaluator, Mrs. Nancy Beane, assisted us by designing an evaluation instrument for the following purposes:

1. To establish a meaningful file for each child with a documented list of what the child has experienced or been exposed to in Career Education.

2. Establish a procedure to find out where the child is by evaluating his:

   a. perceptions
   b. internalizations
   c. preferences
   d. interests

3. To work with teachers in the evaluation process and help them design and maintain records of treatments given to individual students.

4. To get meaningful information to the teachers about each child's expressed interests so the teacher can use this information in academic teaching and student motivation.

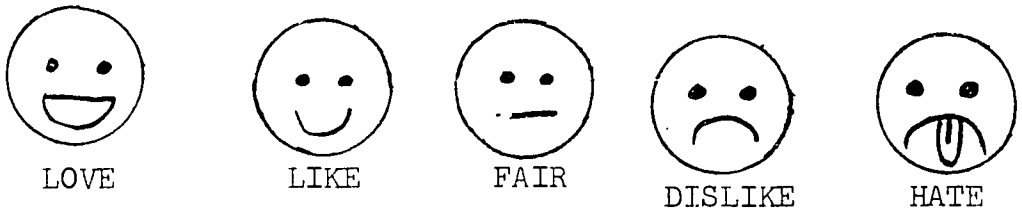
A. Procedure

An initial survey was conducted of the eight teachers involved in the fifth and sixth grades of the elementary department to determine what areas in career education they had taught or were planning to teach before the end of the school year. It was evident from the survey that the areas covered and units taught were many and varied (from auto maintenance to taxidermy). Due to the short time remaining until the end of the school year, the number of units was scaled down and eleven areas were chosen. Due to this problem of time, some children were not given the opportunity to choose their favorite area if the pictures were not included in those eleven

categories.

Six pictures were chosen for each category, and attempts were made to be sure these pictures were representative of most aspects of the job. For example, in the area of construction pictures were of brick laying, machine cutting work, wood shop, form building with a sledgehammer, roof bracing, and cement slab forming. The number of pictures thus totaled sixty-six.

In order to keep language or verbal content to bare minimum, five pictures of faces were drawn and taped to a table. These represented the following categories:



The sixty-six job area pictures were put in randomized order and given to the child. The directions were given as follows:

1. This is not a test. (Teachers reported anxiety when children received scheduling slips; thought they would have written tests in the evaluation center).

2. I want to see what you like to do, and what you do not like to do.

3. I want you to look at the work in each picture, and decide how you feel about the work. It doesn't matter if it's a man or woman in the picture, you look at the work. (Initial pilot presentations showed some children sorted by sex of worker, e.g. put pictures of the opposite

sex into the dislike category. When they were told to discount the sex of the worker and concentrate on the work involved, this problem apparently disappeared.)

4. If you really love the work, put the picture here (point to love category).

5. If you like the work, put the picture here (point to like category).

6. If you think "fair", or "doesn't matter", put the picture here (point to fair category).

7. If you don't like the work, put the picture here (point to dislike category).

8. If you hate-yech the work, put the picture here (point to hate category).

9. OK? Understand? (Hand child the pictures and let him begin sorting).

A sheet was tabulated for each child, listing which pictures he had put in each of the five categories. In addition, notes were made about any additional responses (manual communication, questions asked, facial expressions etc.).

B. Results

The use of descriptive statistic (means, median, standard deviation) resulted in a rank ordering of each of the eleven categories for each child. Means for each category were also included.

Example: Student #1
1. Bakery 1.000
2. Horticulture 1.667
3. Food preparation and food service 2.000

4. Construction 2.167
5. Textiles 2.500
6. Auto Maintenance 2.833
7. Health 3.000
8. Banking 3.167
9. Highway Construction 3.333
10. Newspaper 3.333
11. Clerical 3.667

This student clustered most job pictures in the first three categories (love, like, fair), and did not have any means for job areas in the dislike or hate category.

In addition, to rank ordering the job categories for each student, the statistical treatment yielded a rank ordering for the eleven job areas based on responses from all fifty-six children. These are listed below, with number one being the favorite job area chosen from among all the children's responses.

1. Bakery
2. Horticulture
3. Auto Maintenance
4. Banking
5. Food Service
6. Health
7. Construction
8. Clerical
9. Textiles
10. Newspaper
11. Highways

C. Use of Results

The results of the interest survey were designed to be used along two dimensions: short term and long term.

Short Term Benefits

The individual ordering of job areas may be used to alert the teacher to the student's interests. Academic materials may be designed and used in connection with these interests. For example, reading stories and language can be used relating to an interest in Horticulture.

Classroom motivation can be stimulated and enhanced and good work behaviors and attitudes reinforced by capitalizing on a student's interests. For example, if a student has an interest in auto maintenance, a worker in that field can stress the necessity of being punctual and responsible. Or the teacher can stress the need to know arithmetic and measuring by relating it to a student's interest in the construction area.

Girls who have interests in "formerly masculine" job areas can be encouraged to explore and become aware of jobs that are employing female workers. For example, women roofers and electronics technicians can be visited or invited to come talk about their jobs. Conversely, boys with interests in office work can also be encouraged to become aware of job areas that are employing more and more men (secretaries, nurses, etc.).

Caution: Interest inventories used at this grade and age level are not to be considered as indicators of vocational areas for future vocational training and/or career planning. Interests change as a student grows older and gains more experience and exposure to "life situations".

Long Term Benefits

A cumulative record will be developed over the child's school years, giving information regarding units or career areas the child has been exposed too. This can greatly benefit a vocational counseling situation where mention of previous experiences will serve to "jog" the child's memory and initiate a discussion of job possibilities and interests.

This will also allow evaluators, conselors and others to see his progression in awareness of vocational possibilities and what interests he has developed.

This information will also be valuable for vocational evaluation and placement in training classes here at school and, possibly, occupational training or placement after graduation.

IV. Junior High School Evaluation

The junior high school schedule was designed to take the student through a series of six-week courses during the sixth, seventh, and eighth grades. It was soon realized that accurate records must be made to keep up with the classes each child had taken. It was felt that a data file which described the type of activities within each unit, the student's reaction to various facets of the unit, as well as the teacher's observation of the student's participation would be helpful.

A. Student interest inventory sheets

A student interest inventory sheet was designed to determine the student's reacti to each of the six-week units. A form was designed with questions in the unit relating to jobs dealing with people, data or things. The form has several simple questions under each category; e.g., in the unit on photography, questions relating to working with people in the field of photography, data questions on measuring chemicals and keeping records of pictures, and questions dealing with using things in the field of photography give an indication of the student's feeling towards various types of jobs within each field.

At the top of each form a unit description of the major activities the class has done, sample vocabulary,

resources used and the dates of study.

B. Teacher observation form

The reverse side of the student interest inventory is designed so that a teacher can record her observations of a student. This section of the form is divided into four major groups with subcategories depicting personal, social, and physical attributes. Both forms are completed at the end of each six-week unit and placed in the students file.

The next two pages are examples of forms for junior high school units. Definitions of terms used on the teacher form are listed in the appendix of this report.

PERSONAL EVALUATION
for
BUILDING CONSTRUCTION
Date unit began _____ Date unit ended_____

DESCRIPTION OF UNIT

Students measured wood, made snall picture frames, worked on all phases of building construction when they built a small house in class. Ex. voc. - concrete, plumbing, carpenter, sheet rock, carpets, tile, window, door, insulation, roofing, siding.

PEOPLE

	YES	NOT SURE	NO
1. Do you like to work with people?	___	_____	___
2. Do you like to work alone?	___	_____	___
3. Are you interested in building?	___	_____	___
4. Are you afraid of working in high places?	___	_____	___
5. Do you like to work inside?	___	_____	___
6. Do you like to work outside?	___	_____	___
7. Do you like to work with many people?	___	_____	___

DATA

	YES	NOT SURE	NO
1. Do you like to measure with a ruler?	___	_____	___
2. Do you like to make blue prints?	___	_____	___
3. Do you like to add and subtract numbers?	___	_____	___
4. Do you like to buy things in a lumber yard?	___	_____	___

THINGS

	YES	NOT SURE	NO
1. Do you like to work with your hands?	___	_____	___
2. Do you like to use a hammer?	___	_____	___
3. Do you like to pound a nail with a hammer?	___	_____	___
4. Do you like to mix cement with water?	___	_____	___
5. Do you like to build a house?	___	_____	___
6. Do you like to use a saw?	___	_____	___
7. Do you like to use a square?	___	_____	___
8. Do you like to use a drill?	___	_____	___
9. Do you like to use a brace and bit?	___	_____	___
10. Do you like to smooth cement?	___	_____	___
11. Do you like to paint a house?	___	_____	___
12. Do you like to work with pipes?	___	_____	___

CAREER EDUCATION
TEACHER OBSERVATION OF
STUDENT PARTICIPATION

DATE _____ UNIT _____
STUDENT'S NAME _____ GRADE _____

PEOPLE

	MAX	MOD	MIN
1. Sociability	___	___	___
2. Self Expression	___	___	___
3. Teamwork	___	___	___
4. Communication	___	___	___
5. English Fluency	___	___	___
6. Self Confidence	___	___	___
7. Accepts Criticism	___	___	___
8. Organization	___	___	___

DATA

	MAX	MOD	MIN
1. Degree of abstract thinking	___	___	___
2. Reading level	___	___	___
3. Degree of Problem Solving ability	___	___	___
4. Memory	___	___	___
5. Accuracy	___	___	___
6. Numerical Ability	___	___	___
7. Neatness	___	___	___

THINGS

	MAX	MOD	MIN
1. Degree of dexterity	___	___	___
2. Timing	___	___	___
3. Pace	___	___	___
4. Tactile Quality	___	___	___
5. Ambulatory Efficiency	___	___	___
6. Stamina	___	___	___
7. Caution	___	___	___
8. Directional Spatial Concept	___	___	___
9. Ability to learn tasks	___	___	___

PERSONAL CHARACTERISTICS

	MAX	MOD	MIN
1. Attitude	___	___	___
2. Attendance	___	___	___
3. Appearance	___	___	___
4. Work Independently	___	___	___
5. Vision Quality	___	___	___
6. Speech Quality	___	___	___
7. Perseverence	___	___	___
8. Choices	___	___	___
9. Ability to maintain interest	___	___	___
10. Initiative	___	___	___
11. Follows directions	___	___	___
12. Responsibility	___	___	___

TEACHER COMMENTS _____

_____

_____

_____

INSTRUCTOR _____
signed

C. Use of results

During the school year evaluation forms were designed for each of the sixteen units taught this year in the junior high school. Evaluation sheets were completed at the end of each six weeks unit and a student file was begun. This file is designed to build on the information collected in the elementary awareness program and gives more detailed information from the student concerning specific tasks within a job. The teacher observation form was a new task for the teacher and many felt uncomfortable or unqualified to complete them. The Career Education staff and the school evaluator felt that observation of the student under several different situations and from several teachers would be valuable information for both the evaluator and the student when the time comes for decisions to be made concerning future career planning. No analysis was made of the data collected; rather it was felt the information would be more useful to the student and the school evaluator as personal data to be used in a counseling situation. Recommendations will be discussed as to the problems and benefits of this instrument in the final chapter of this report.

V. High School evaluation

To provide some initial data for beginning a high school Career Education program, it was decided to use

material researched by a basic adult education staff at the University of Texas. A study entitled "The Adult Performance Level Study (4) sought to identify basic adults needs necessary to function in society. The study breaks nine general areas of need in which adults must be able to function into "general knowledge areas" and "basic skill areas". The study group has recently written goals and objectives for the five general knowledge areas, designed tests for each of these areas and has compiled a bibliography of material appropriate to each area in three different levels of performance.

The vast amount of work done by the APL study attracted the attention of our project staff. A summer workshop in August of 1974 was conducted with our high school teachers.

The goals and objectives of the APL study were used by the workshop participants and specific activities were written for deaf high school students in each of the five general knowledge areas.

During the school year the test used by the APL study was given to our high school students. This test had been designed to be used in adult basic education and therefore, required some modification so it could be used with deaf students. Ms. Marian Pharr, our school counselor, revised the language level of each of the

forty-two questions. Transparencies were made of each question. High School students were them placed into groups with similar ability. In the testing situation Ms. Pharr presented the questions in total communication then used the overhead projector to project the revised form of the questions.

By using this method it was possible to complete most sessions in approximately two hours.

The tests has a variety of questions that require the student to demonstrate his performance ability, e.g., filling out a check properly as well as reading an airline schedule.

Scoring of the tests was done by the staff of the APL group at the University of Texas. Scores were listed into three levels. (ABE level I = grades 1-3, ABE level II = grades 4-6, ABE level III = grades 7-8)

The following chart shows the percentage of the one hundred fifty-seven high school students in each of the three levels. Twenty-five of the slowest students were given part of the test but did not complete it, their scores are not part of the total percentages.

A. Results of H.S. Performance

T.S.D. H.S. Student Performance Levels

	LEVEL 1	LEVEL 2	LEVEL 3
OCCUPATIONAL KNOWLEDGE	95.6%	4.4%	0%
CONSUMER ECONOMICS	79.3%	18.2%	2.5%
GOVERMENT & LAW	93.7%	3.7%	0%
HEALTH	71.8%	25.1%	3.1%
COMMUNITY RESOURCES	93.7%	5.7%	.6%
READING	97.5%	2.5%	0%
PROBLEM SOLVING	100%	0%	0%
COMPUTATION	82.5%	15.7%	1.8%
WRITING	63.4%	32.9%	3.7%

Level I = grades 1-3 Level II = grades 4-6 Level III = grades 7-8

B. Discussion of Results

The data given to us by the APL study group was listed as a print out on each student. The combined percentages listed above give us some indication of the performance level of deaf high school students in each of the nine categories. As the chart indicates writing and health appear to be the strongest disciplines while problem solving skills were virtually non existant.

Further analysis of question items revealed that while 78% could address an envelope well enough to insure it would reach the desired destination, only 58% placed a proper return address on the envelope to insure its return.

... About two-thirds of the group could not read an "equal opportunity" notice well enough to identify a statement which defined its meaning.

... Only 56% of the group were able to write a check on an account with out making an error so serious that the check would not be processed.

... When given a check and cash only five of the one hundred fifty-seven students could fill out a deposit slip correctly.

... A surprising 73% could write a note to a teacher explaining that their child was sick.

... None of the one hundred fifty-seven students, when given a series of newspaper "help wanted" advertisements, were able to correctly match personal qualifications to job requirements.

... Seventeen percent could figure how many months it would take to pay back an employment agency given the rate and amount of payments each month.

... Given a monthly earnings statement containing the gross salary, deductions by type and net salary, only 58% of the group could determine the total amount of deductions. Further, only 13% could locate the deduction for social security.

... None of the one hundred fifty-seven students were able to read a simple menu and figure the cost and tax on three meals.

... Only three of the students could figure how much a person working forty-three hours would earn if he makes two dollars an hour for a forty hour week and gets time and a half for overtime.

The results of these tasks as well as the dozens of others not reported here, would suggest that our students

are not developing skills considered by many to be necessary to be a literate adult.

VI. Questionnaires

Questionnaires devised by LeVene A. Olson from a study entitled "A Study of Elementary and Secondary Career Education in Lincoln County"(5) were given to all of the teachers on our south campus. The purpose of the questionnaire was to give the teacher a chance to give imput for this report. The questionnaires were coded as to department but the names of individual teachers were not recorded. Teachers were invited to make any comments concerning Career Education at the end of the questionnaire. The comments were then typed as written for this report.

A parent survey, also designed by LeVene A. Olson was sent to the south campus houseparents and to the parents of deaf students in Austin. The results of this survey follow the teacher opinion section.

TEACHER OPINION SURVEY

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

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

YES:	I strongly agree with the statement.	YES yes ? no NO
yes:	I agree with the statement in general.	YES yes ? no NO
? :	I am not sure.	YES yes ? no NO
no :	I disagree with the statement.	YES yes ? no NO
NO :	I strongly disagree with the statement.	YES yes ? no NO

SAMPLE SURVEY FORMAT

1. The purposes of Career Education were clear to me by the beginning of this school year.	YES yes ? no NO
2. The purposes of Career Education appeared to be clear to most of the students.	YES yes ? no NO
3. The major purposes set forth for Career Education were adequately met during the school year.	YES yes ? no NO

The results of this survey are broken down by the different departments and between Career Education teachers and non-Career Education teachers. Fifty-eight teachers responded to the questionaire.

		ELEMENTARY	JUNIOR HIGH SCHOOL (C.E. TEACHERS)	JUNIOR HIGH SCHOOL (NON-C.E. TEACHERS)	HIGH SCHOOL	VOCATIONAL	VOCATIONAL ED.
1. The purposes of Career Education were clear to me by the beginning of this school year.	YES	64.7	75	30%	28.6	38.5	33.3%
	yes	35.3	25	50%	42.8	38.5	66.6%
	?	0	0	0	14.2	0	0
	no	0	0	20%	14.2	0	0
	NO	0	0	0	0	0	0
2. The purposes of Career Education appeared to be clear to most of the students.	YES	17.6	25	20%	0	7.7	0%
	yes	58.8	25	20%	14.3	30.7	28.6%
	?	11.8	50	20%	57.1	46.2	57.2%
	no	5.8	0	30%	14.3	0	0
	NO	5.8	0	10%	14.3	15.4	14.2%
3. The major purposes set forth for Career Education were adequately met during the school year.	YES	52.9	50	10%	0	0	0
	yes	23.4	25	50%	14.3	27.3	16.7%
	?	17.7	25	40%	57.1	63.6	83.3%
	no	0	0	0	14.3	9.1	0
	NO	0	0	0	14.3	0	0
4. The time we had allotted was sufficient to accomplish the purposes set forth for Career Education.	YES	64.7	0	40%	0	12.5	0
	yes	23.5	100	20%	25%	25%	0
	?	11.8	0	40%	50%	62.5	0
	no	0	0	0	25%	0	25%
	NO	0	0		0	0	75%

	ELEMENTARY	JUNIOR HIGH SCHOOL (C.E. TEACHERS)	JUNIOR HIGH SCHOOL (NON-C.E. TEACHERS)	HIGH SCHOOL	VOCATIONAL	VOCATIONAL ED.
5. Students gained first-hand knowledge of the world of work (field trips, resource people, etc.)						
YES	64.7	0	27.3	14.3	41.7	28.6%
yes	29.4	66.7	45.5	57.1	16.6	57.2%
?	0	33.3	27.3	14.3	41.7	0
no	5.9	0	0	14.3	0	0
NO	0	0	0	0	0	0
6. Students were exposed to adequate hands-on experiences.						
YES	58.8	0	37.5	0	15.4	16.7%
yes	35.2	80	25	57.1	46.2	16.7%
?	0	20	37.5	14.3	38.4	66.7%
no	6.0	0	0	14.3	0	0
NO	0	0	0	0	0	0
7. Students explored their capabilities in various areas under a variety of situations pertaining to the world of work.						
YES	41.1	50	30	0	33.3	33.3
yes	47.0	50	60	57.1	25.0	33.3
?	5.9	0	10	14.3	41.7	66.7
no	5.9	0	0	14.3	0	0
NO	0	0	0	14.3	0	0
8. Students learned to self-appraise their emerging potentials.						
YES	17.6	0	10	0	13.3	0
yes	47.0	50	20	28.6	60.0	14.3
?	29.5	50	70	42	26.7	85.7
no	5.9	0	0	14.3	0	0
NO	0	0	0	14.3	0	0

	ELEMENTARY	JUNIOR HIGH SCHOOL (C.E. TEACHERS)	JUNIOR HIGH SCHOOL (NON-C.E. TEACHERS)	HIGH SCHOOL	VOCATIONAL	VOCATIONAL ED.
9. Equipment was adequate to accomplish the objective of the Program.						
YES	23.4	0	45.5	16.7	7.7	14.3
yes	58.9	100	27.3	16.7	15.4	14.3
?	5.9	0	18.2	50.0	69.3	57.1
no	5.9	0	9.0	0	7.7	14.3
NO	5.9	0	0	16.7	0	0
10. Adequate materials and supplies were made available for the Program.						
YES	29.4	0	10	16.7	15.5	0
yes	64.7	75	20	16.7	23.0	42.8
?	5.9	0	60	50	53.8	28.5
no	0	25	10	0	0	28.5
NO	0	0	0	16.7	7.7	0
11. Career Education of this type should be made available to every student.						
YES	82.4	66.6	63.6	85.7	61.6	71.4
yes	5.9	33.3	18.2	14.3	30.7	0
?	5.9	0	9.1	0	7.7	28.6
no	0	0	9.1	0	0	0
NO	5.9	0	0	0	0	0
12. Students became aware of the factors that contributed to success in an occupation.						
YES	35.3	50	40	28.6	35.7	42.8
yes	52.9	25	20	28.6	42.8	42.8
?	11.8	25	40	14.3	21.5	14.4
no	0	0	0	14.3	0	0
NO	0	0	0	14.3	0	0

		ELEMENTARY	JUNIOR HIGH SCHOOL (C.E. TEACHERS)	JUNIOR HIGH SCHOOL (NON-C.E. TEACHERS)	HIGH SCHOOL	VOCATIONAL	VOCATIONAL ED.
13. More well-rounded	YES	53	25	30	33.3	35.7	0
	yes	35.3	75	20	33.3	35.7	66.7
	?	11.7	0	40	0	28.6	33.3
	no	0	0	10	0	0	0
	NO	0	0	0	33.3	0	0
14. More motivated and interested	YES	52.9	25	44.4	50	26.7	16.7
	yes	35.3	75	33.3	25	33.3	33.3
	?	11.8	0	22.3	0	33.3	50
	no	0	0	0	0	6.7	0
	NO	0	0	0	25	0	0
15. More skilled in planning their careers	YES	11.7	0	20	25	15.4	0
	yes	47.0	50	20	50	26.7	33.3
	?	35.3	50	50	0	53.8	66.7
	no	5.8	0	10	0	0	0
	NO	0	0	0	25	0	0
16. More able to use their own initiative	YES	41.2	25	10	25	21.4	0
	yes	35.3	50	20	50	14.3	50
	?	23.5	25	60	0	57.2	50
	no	0	0	10	0	7.1	0
	NO	0	0	0	25	0	0

	ELEMENTARY	JUNIOR HIGH SCHOOL (C.E. TEACHERS)	JUNIOR HIGH SC... (NON-C.E. TF...)	HIGH SCHOOL	VOCATIONAL	VOCATIONAL ...
17. More self confident						
YES	41.2	25	33.3	25	23.1	0
yes	47.0	25	0	50	14.4	50
?	11.8	50	55.6	0	53.8	50
no	0	0	11.1	0	6.7	0
NO	0	0	0	25	0	0
18. More able to see that knowledge is relevant to job success						
YES	29.5	25	40	25	23.1	0
yes	47.0	75	50	50	46.2	83.3
?	23.5	0	10	0	26.7	16.7
no	0	0	0	0	0	0
NO	0	0	0	25	0	0
19. More able to make vocational choices that are satisfying and productive for both themselves and the society of which they are a part						
YES	0	25	20	25	7.1	0
yes	47.0	50	40	50	28.6	50
?	53.0	25	20	0	57.2	50
no	0	0	0	0	0	0
NO	0	0	0	25	0	0
20. Other teachers in this school have favorable attitude toward Career Education						
YES	41.2	0	40	0	30	16.7
yes	41.2	75	50	57.2	20	50
?	17.6	25	10	28.5	50	16.7
no	0	0	0	14.3	0	16.7
NO	0	0	0	0	0	0

	ELEMENTARY	JUNIOR HIGH SCHOOL (C.E. TEACHERS)	JUNIOR HIGH SCHOOL (NON-C.E. TEACHERS)	HIGH SCHOOL	VOCATIONAL	VOCATIONAL ED.
21. Helping students to appraise their abilities, interests and potentials is an important part of Career Education.						
YES	58.9	75	80	71.4	46.2	28.6
yes	35.3	0	10	28.6	30.8	42.8
?	5.8	25	10	0	23.0	28.6
no	0	0	0	0	0	0
NO	0	0	0	0	0	0
22. Instruction in the Career Education is relevant to the needs of students at this level.						
YES	58.8	40	55.6	57.2	38.5	28.6
yes	41.2	60	33.3	28.6	30.7	42.9
?	0	0	0	14.2	23.0	28.6
no	0	0	0	0	0	0
NO	0	0	11.1	0	7.7	0
23. Selecting appropriate instructional materials.						
YES	70.6	0	30	14.2	54.5	14.3
yes	23.5	100	40	28.7	0	71.6
?	0	0	30	28.7	45.5	14.3
no	5.9	0	0	14.2	0	0
NO	0	0	0	14.2	0	0
24. Coordinating planning activities among teachers.						
YES	70.6	75	30	14.2	45.5	0
yes	23.6	25	50	28.6	36.4	60.7
?	0	0	20	28.6	18.1	33.3
no	0	0	0	14.2	0	0
NO	5.8	0	0	14.2	0	0

25. Helping me to better understand my mission	YES	76.4	25	20	28.6	41.8	0
	yes	11.7	50	20	0	16.6	50
	?	0	25	60	28.6	25	25
	no	11.7	0	0	14.2	16.6	25
	NO	0	0	0	14.2	0	0

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Comments as written by the

Elementary teachers

"Career Education is the only major part of our curriculum which primarily focuses on the affective domain. My students are not strong in academics, but through Career Education they have seen more relevance for reading and math and language. They have also developed pride in work and some vitally needed social interaction skills (Spring Spirit, simulated business, field trips). Furthermore, their curiosity has increased about where they, as deaf students, fit into the job world now and in the future."

"I cannot emphasize too much how much interest and enthusiasm for school has been stirred up by Career Education. This carries over especially into Lang. To be very detailed, I would have to use my daily lesson plan book to describe what language has been learned as a result of the excitement created by Career Education. The children learn how important communication is and will be. They try hard, and through Career Education.-- they experience success in a real way not 100%'s on their tests, but in real job situations set up in the room. They must communicate with notes to each other and to their strictly hearing boss. Also, they can see the amazement on the faces of the workers we have interviewed which thrills them. Almost every place we have gone, the managers, workers, etc. are amazed at what the children know and what they desire to know. Not "How old are you?" but "How many hours do you work each day, "When do you arrive and leave","What about emergencies - is your pay cut? etc." The children learn why we ask questions as well as how. Attitudes and personal discipline are discussed and daily practiced. Responsibility is built into their character instead of being pasted on by a few very unreal classroom activities. Confidence is developed through meeting the working world and knowing that they are being prepared for it. No simulated, sporatic, stale, and dry classroom activities can take the place of a well developed Career Education program. I have seen bored, unreachable children come alive when school starts having a real meaning. Let me teach Career Education or let me quit!"

"I feel that the Career Education program got off of the ground this year and the program was much more effective. Most of the teachers were more knowledgeable of the purposes of the program, thus plans were made to help the students be aware of the work-a-day world which is so essential to these students. Responsibility cannot be over-emphasized with the students. All personnel in the Career Education department are to be commended and my personal "thanks" to each of you for the patience, help and cooperation given to the teachers in the department. Without your help we would not have had such a good year."

"Since I had not even heard of Career Education till September, I don't feel I've gotten as much out of it (or put as much in to it) as someone with more experience. Hopefully time will alleviate this. Therefore I don't feel that qualified for all of this. One comment, though - three and four classes, especially the younger ones, seem to understand so little - will they ever understand the responsibility of a job - much less at their present ages?"

"Career Education is a very worthwhile integral part of our teaching core. Courses are interelated with Career Education, and worthwhile teaching projects for language, math, social studies and science emerge. Using Career Education as a focal point we can build and unify all subject areas with a goal, and an enrichment for our students. Career Education opens up the hearing world to our students. They understand the working world. They find that deaf people can and do work, and that they also must work when schooling is completed. Career Education makes working and earning a salary a challenge to our students. They see a purpose in learning and training now, so that they might work."

"Career Education has been the main class where the children walk into smiling eager to work and more eager to be taught. All the children were constantly asking what we would do, When?, how? and why? They were totally involved in the program and were cooperative. I feel that much was taught during these hours and a responsive class retains 90% of what is taught. Career Education was the "door" to language, human values and social growth. Career Education awakened the "slow learner" and included him in all activities. Class projects included everyone. This was the inner beauty of the program. Being a new unit each time, no one was handicapped with previous lessons. I feel that the staff, especially Mrs. Davis and Mr. Randall were a great help and without their assistance Career Education would have lost its backbone. A good staff = a good, effective program. I feel that the institution of TSD has greatly benefited from this program on the basis that it is our first program that has a curriculum for 6 yrs in succession. (3rd - 8th)

" CE is an invaluable part of the curriculum. It gives substance and direction to vague instructional objectives. It gives the students an opportunity, in most cases, to directly experience what they are studying. At least it gives the students a chance to see first-hand the subject of their study. CE is a concrete and fun way for students to learn about the work world. Slowly perhaps at first, the students begin to realize that they must someday fit into that vague thing called the work world. I was delighted when several boys in my class were very interested in knowing how long doctors and teachers must go to school. This interest came with no prompting, really out of the blue. They also wanted to know about salaries, and expressed their own preferences for careers."

" Career Education is one of the best teaching tools I have ever had! It is a stepping stone to many areas and interests. My students have been easily motivated by C.E. and I feel have gained much from each experience they have had. We have had some great field trips and have been welcomed at each business or office we have gone into. The C.E. staff has been most helpful in helping us locate places to visit and resource people. They have gone with us on many trips-provided transportation, taken pictures, etc. Our students need C.E. so badly, please don't let all this work go down the drain!"

" I feel that CE is a worthwhile program. There are too many meetings of the teachers. The meetings are too long. It is a pity we did not have a program like the CE program sooner."

" I do feel that Career Education at T.S.D. has been a very helpful experience for the students. One very strong point is that through this program many field trips to places of business have been made available so that the students were able to receive first hand knowledge and experience. Some equipment and materials have been made available to the children that they would not have otherwise had. They have had an opportunity to meet many experienced people and see them perform their duty or work as well as listen to what they had to tell about their jobs through a teacher interperting the information to them. The career education program has aroused the students curiosity about many different jobs and the pay that they could expect for the job, as well as the qualifications that they must process to qualify for the job. I feel that Career Education has been an invaluable aid to the academic program here at T.S.D."

" Career Education is a <u>vital part</u> of our curriculum. Our children need to be exposed to the world of work at this age. C.E. teaches the children responsibility and cooperation (team work) with others. We must start preparing our children at an early age if we want them to live successfully in a hearing world of work."

" Career Education is one of the most sensible and realistic ways to teach children. It provides for a flexible and creative atmosphere in the classroom and puts students in touch with "the outside world." Through the T.S.D. economy, my students have gained more experience about handling money, earning money and spending money than any other experience I could provide. They also began to understand by the end of the year that checks are no good without money behind it. In one of our C.E. class projects , one of my students came to the conclusion that the job she was doing was getting boring because she was doing the same thing over and over--and then concluded for herself about what some jobs are really like. After being actors and actresses themselves in another C.E. unit, we visited a T.V. station. They saw actors and actresses, told me what these people were doing and then asked some intelligent questions about jobs, earning money etc. Had they not had the experience themselves, I don't feel this would have happened. C.E. means exposure and gives the child something concrete to build her/his language upon. I wouldn't trade it for anything."

" The students in my class have:

1. become more aware of the jobs available to the deaf;
2. become more aware of the lifestyles that accompany various salaries;
3. been exposed to the educational level needed for white collar vs. blue collar jobs;
4. through role playing increased their communication skills and have developed a greater understanding of how language is very important in the working world.

Comments concerning the E.E. staff:

1. Where have they been this year? "

" I think Career Education is a wonderful program. It allows the students to really become involved-to get away from a structured classroom situation. It provides wonderful learning experiences and, the exposure in working with money and merchandise has been very helpful and meaningful for the children. The CE staff has been very anxious to help in any way they could. They have made helpful suggestions. The really only weak link in the program has been getting pictures back promptly. If CE pictures could be returned within 2 days it would certainly be more beneficial for the students-and the teacher. This serves as better reinforcement. Spring Spirit was a beautiful success. It provided a goal and a deadline for the children. This is very important. I hope this tradition is carried over for future years. The most important reason why I have enjoyed CE is because of the unlimited things to choose from in teaching. And the students can have a part in deciding what they'ld like to study and learn about. I'm for Career Education all the way. "

Comments as written by the

Junior High School Teachers

"We need to keep revising some of the courses to be more efficient. Some courses are excellent, some need revision to be better efficient, some need to be expanded and developed into courses and better courses, possibly through summer workshop. One or two may be eliminated. Restaurant course needs to be expanded. This is an excellent course to "learn on the job". We need a resourse teacher vitally if staff is disbanded. Evaluation of students interest and ability needs to be simplified in a nutshell to avoid excessive paperwork."

"I don't teach a C.E. class myself, but I think it"s an important and worthwhile part of the T.S.D. curriculum. The more the students interact with other adults in a job setting, the better."

"Career Education can be a fascinating "open door" for the students if it is done right. We started out the year on such high hopes, but have petered out as we saw all the problems coming. Some areas were not good units to teach(this is understandable and a disappointment for so much wasted time) such as the Restaurant or Clothing with no appropriate supplies and equipment (sewing machine.....). For some of the units, weekly supplies were easy enough to get. The students themselves began to lose interest after passing through 2 or 3 very unproductive and wasted units. The idea of moving a student out of one class if he wasn't that interested didn't work; thus you had many bored students. It's a shame Vocational and C.E. can't be combined. (It's impossible to really work in Auto Care when you have no car to really tear apart.) Units such as Photography have been successful because of plentiful supply of equipment and materials. As far as the teachers viewpoint----please cut the evaluation form to a 3"x5" card with things such as "shows interest", "Has good capablities in this field", "Has a future here," "Very cooperative,".....(limit to 4 or 5 areas to evaluate). Evaluations this year have an easy tendency to stay on a teachers desk because they look so cumbersome. (Even though we've been told you don't have to fill everything out----you fill guilty if you don't at least put N/A -- which takes time too.) Ditto for the students side of the evaluation! 2 or 3 check (✓) areas."

" For the most part, I felt that the activities(units) were worthwhile for the students. I do feel, however, that Plan I students will pick up most of the information later and would thus use C.E. for the Plan II students in Jr. H.S. The evaluation sheets were far too long. A short, to the point evaluation, I feel, is all that is needed."

"I did not feel prepared to answer this survey since I am not directly involved. I do think your program has seemed very worthwhile this year. I hope it can continue. I do feel that the students who function at the highest academic levels would benefit more from their science, social studies, math, and language routine. These are the subjects that will be covered in their college entrance exams. Perhaps the C.E. could be an extracurricular for them."

"I was very pleased to see most of your programs in action. They were programs which were worthwhile to our students. For example, your units on car care, appliance care, animal care seemed so beneficial to our students who are limited in experiences that normal children get in the home. I was only disturbed by one or two units, dealing especially with some product such as flowers made from cloth(which were sold) and especially the fact that they were made by some high Plan I students. It seemed that their time could've been used for something more worthwhile than such a craftsy project. Whereas such a project might've suited other classes better."

"On the whole, I think Career Ed. has served Jr.High students more effectively than the Voc. department. However, I do not think Plan I students benefit from such activities as working in the garden or making arts and crafts projects. I see no relationship between such activities and job selection for these students."

"Having not been involved in the Career Ed. program I am not familiar with its make-up. However the feedback that I receive from my students this is one subject area where they definitely have the advantage to actively participate. Most of it seems definitely relevant to their present and future needs. Perhaps it will help them see why they need to study and learn."

Comments as written by the

High School Teachers

" These comments relate to the limited use of C.E. curriculum in the high school. I feel that what use was made was time well spent. I would like to see more of C.E. in high school."

"Although I worked on the Career Education program and helped write some of the materials, I did not have any Plan II students or other students who participated in the program this year. Therefore, I do not feel that I can answer some of the questions."

"Since I don't have many students in C.E. I am not really qualified to evaluate the program, but have filled this questionaire as requested. I know of no written objectives of the C.E. program, so can not actually say whether they have been met. Having only two students in C.E. does not qualify me for answering questions 13-19."

"I am sure I sound like a ninny- I don't have any Career Ed. classes in High School as I teach all Plan I classes. What I know is mostly from write-ups in the Lone Star. I believe, as far as I know, that your program is a valuable asset to the school."

"Please understand that my responses are based on the fact the C.E. didn't quite make it into high school. Observing one teacher who was familiar with the program and incorporated it into her classroom, it was a huge success. However, personally I need more training and more assistance to incorporate the program into my classroom. I think C.E. a most worthwhile experience and hopefully will continue at T.S.D."

"I have the greatest admiration for the school personnel who so conscientiously and generously give of their time and ideas in order that students futures may be more productive and their places in the community more meaningful. Instilling into students honesty, self-reliance, cooperation, and courtesy should be our main goals, because without these qualities they cannot succeed in any career.The mechanics of a trade, together with the vocabulary and language that "go with it" cannot be over-emphasized."

"I feel the program was very strong in the elementary and Jr. Hi. schools but not enough emphasis was placed on the High school and Vocational schools. I think by the tome the High School student starts Vocational they should know about the world of work and start concentrating on a vocation or have some idea of what they want to do when they graduate."

"Since we did not have Career Ed. in Voc. I can not honestly say how the students reacted to it, although I think you can see an improvement in their attitude toward some Voc. Classes. I hope that we can continue to have C.E. and that we can get it in the Voc. Dept."

"We in Vocational work have had very little contact with the project coordinators and I feel that we have not been helped by it."

"I feel it was a very good project and should help our students and teachers in the future years."

"It is understood that there has been the good Career Education program provided at the Elementary and Junior High Schools however there is not enough one at Senior High School and Vocational School."

"In that I am a Vocational Teacher, I am not in a position to give first hand accounts, but from my observations, I feel that Career Education is a very valuable, and very worthwhile project. The students have so much to benefit from Career Education. I would hope that we, too, could be included in the C.E. program."

"As far as I have been trying in touch with the effectiveness of Career Education Project, I have admitted that I still need to have more and complete information about the project. I guess I am still getting lost in trying to be acquainted with the project."

PARENT OPINION SURVEY

The Career Education project staff are interested in how you feel about Career Education at the Texas School for the Deaf. There are no right or wrong answers to the following questions.

The answers that you provide to the following questions will be kept strictly confidential. Your name will not be used when the information is reported. Please respond to each question by placing a circle around the "yes" or "no".

SAMPLE SURVEY FORMAT

1. My child talks about Career Education at home. Yes No

2. My child has discussed my occupation with me. Yes No

3. My child shows more interest in discussing the occupations of neighbors, relatives and other people in the community. Yes No

The results of this survey are broken down by the parents of students residing in Austin and by the Houseparents of the Texas School for the Deaf.

		Parents	Houseparents
1. My child talks about Career Education at home.	Yes	90%	76.2%
	No	10%	23.8%
2. My child has discussed my occupation with me.	Yes	66.6%	68.2%
	No	33.3%	31.8%

3. My child shows more interest in discussing the occupations of neighbors, relatives and other people in the community.	Yes No	52.6% 47.4%	42.8% 57.2%
4. My child's attitude toward school has improved.	Yes No	71.4% 28.6%	50% 50%
5. My child is more enthusiastic about going to school.	Yes No	65% 35%	36.8% 63.2%
6. My child is more enthusiastic about the study of math, reading, science, etc.	Yes No	60% 40%	28.6% 71.4%
7. Does your child relate school activities to activities and occupations in the community?	Yes No	70% 30%	66.7% 33.3%
8. Does your child attempt to relate career education activities to his interests, abilities and desires?	Yes No	78.9% 21.1%	68.4% 31.6%
9. Has career education been what you expected?	Yes No	90.5% 9.5%	70.6% 29.4%
10. Is career education worthwhile?	Yes No	95% 5%	95% 5%
11. Should career education be continued?	Yes No	95% 5%	95% 5%

Discussion of Evaluation

For many years schools have enjoyed the unique position of not being held accountable for the quality of their product. Teachers have been allowed to operate their classrooms with little or no external interference. To many administrators, the teacher who showed up every-day and kept the students busy was meeting satisfactory requirements. While this situation has offered many teachers the opportunity to be more creative in their teaching, a systematic system of presenting appropriate experiences for the child must be designed.

The only way to know if we are providing appropriate developmental experiences is through evaluation. To many educators, evaluation is viewed as a threat, because it frequently forces change and identifies weakness with the system.

Schools for the deaf are not alone in facing these problems, moreover they are characteristic of many educational programs. The field of deaf education has faced multiple problems in evaluating its population therefore few instruments are designed to help school systems evaluate their program(s).

In using the instruments described in the beginning of this chapter we encountered several problems. Teachers

have been required to use inappropriate evaluation instruments (standardized tests) with their students; consequently the students often do not show the anticipated improvement that the teacher expects. Teachers have for these reasons developed a more negative than positive attitude towards tests or evaluation procedures with deaf students.

When junior high teachers were approached with an idea of setting up a student file with an evaluation of the students the general feeling was negative. The reasons they gave were that the file would never be used, it required their preparation time and they didn't feel qualified to evaluate students. A change of attitude came about when the school evaluator meet with the teachers and a definition of terms was compiled to help teachers make decisions.

We have found that to overcome the negative attitudes of teachers we must take time to adequately explain the reason for needing the information, show how the data could benefit the child and ask teachers to give input to developing the instrument or file.

In this research project we have found many deficiencies in our students and in our school curriculum. These deficiencies are of a magnitude that is producing a deaf graduate who is illiterate in terms of being

able to function in our culture. These deficiencies are not brought about solely because of the lack of any one group failing to do its job; rather, it is the responsibility of every capable person dealing with deaf students to work for an appropriate system of education. Such a system of education would introduce deaf students to a set of skills that are necessary to function in society and allow opportunity to apply these to a set of general knowledge areas peculiar to our culture.

Deaf students must be introduced to the skills and knowledge areas at an early age and constant reinforcement must be given until we can produce students who have had every opportunity to gain the performance requirements necessary to function in our culture.

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Chapter III

Career Awareness

I. Development and implementation - 1972-1973

A. Summer workshop

1. Task of participants
2. Elements for success
3. Inservice training

B. Structure of the elementary department

C. Content

1. Specific units
2. Continuing units

D. Summary

II. Development and implementation - 1973-1974

A. Workshop

B. Expansion

C. Structure

D. Content

C. Summary

III. Development and implementation - 1974-1975

A. Structure description and analysis

B. Content description and analysis

1. Specific units
2. Enrichment units
3. Continuing units
   a. Previous units
   b. Economic cycle

C. Summary

IV. Sample units description

A. Specific units

B. Continuing units

C. Enrichment

D. Summary

Career Awareness

To accomplish the goals previously stated, the awareness phase of the Career Education program was implemented through a series of job cluster units assigned to a specific grade level. These units were designed to take the students from the classroom to the world of work, so give the student "hands-on" experiences with materials and tools as well as opportunities to role play and simulate business activities.

Beginning with Phase I, career awareness was established as an integral part of the curriculum. The existing curriculum was rescheduled to make Career Education an interdisciplinary concept. This continued to be true throughout the project.

I. Development and implementation - 1972-73

A. Summer workshop

Task of participants

On the first day of the workshop the participants were given the best materials available on Career Education at that time. The participants were guided to search these materials and develop a broad concept of Career Education that the group could accept. They were not to use the entire workshop time to argue the philosophy of Career Education. They were to learn what they could from the available writings and then devise a scheme for implementing a program of Career Education in the fall of

1972. (The plan for a three-phrase implemention of Career Education has been described earlier in this report.)

The participants completed their task by the end of the workshop. However, a larger, more difficult task still lay ahead: convincing the elementary teachers to become involved in the implementation of Phase I.

Elements for success

Less than one-third of the elementary teachers had participated in the Career Education workshop. The other elementary teachers were to be introduced to the concept of Career Education, a new schedule, and, what would appear to them, another discipline in a few brief hours of inservice training prior to the first day of school. Realizing the enormity of the task of selling these new ideas in such a short time, the workshop participants and the Career Education staff decided that to guarantee any success with the program the following must exist:

1. Curriculum guides
2. Workable schedule
3. Freedom for the teacher
4. Alternative choices
5. Administrative interest and support
6. C.E. Staff reinforcement and involvement
7. Availability of money

During the six weeks of the workshop the participants wrote and printed curriculum guides and made recommendations for schedule changes. They were able to verbalize the

problems a department of teachers might face at the beginning of school and devise recommendations for over coming these problems. Part of the solution was in the recommendations for freedoms and alternative choices for the teachers. With the administration the participants openly and honestly discussed the type of admininistrative and project staff support necessary for the success of the program.

The following is a more detailed account of these recommendations for success of the Career Education project.

1. Curriculum guides

These guides must:

(a) Have an attractive, interesting, imformative, easy-to-follow layout (not the typical "wordy," crowded curriculum guide.)

(b) Be practical and ("what-to-do") activity oriented.

(c) Have listings and locations of resources.

(d) Have goals, purposes, and behavioral objectives for each unit.

Three such guides, written printed by the 1972 workshop participants, were distributed on the first inservice day of the fall semester.

2. Workable Schedule

For success of the program a workable schedule was necessary.

(a) A schedule was devised with a two hour Career Education/language period.

(b) The teachers were grouped into six teacher blocks with all teachers in a block having a common preparation period.

(c) The students rotated with the block to meet their required classes.

3. Freedom for the teacher

For the program to be successful teachers needed the freedom to:

(a) Choose to teach Career Education or not.

(b) Choose the units to be taught.

(c) Determine how the units would be developed.

(d) Determine the length of time to be spent on each unit.

(c) Leave the classroom and the campus grounds.

With administrative and supervisory support, the above freedoms were available to every teachers in the elementary department. A teacher truly could decide to teach Career Education or not. Many chose not to at first and used this period for language classes. The teachers using Career Education units could decide which units from their level to teach, could determine the time to spend on each, and could determine how the unit would be developed.

4. Alternative choices

After struggling with the concept of Career Education daily for six weeks and still finding it difficult to articulate what we felt to be true, we realized to some degree the difficulty a teacher might have with this new found "freedom." It was learned in the first weeks of school that the open two hours to be designed and managed solely by the teacher were frightening and threatening to some. Although all teachers were given a two-hour block for Career Education, they were given the option of teaching in a traditional manner another area as an alternative. That year the alternative area was language development. All teachers were given the available materials for teaching language to the deaf.

5. Administrative support

Both administrative and supervisory support were essential to the success of the program. But more than

support was necessary. Also, were needed:

(a) Genuine interest.

(b) Responsesiveness to new ideas.

(c) A freedom between Career Education staff, elementary teachers and their supervisors to sit down with the administration to discuss and work toward a common goal, preparing our students to cope with life in a fulfilling way.

(d) A willingness on the part of the administration to trust the staff and teachers with choices.

(e) Courage enough to allow experimentation, ability to change quickly enough to allow research, and caution enough to act wisely.

6. Career Education staff reinforcement and envolvement

The first year of implementation the staff consisted of the project director and a secretary. It was vital to the classroom teacher to have the project director's ideas and support as well as his vitality and insights to carry through the administrative procedures and to assist with some details of class projects.

7. Availability of money

Supplies and tools needed to be made available quickly, because the units were flexible in content, approach and length. Then, surplus supplies and tools needed to be properly stored and available to future use.

Inservice training

The inservice training of teachers to work with the Career Education concept was not completed in a few hours of traditional inservice training. The real development of the teachers in the area took place throughout the school year predominantly in two way.

1. The block rotating system

   (a) The block system with a Career Education workshop participant in each block, provided a subtle way to acquaint other teachers with what could happen in Career Education.

   (b) Every day the students spent at least one hour in a classroom where the teacher was excited about Career Education and was using its techniques.

2. Team teaching

   (a) Teachers who were enthusiastic about Career Education talked other teachers into team teaching with them on isolated Career Education units.

   (b) The other teachers had an apportunity to see how work could be planned and implemented.

   (c) Both teachers shared in the enthusiasm and excitement of the classes' experiences.

B. Structure

In the fall of 1972 Career Education was implemented for the first time at Texas School for the Deaf according to the guidelines recommended by the workshop earlier that summer. Career Education was first implemented in the third, fourth, and fifth grades.

At the same time other organizational changes took place in the elementary department. Two of the most important changes were:

1) Ungraded classes were discontinued. All students were placed in a grade level and then leveled by ability within that grade.

2) Classes would no longer be self-contained, but would rotate throughout the day.

One of the strongest recommendations from the workshop was for a two-hour daily block of time for Career Education for every child and every teacher. To create this two-hour block of time brought about complicated schedule changes for all classes. However, with the strong support of the acting superintendent, Mr. Jim Howze, this recommendation was given to Mrs. Carrie Abbott, supervisor of the elementary department. Their work combined with that of the project director produced the workable schedule for the year 1972-1973.

The structure of the elementary department in the fall of 1972-1973 involved the organization of the teachers and the students.

1. Organization of teachers

   (a) Every teacher assigned a two-hour Career Education/language period.

   (b) Six teachers to a block of teachers.

   (c) One teacher in each block a participant in the summer workshop.

   (d) Every teacher a mathematics teacher.

   (e) Every teacher had three periods of another discipline (ex. reading, social studies, or science).

2. Organization of students

   (a) Every student - two-hours Career Education daily.

(b) Every student rotated in the six-teacher block.

(c) Student's homeroom was the Career Education class and teacher.

(d) Student went daily to science, mathematics, and social studies, and physical education as well as one class of art a week.

STUDENT SCHEDULE

8:00 - 10:00 - Career Education/Language

10:00 - 11:00 - Science

11:00 - 12:00 - Reading

12:00 - 12:50 - Lunch

12:50 - 1:45 - Social Studies

1:45 - 2:40 - Physical Education

2:40 - 3:35 - Math

C. Content of Career Education

The content for the awareness phase of Career Education comes from specific units and continuing units.

1. Specfic units

Specfic units are outlined in the curriculum guides. The curriculum guides for each grade level states the goals as well as the general and behavioral objectives of that unit with emphasis on activities for accomplishing the stated goals and objectives. Each unit includes a list of available resources.

For example:

Category	Level 3	Level 4	Level 5
Agriculture	Farms (general)	Farm to Market (food from farm to wholesaler)	Market to Consumer (food from wholesaler to consumer)

2. Continuing units

During the first year of implementation, ideas were introduced and later developed into concise projects and units that are a permanent part of the program. The innovations were the banking system, Career Quiz, Project Share, The Little Worker, and Spring Spirit. These will be discussed in more detail under the description of the third year of implementation in the elementary department.

D. Summary

Through the block rotating system all students could see what was happening in effective Career Education teachers' classes. Many times these teachers were using Career Education experiences to enhance their other subject areas. Teachers who either did not want to bother with Career Education or did not feel comfortable with it began to hear frequently from their homeroom classes, "Why don't we do interesting things like Mrs. Blank's class?"

Team teaching provided opportunities for teachers to cope with conceptualizing Career Education. At the same time they learned together how to manage the block of time and to devise expansions of recommended activities.

By the end of the 1972-73 school year most teachers in the elementary department began to dabble in Career

Education, to try a unit here or there, or at least to pay attention to what was happening in active Career Education classes.

Enthusiasm was contagious. Teachers began to trust the freedoms and to see the potential for language development and a multitude of other relevant learning opportunities.

II. Development and implementation - 1973-1974

A. Workshop

The Career Education elementary summer workshop in 1973 involved elementary teachers as participants, a photographer, and media aids as well as the project director and secretary. The workshop goals were:

1. To make minor revisions in the original curriculum guides.
   (a) To delete some units and add better ones.
   (b) To locate and add to the curriculum guide all the support resources on campus.
2. To provide a quantity of good teaching photographs for each of the thirty-three units.
3. To design, write and compile student booklets for each unit with pictures and stories written on three reading levels.
4. To gather as much material as possible on each unit and file it in one of the thirty-six boxes purchased for the elementary department.

At the end of the workshop, the goals had been accomplished, leaving only the printing and collation of the student booklets to be done by the Career Education staff.

B. Expansion

In the fall of 1973 the Career Education staff was enlarged to meet the demands of the program as it expanded to more involvements in the elementary department and as it moved into implementation of a junior high curriculum. The staff now consisted of a project coordinator, curriculum specialist, media specialist, media aide, and secretary.

Two expansions were made to enrich the content areas. Student booklets, developed and produced on each unit, provided photographs and informational stories for the units. Each student had his own Career Education booklet on each unit. A collection of thirty-six large file boxes stored the language masters for each booklet, teaching photographs, and other materials for enrichment of the units.

C. Structure

1. The structure of the department in 1973-74 remained basically the same.

(a) Two hour block for Career Education.

(b) Rotating classes.

(c) All students with Career Education as their homeroom.

(d) All teachers designated as Career Education teacher

2. There were three basic changes.

(a) The department was reorganized from the six-teacher block to a four-teacher block with an experienced Career Education teacher serving as block chairman to assist new teachers and coordinate the block activities around Career Education.

(b) Career Education was designated as the content of the two-hour block; social studies was the alternate content.

(c) Every teacher taught language each day to his or her Career Education class but during a separate period. Therefore every teacher had the same students three hours a day and taught each of the other classes in the block the three remaining periods of the day.

TEACHER SCHEDULE			
8:00	- 10:00	-	Language
10:00	- 11:00	-	Reading
11:00	- 12:00	-	write words Reading
12:50	- 1:45	-	write words Reading
1:45	- 2:40	-	Preparation Period
2:40	- 3:35	-	Career Education

D. Content

1. Specific units

In specific units the content was basically the same, but much improved as the teachers became more skilled and creative in their teaching.

The student booklets provided reading material from which the student could learn for himself. The unit photographs contributed greatly to more effective teaching - expecially in the areas of vocabulary building and creative writing. The resource file boxes provided a manageable way of storing material. But more important was the fact that teachers had available, useable resource materials for their units.

2. Continuing units

Continuing units from the past year were improved and new ones were introduced.

The T.S.D. bank became more sophisticated. T.S.D. "real" play money was distributed to each teacher to pay the students for work done in Career Education classes. From September through January the money was earned and banked. The enthusiasm of the students appeared to slow down. We realized that we needed to give worth to the money by establishing a place to spend it.

The T.S.D. store was opened in February of 1974. (The store's benefits, problems and details of operation will be discussed later in the report.)

There were other changes. Spring Spirit was successfully enlarged. A winter and a spring garden were harvested by ten classes each season. Several Project Share experiences were developed during the year, the Little Worker was more widely distributed than the previous year.

E. Summary

This second year of implementation in the elementary department began with a different feeling on the part of the teachers. There was enthusiasm instead of dread. Both teachers and students appeared thrilled as they learned together through Career Education. All teachers participated at least occasionally and the large majority moved from unit to unit throughout the year, making Career Education a real part of the curriculum.

The enthusiasm and success of the second year of Career Education implementation in the elementary department was probably best expressed by two statements, one statement from a teacher, the other from a parent. The teacher's statement, as she dropped into a chair in the lounge, was, "I have never been as tired in my life, but you should see my kids. Something is always happening

and they are excited about learning." The parent's comment, made during a visit to the Spring Spirit Festival, was, "Will you tell me what in the heck Career Education is? My daughter doesn't want to miss school even when she is sick. She's afraid she'll miss something in Career Education."

Career Education had created a need to know and a climate for learning. It gave credibility to all other subject matter.

III. Development and Implementation - 1974-75

In the summer of 1974 no workshop involved the elementary department. By the fall of 1974 Career Education had become the fundamental of the elementary department.

A. Structure description and analysis

The structure remained basically the same as it was in 1973-1974 with the four teacher block and the two hour Career Education period. The classes rotated in fifty-five minute periods with the exception of the Career Education block. During this third year of implementation the total population of the elementary department actively participated in Career Education units. All elementary teachers were Career Education teachers.

The one structural change was in the choice of the alternative subject. In the Career Education slot social

studies became the alternative subject and language development was assigned a period by itself. Language development was scheduled for the first period for all classes. Each class had the same teacher for both language development and Career Education.

In addition to Career Education/social studies and language development each child attended daily classes in reading, math, science and physical education.

With a daily two hour period there was enough time to conduct field trips, participate in projects and to discuss, investigate and follow up on planned activities. There was, also, time for students to move at their own pace, to discover their abilities and weaknesses and to interact with classmates as well as resource people from the community.

During the first year of Career Awareness implementation, much discussion was held about combining Career Education with language development. It was true that a great deal of language was springing from Career Education experiences. The students had something to say, to write or to express. Much creative language was seen, but there was not enough time to work on language weaknesses or even to allow creative writing. There was often a struggle between squelching creative expression or deleting meaningful activities.

Looking closely at the textbooks and curriculum prescribed in other disciplines, we realized that almost all the social studies content and purpose could be covered in Career Education experiences. Career Education encompassed a great deal that social studies recommended for grades three, four, and five. The exception to this was some world geography and some U.S. history. Two questions prevailed:

1) Which was more important to our students as a whole: participating in activities which would make his life more understandable and meaningful or being exposed to facts and ideas of the larger world beyond their lives?

2) When the teacher thought it appropriate and meaningful to a class, could the teacher not cover the history and geography during the Career Education period?

It was decided at this time that the Career Education period should no longer include language as a discipline and social studies should be the alternate discipline.

Because the greatest handicap of deafness is not deafness itself, but language development, every phase of teaching should involve language development. Everything that is done as educators of the deaf is used as a means to the end of language development. For this reason it was decided every elementary teacher must be designated a language teacher, also. This serves as a constant reminder to elementary teachers that in all they do in other disciplines they must also strive to help students develop functional and creative language.

Since Career Education teachers saw in their students a new interest in expressing themselves, it was decided that the teacher should have the same students for Career Education and language development. Having shared Career Education experiences with the class, the teacher could have interesting content for language development work.

The modified rotation system used this third year took advantage of the best of the rotation plan for scheduling and the best of the self contained class plan. The students identified "their teacher" as their Career Education teacher. By having the same class three hours daily, the teacher had the opportunity to know one group of students very well. The three hours daily provided great flexibility in the schedule. An activity, started in Career Education, could continue during language class. A discussion or writing activity, begun during the first period of the day, could be completed or further developed during the Career Education period. By rotating the teacher could, ideally, concentrate on one other discipline for three periods a day. A teacher, during one day, would teach all students in the block from the slowest to the fastest, thereby providing a better chance to keep a clear perspective of student potential.

B. Content description and analysis

The content of the Career Education period in the awareness phase basically came from the suggestions in

the Curriculum Guides (3, 4, 5). A teacher may select any unit in his or her grade level and develop it as suggested in the guide or in any way that is interesting to the teacher and the class. This gives complete flexibility for the teacher to develop a unit according to the needs and abilities of the class. A teacher has the option to select a unit from his or her grade level or any unit in a previous level to which the students have not been exposed. But a teacher must not select a unit from any higher grade level. A teacher may design his or her own units around an area not covered in the guides.

No specific number of units must be covered in a given year. There is no specific length for any unit. Many units vary between three and six weeks. The length of a unit is determined by the teacher, ability of students, and interest generated.

Twenty-six treatments have been identified as ways to reach goals and objectives of specific units in the awareness phase of Career Education. (These twenty-six treatments will be listed and defined in the evaluation section of this report.)

One of the most effective treatments was the use of Career Education field trips, which in some ways were similar to traditional field trips. However, Career

Education field trips have some unique qualities as evidenced in the following list.

Purposes of Career Education field trips:

1. To expand the learning environment past the four walls of the classroom into the world outside the classroom with emphasis on the world of work.
2. To observe a wide variety of workers in their work setting.
3. To observe the interaction of workers.
4. To inquire about job requirements and training.
5. To interview deaf and/or hearing workers on the job.
6. To help students discover how they feel about themselves in relation to each area of work.
7. To expose students to the latitude of the process required to make a product or provide a service.
8. To help students appreciate the worth of all work.
9. To develop vocabulary related to the area of work observed.
10. To stimulate language and creative experiences.

A Career Education field trip may be a walking trip to the campus cafeteria, or a city bus trip to a photographic shop, or an automobile ride to a construction site. It may, also, be a field trip using school bus transportation. The field trips may go out of town or only a few blocks away.

During the third year of the project teachers began to initiate new units. These were called enrichment units and were developed in one of two ways. Some enrichment units resulted from the personal interests of students or their teacher. Other enrichment units were the spin off from curiosity generated by a previous unit.

All of the continuing units were improved. The fall vegetable garden was planted, cultivated and harvested by ten classes. Career Quiz, the weekly Career Education quiz program, began production in October and continued into April. Because of other commitments by the staff, The Little Worker newspaper was published less frequently than in previous years. The T.S.D. National Bank and the T.S.D. Store opened in October and operated weekly until the first of May.

The operation of the bank and the store as well as the system of paying wages for work done in Career Education classes developed into a complete economic cycle.

This economic cycle had several distinct elements. The means of exchange is T.S.D. "play" money. The money must be earned for specific jobs completed during the Career Education time. The money was banked at the T.S.D. bank and spent at the T.S.D. store. These experiences were a vital part of the daily learning experiences of each child. This economic cycle operated throughout the

year. Other units were going on, but the children were still earning, banking, and spending money, creating a very true to life situation.

A detailed description of the evolvement and management of this economic cycle appears in the appendix of this report under Elementary School Economy.

C. Summary

In the awareness phase of Career Education students were exposed to many and varying areas of work. They were exposed to and experienced the attitudes useful to an employee. They learned about responsibility, punctuality, and other attitudes, because they participated in activities where these attitudes were necessary for the success of the project. Or they saw an unsuccessful project because good attitudes were lacking.

The three years of the awareness phase of Career Education were designed to provide an environment where each student could gain a back-log of meaningful experiences from which to know himself, to make choices and to cope better with daily living.

There was no failure in the Career Education classes. For many of our students repeated success was a new experience. The Career Education class did not depend on the

"academic" criteria for success, so many students experienced acceptance and appreciation of their skills and abilities other than reading, writing, and arithmetic.

Career Education in no way deleted anything from the academic areas. Rather, students began to discover through teacher guidance, from their peers and on their own why reading, writing and arithmetic were important.

IV. Sample unit description

All units are activity oriented. We do not only talk about, "we do." Some units are built around a core of activities such as the fourth grade "Farm to Market" unit. Some teacher handle this unit with food processing, others around textiles.

One class of fourth grade students for example took dirty raw wool and worked it into wool yarn which was woven into cloth on hand looms as well as on a large floor loom. In doing this they washed, carded, spun, and dyed the wool. They saw movies, and slides, and read library books about the same experiences. At the beginning every student did every operation for him-or herself. Because they had time, the students learned for themselves that this was a slow process and they began experimenting with ways of improving the system. They discovered an assembly line process for themselves,

learning to use what each person did the best to the greatest advantage (some could spin better while others washed more thoroughly or carded straighter fiber). They experienced the interdependence of workers.

In the "Market to Consumer" unit another teacher extended the above experience, when they reached fifth grade, by exploring the textile and garment industry. The class visited a textile mill and saw all the cloth producing processes, they had done by hand in the fourth grade, done quickly by many workers operating vast machines. To extend it further they discovered the jobs and processes in making a garment. As a culminating activity, they took this knowledge and simulated some of the same jobs. For example they incorporated the jobs of the designer, pattern maker, cutter, sewer and foreman into the manufacturing of wall hangings by the assembly line process. This class later repeated the process figuring cost and profit to make products to sell at Spring Spirit Festival. Later, the class went on a Project Share expedition to a county wide school for the deaf in San Antonio. There TSD students on a one to one basis taught another class of deaf students to make wall hangings.

Among the numberous enrichment units introduced the third year, several were initiated by fifth grade classes. One very bright class explored "Cat Fish Farming",

learning that one man could turn a life time dream into a reality by persistent study and hard work. They learned how his career determined his life style. In this study the teacher emphasized a great deal of the science related to raising catfish. Another class studied "Taxidermy". In this unit the class explored the jobs, skills and training required in this business. The students and teachers were surprised at the artistic as well as the scientific knowledge required. Still another class introduced an extensive unit on "Communication Careers". The class not only became involved with the world of careers in the communication field, but, also, with the history of communication. They visited KLRN and saw a television show in production and interviewed people with various jobs in television. Later, the class wrote, produced and video taped their own television shows. One other aspect of the unit involved experience in the process of silk screening. This led into learning how this skill could be used commercially in advertising and publications. In this unit the cover for this report was designed.

Generally classes worked singly or in pairs on units. The two upper third grade classes often worked together on field trips and activities where large numbers were beneficial. These two classes liked best the unit work on the "Post Office" and the "Dairy Farm". Both units included studies of transportation. Observing the

nature and ability of her class of plan II boys, another third grade teacher decided to spend the better part of the year on a unit intitled "Living Skills". Goals, content and activities for this enrichment unit were determined by the present and future needs of those boys in the same way that the other enrichment units were devised for the academically above average students.

At the end of the year teachers in the elementary department were asked to list the units they felt most beneficial to their classes this year. It was surprising that in most cases teachers within a block listed different units, although they may have teamed together to teach. When asked about this, the teachers explained that the flexibility of the awareness phase of Career Education allowed them to create to the maximum a learning environment determined by the needs and interests of their students. Even though they may have teamed together to teach they had the flexibility to individualize learning experiences. The selection of the most beneficial unit reflected this flexibility.

There is no better way to summarize the awareness phase of Career Education than to quote excerpts from the comments added by the teachers in the elementary department when they completed their last Career Education questionnaire.*

*(The tabulation of the questionaire and all the comments from teachers will be printed in the evaluation section of this report.)

One teacher stated, "I cannot emphasize too much how much interest and enthusiasm for school has been stirred up by Career Education.. Attitudes and personal discipline are discussed and daily practiced. Responsibility is built into their character instead of being pasted on by a few unreal classroom activities..... No simulated, sporatic, state classroom activities can take the place of a well developed Career Education program. I have seen bored, unreachable children come alive when school starts having real meaning."

Another teacher said, "Career Education is a very worthwhile integral of our teaching core. Courses are interrelated with Career Education, and worthwhile teaching projects for language, math, social studies, and science emerge. Using Career Education as a focal point we can build and unify all subject areas with a goal and an enrichment for our students."

Another teacher's comment was,"Career Education has been the main class where the children walk in smiling, eager to work and more eager to be taught. All the children were constantly asking what we would do, when? how? and why? They were totally involved in the program and were cooperative. I feel that much was taught during these hours and a responsive class retains 90% of what is taught. Career Education was the "door" to language, human values and social growth. Career Education

awakened the "slow learner" and included him in all activities. Class projects included everyone. This was the inner beauty of the program."

The awareness phase was developed and implemented by the envolvement of experienced and creative teachers, students, administration and Career Education staff to reach the underlining goal to develop, each at his own level, self managing, productive and contributing citizens that could appreciate the worth of themselves and their work and the worth of others and their work."

The great impact of Career Education is not in the realm of measureable knowledge or skills. The great impact is in the almost immeasureable realm of attitudes that must be caught not taught.

CHAPTER IV

Career Exploration

I. Introduction

II. Original Concept

III. First Exploration Workshop

IV. First Year of Implementation

V. Model City Concept

VI. Second Junior High Workshop

VII. Year of Refinement

Career Exploration

I. Introduction

The participants of the first Career Education workshop in the summer of 1972 decided that the implementation of the program should be divided into three phases. Career exploration would be the second phase of the program. The participants in the first workshop worked primarily with the elementary awareness phase; however, they felt the exploration phase should build on the elementary program and would basically give the junior high student more hands-on experience than the career awareness phase.

During the first year of the project the Career Education staff began to implement the elementary awareness phase. Many of the teachers that had worked in the summer workshop elected to work on curriculum as their extra duty activity. During the year these teachers served as an advisory group to the staff in regard to the elementary Career Education program. The group began to work on designing a program for junior high school in January of 1973. The scheduling problem for junior high school was much more complicated than it had been for elementary. The junior high students were already going to the vocational school two hours per day and a Career Education program at this level had to offer the students information that was not covered in the vocational or academic departments. The teachers did feel that there was a gap in the junior high students' exposure to careers and that

Career Education was necessary at this level. The committee felt that the vocational teacher did not have the time to present the career vocabulary and teach the skills of the trade because the junior high and high school students were being taught in the same classes. The committee struggled with this problem for several months, then came up with the first concept for the exploration phase.

II. Original Concept

We felt the primary concept of Career Education on the junior high level should be exploration of the world of work in a more specific way than in the elementary department. Originally the emphasis was the coordination of academic classroom study with experiences in the vocational school. Students would attend a block of vocational shops, the skills of these shops all being interrelated, such as photography, printing, and commercial art.

A contingent academic classroom unit, in this instance on "grahic communication," would provide language development pertinent to all three vocational shops and stress the product's relationship to the consumer and society as well as to the producer.

A projected curriculum structure, it was felt, could consist of a two-hour block of Career Education integrated into the daily curriculum. The academic and vocational teachers would, in effect, be team teaching. Students would spent one hour in the classroom and the other in the workshop.

The original goals for exploration were to:

1. Provide "hand on" and/or job sample experiences in many jobs.
2. To provide a curriculum which would combine vocational skill training and academic development in the form of consumer education and vocabulary reinforcement.
3. To provide experience and counseling so the eighth grade students would be able to narrow the number of courses available and select three courses in which to study in more depth during the ninth grade.

The chart on the next page shows our original concept for junior high school exploration.

This was perhaps a radical idea considering the structure of the school and it's traditions. But nevertheless it was the concept embraced in our first summer workshop for junior high in 1973.

III. First Exploration Workshop

The participants in the second workshop were primarily teachers from the junior high, high school departments,

GRADE	QUARTER	CAREER CLUSTER	VOCATIONAL SHOPS	CONSUMER EDUCATION
6	1	construction	drafting, woodworking, building trades	construction
6	2	household furn. services	clothing, upholstery, cleaning and pressing	household
6	3	agriculture	horticulture, foods, bakery	agriculture
7	4	health and family	health education, grooming, medical aid	health and family
7	5	business	office training, cleaning services, basic electronics	business
7	6	transportation service and repair	auto mechanics, driver's education, metal work	transportation
8	7	graphic communications	photography, printing, commercial graphic arts	graphic
8	8	consumer education	world of construction, world of manufactoring, junior achievement project	*FREE
8	9	counseling and evaluation	*FREE	*FREE

*FREE SPACES WILL ALLOW FOR CHANGES TO MEET SCHEDULING PROBLEMS.

and vocational departments. An attempt was made to select vocational teachers from several different trades so a variety of input was available.

The basic guidelines had been discussed during the year so the teachers in the workshop had little to discuss, therefore, they immediately began dividing up the various career clusters and writing units.

There was a little reorganization from the proposed chart and the final list of job clusters was as follows:

Grade 6

Health Education

A. Health Education

GRAPHIC COMMUNICATION

A. Photography
B. Typography-Presswork
C. Lithography

AGRICULTURE AND FOODS

A. Horticulture
B. Foods and Food Services
C. Baking

Grade 7

HOUSEHOLD & PERSONAL SERVICE

A. Clothing
B. Upholstery
C. Cleaning and Pressing
D. Cleaning Serving

CONSTRUCTION

A. Drafting
B. Woodworking
C. Building trades

TRANSPORTATION SERVICE & REPAIR ORIENTATION

A. Auto Mechanics
B. Drive Education Concepts
C. Metal Work

Grade 8

BUSINESS TRAINING

A. Business Machines
B. Business Mathematics

CONSUMER EDUCATION

A. Moder Consumer Education

CAREER ORIENTATION

A. Employment Orientation

The participants wrote a unit for each of the courses, these were later printed into teacher guide-books for grades six, seven, and eight. During the workshop some concern was expressed as to the exact nature of the implementation of the units into the curriculum. It was felt, however, that scheduling could be worked out as it had the previous year with the elementary department.

IV. First Year of Implementation

Scheduling proved to be much more complicated than anticipated; therefore, it was impossible to set up the vocational-academic teachers team-teaching situation as visualized in the original concept for Career Exploration.

In the first month of the school year it was decided that the science teachers would be the most qualified to teach Career Education. Unfortunately few of the science teachers had attended the workshop. Therefore they were unfamiliar with the concepts and goals of Career Education. The science teachers had little insight into the potential of this new discipline, and it appeared to them that they were being forced to give up science for Career Education. A few units, however, were completed - in fire prevention and first aid.

By October it was decided to reorganize the junior high assignments so that all teachers in the junior high department would work with Career Education. Several meetings followed this reorganization and we attempted to make all teachers infuse Career Education into their discipline. Progress was slow and resistance was high because teachers did not really have the guidance or materials to start "teaching careers" within their traditional curriculum. All the teachers in the junior high school were assigned to work on curriculum as their extra duty assignment so they had to face the problem of Career Education infusion each week. As the junior high school department teachers, supervisor and Career Education staff sought a workable solution, meetings became tense and many participants apathetic.

After much discussion and frustration the following problems were identified:

1. Many of the academic teachers were not familiar with the skills or vocabulary taught the students in the vocational department.
2. The academic teacher needs tools, equipment and materials to teach the vocabulary for vocational concepts.
3. Field trips interfered with performance of other classes because a trip could not be made in the 50-minute class period.
4. Students in the academic classes were enrolled in many different vocational shops.

5. Teachers were caught between teaching their assigned discipline and trying to "work" Career Education into their class.

The department had struggled for two months trying to infuse Career Education into the curriculum.

V. Model City Concept

By mid-November it was decided to try another approach. A unique idea of establishing a model city for the entire department was conceived. It was felt that the community concept would offer students the opportunity to see the relations and dependencies of one career upon another. A large van approximately eight feet wide and thirty feet long was to house the small city. Tables were set up and large pieces of plywood marked off into two foot squares were put into place. Each class was given a two foot square of the community to develop.

Each teacher worked with one or two of their regularly scheduled classes to contribute to the development of the model city. Each class supplied services or represented a cluster of jobs in a city. For example, a science class would be responsible for all electrical and construction work. Other classes were concerned with horticulture, water, and medical services. Math classes would work on banking principles, lend money for con-

struction and set up savings accounts. Language classes established a city named Young City and a city newspaper entitled the Young City American. This student-published newspaper carried articles about Career Education activities and general news around the campus.

The social studies classes studied basic governmental principles of a city election. A campaign was conducted and candidates appeared on our closed-circuit TV; all students in the department registered and later voted for a mayor and city council.

By December classes were given a deed to their property and began to be paid by check for their undeveloped property. Classes guided by the teacher decided what they wanted to study and establish on their property. Some classes opened accounts in the bank and the science classes studied construction and built small houses and a hospital. Field trips to the electric company, hospital, and the newspaper reinforced class study about specific jobs.

In theory the model city would allow a class to decide what they wanted to establish, get a building permit from the city government, borrow money from the bankers, contract with the science classes to construct their building, establish their business, advertize in the city newspaper and be involved in figuring a budget

and paying wages.

The model city concept was a unique alternative and a highly activity-oriented approach to Career Education. In reality the concept demanded an extreme amount of coordination and cooperation between the teachers, Career Education staff and the school administration. The concept met with moderate success because of the complexities involved; some teachers were quite pleased with the concept while others felt it was a waste of time.

In the spring of 1974 some teachers began to fall back to using the teachers guides that had been written the previous summer. Special units were taught on photography, auto care, woodwork, and clothing. The success of these units began a reshaping process that ultimately lead to the reexamination and overhauling of the program that would once again reshape our approach to Career Education in the junior high.

It was through the efforts of our most enthusiastic teachers that a concentration on specific career fields began. This would eventually lead to the consolidation of separate Career Education classes. However it was in the second summer workshop that this approach crystalized into a viable reality.

VI. Second Junior High Workshop

The previous year had taught us many valuable lessons as we came to realize our original idea of utilizing both classroom and vocational shops was not feasible at that time.

As we approached the second workshop we had more experience in dealing with the junior high school child, teachers and supervisor. We especially appreciated the importance of a schedule to make a program work. It perhaps took this year of struggle to change all of our attitudes and ultimately to unify the Career Education staff and the junior high personnel to the point of being able to work together.

The junior high school supervisor and the Career Education director took a closer look at the class requirements for the junior high school. These two administrators felt that it would be possible to set aside one hour per day as a separate time for Career Education. It was decided however that plan I eighth grade classes would not benefit from Career Education as they would from their college preparatory classes.

With the establishment of a one-period class time for Career Education, the groundwork was laid for the second workshop.

The teachers who would probably teach Career Education the following year were chosen to participate in the workshop.

The workshop participants decided to build on the ten general topics selected in the first workshop in the summer of 1972. There were :

1. Food Products
2. Protective Services
3. Agriculture Service
4. Social Service
5. Transportation
6. Construction
7. Media Communications
8. Business
9. Maintenance
10. Industrial

From these ten general topics we developed seventeen specific units. Each unit then became a six-week course which would be taught during the next academic year.

Because we believed a career should play a developmental part of an individual's life, so should the education that he is given to prepare for a career. Thus the units build foundations in many areas of a student's life.

These units were divided into three grade levels. The following is a list of units divided into their respective grades.

GRADE 6	GRADE 7	GRADE 8
HEALTH	FOODS & NUTRITION	RESTAURANT OPERATIONS
FIRST AID	HORTICULTURE	CAREER EDUCATION
CLOTHING CARE	BUILDING CONSTRUCTION	CAREER EDUCATION
STYLE & GROOMING	PHOTOGRAPHY	ELECTRICITY
AUTO CARE	ANIMAL CARE	PUBLICATION & ILLUSTRATION
WOODWORKING	ASSEMLY LINE	HOUSEHOLD DECORATION & MAINTENANCE

Out of the above courses all but assembly line and publications were written into units. The department would function independent of the vocational departments and would require its own tools to introduce the students to hands-on experiences properly. Several sets of tools were identified and ordered for each of the units. Teachers traveled to several businesses and gathered materials and supplies.

Enthusiasm was generated as a new approach was developing. The new courses were not as unique as the approach the teachers were visualizing. The units became highly activity and business oriented. It was felt that the background provided in the elementary department gave the older junior high student experiences with which to build more sophisticated skills. The horticulture unit would build into a florist shop, students would actually make and sell corsages for homecoming; A restaurant unit was

written with activities that would teach students the skills of food preparation, business management and food service. The new approach had become a combination of the skill development of vocational and the consumer-producer concepts of the model city.

VII. Year of Refinement

The primary problem from the previous year had been the lack of structure in both the Career Education curriculum and its implementation into the existing junior high curriculum. By this time several approaches had been tried, but the right one had evaded us.

In our last year of the three-year program and the second academic year for our junior high program the results of our trail-and-error year bore fruit. The junior high school supervisor had designed an ingenious schedule that permitted much flexibility. It was possible to teach classes every six weeks but even more unusual, it was possible to exchange classes between teachers without disturbing the department schedule.

The flexibility of the schedule permitted some teachers the opportunity to teach the same unit two or three times if they preferred. On the other hand, some teachers wanted to keep their classes, get to know their

students better and change units every six weeks. The schedule gave all but one of the teachers teaching Career Education the same preparation time. This period was invaluable to help solve department problems and to disseminate information.

As the year began six teachers were teaching Career Education. Some teachers were teaching several classes while others had only one or two classes plus their duties in other disciplines.

The small group of teachers that had worked in the workshop were confident as they began the year. A mix-up in ordering many of the tools caused some anxiety as the teachers moved into their second six-week units. Mr. Harry Boyd was assigned to work with the teachers and assisted in buying many of the supplies that had not been ordered. Many interesting units developed as the year progressed.

As the new approach began to take shape the junior high school student was exposed to several experiences. The First Aid course taught survival techniques as students earned basic certification from the Red Cross. A nutrition unit featured work with the Dairy Council and their "Rat Pack," a six week experiment on the diet of two white rats. General knowledge courses exposed the student to clothing care such as sewing buttons on shirts and patch-

ing jeans. The course on electricity taught students a respect for electricity and also emphasized the basic wiring for a house.

A unit on building construction was done through the actual construction of a two foot by three foot house complete with a real concrete foundation. The house had plumbing and electric lights. The teacher was able to teach about sixty different jobs by using this method of instruction.

Another unit on household decoration and maintenance taught practical skills: how to putty a window, fix a door knob and color-coordinate furniture to wall coverings. Units on restaurant, photography, and horticulture emphasized the business concept as well as the skills.

In these units students actually established a business that sold a product. In the horticulture unit students learned the art of making homecoming corsages. Students took orders and sold corsages to staff, students, and parents. An assembly line was set up and students put the corsages together by taping florist's wire, tieing ribbon, packaging and delivering their product. Students had to keep track of money and make sure all deliveries arrived in the proper place.

A photography studio was established in which students learned photography skills and made portraits of other students. A restaurant unit also emphasized business operations as students learned to figure out a budget, shop, prepare, and serve meals to school staff.

The wide variety of experiences at the junior high school level exposes students to many careers and enables them to actually learn some of the skills and tasks involved in the jobs.

The staff feels that the preparation given at the junior high school level will make the student better able to select courses at the high school level and make his secondary training more meaningful.

CHAPTER V

Career Preparation

I. High School Summer Workshop

II. APL Study

III. APL tests given to high school students

IV. Career Education Labs

V. Modular Learning Stations

Career Preparation

In the summer of 1974 a Career Education workshop was held to make plans for the development and implementation of phase III of the research project. The workshop was commissioned to design Career Education curriculum for plan II (non college bound) high school students.

During the first morning the group was oriented in background C.E. materials and was brought up to date on the work of the C.E. research project at the elementary and junior high school levels. The task and population for the two week workshop was defined. The task was to devise a Career Education curriculum that would strive to meet the immediate and future needs of plan II high school students. The plan II student was defined as that student who would probably enter the world of work after graduation, rather than pursue a post-secondary education. The primary focus was upon Plan II students who received training in the vocational education department under Mr. Phil Marshall and his staff.

During the orientation Mr. Marshall spoke to workshop participants who were academic high school teachers, vocational teachers, vocational education teachers and houseparents. At this time Mr. Marshall coined a phrase that will continue to be a key in our discussions about Career Education. Mr. Marshall said, "Career Education creates the need to know."

After this orientation the project director led

the group in a discussion and a listing of the things that our high school students need to know now and after graduation. The list became lengthy, so the participants were divided into groups and asked 1) to make a list of these needs and 2) to divide the needs into categories or subject areas where the need could best be handled. After many hours of frustration, listing and grouping what appeared to be never ending needs, the group was introduced to the Adult Performance Level Study. (4) In this study Dr. Norvel Northcutt, the University of Texas, and his research staff had identified what an adult needed to function literately in our society and had developed a test to determine an individual's strengths and weaknesses in each of the areas defined.

"The APL Study is an attempt to operationally define literacy in terms of the skills (reading, writing, and computation) and knowledges needed to be proficient in certain areas of need which have been identified as being important for survival in our society. In its limited way, the APL Study is an attempt to define "funtional" literacy in terms of observable behaviors in certain skills relating to a set of needs which have been tentatively identified as being important to "success" in adult life." (4)

The research states that an adult must achieve a minimum level of competency (performance) in six general

knowledge areas - occupational knowledge, consumer economics, health, community resources, government and law, and transportation. The minimum performance level within each knowledge area is determined by the performance in the basic skills areas - reading, writing, speaking (listening), computation, problem solving, and interpersonal relations. The APL Study also lists goals, objectives and tasks that may lead to competency in each of the knowledge areas.

Because the information was still research and not widely distributed, we contacted Dr. Northcutt and received permission to use their findings in the Career Education research project at the Texas School for the Deaf. The workshop participants took these objectives, goals and tasks and adapted them to the needs of the deaf. Later, the group designed activities for each objective and task. After completing this massive task, they made recommendations for injecting this information into the present school curriculum. At the end of the two weeks a workable solution was not found for the dissemination of this valuable information to high school students.

During the school year 1974-1975, the high school teachers from the workshop used the activities and materials in teaching some of their classes. Contact was again made with Dr. Norvell Northcutt who introduced us to Dr. Nina Selz from his staff. Viewing the workshop results, Dr. Selz made favorable comments about the efforts. It was the first time their study had been used in the

development of a curriculum. While talking with Dr. Selz we learned about the APL test and became interested in testing our high school students.

To understand our excitement about locating an instrument for testing individuals in the areas so vital to their everyday life, an appreciation of the scope of this study is necessary. To effect this appreciation we will quote and paraphrase from Dr. Northcutt's report, "Functional Literacy for Adults, A Status Report of the Adult Performance Level Study". This report states "1)Literacy is a construct which is meaningful only in a specific cultural context, 2) Literacy does not consist of a single skill or a set of skills. Literacy is two-dimensional, rather than uni-dimensional. Literacy is best defined as the application of a set of skills to a set of general knowledge areas which result from the cultural requirements that are imposed on members of a culture."

The APL Study uses an index which is a composite of 1) income, 2) level of education, 3) occupational and 4) a measure of expressed personal satisfaction with one's vocation and general status in life. After extensive field testing with 7,500 adults across all demographic groups and geographic areas, the best test items were selected to produce an evaluation instrument for adult performance level.

Dr. Selz offered to provide these tests for our high school students and to orient us to the testing procedure. Because Dr. Selz and her staff were not familiar with the testing situation with the deaf, we enlisted the help of Ms. Marion Pharr, Counselor for the Texas School for the Deaf. Because the Adult Performance Level is administered orally to hearing adults, to administer the test similarly to the deaf required that the test questions be read and simultaneously interpreted into sign language for the students. To prepare the test and be sure that the sign language used did not invalidate the test, Ms. Pharr wrote each questions using the words she would actually sign. These questions were check by the project director for clarity and by Dr. Selz for validity. T.S.D. high school students responded to the same test form used by hearing adults. On the forms both the questions and choice of answers were printed. A transparency was made of each test page. On the transparency the question and choices of answers appeared in the language to be signed by the tester. The APL test was designed to be given as an oral test, not dependent on reading skill. The situation described above, as nearly as possible, made the test situation for deaf students comparable to the test situation for hearing adults. All high school students were tested except three classes of very slow plan II students. These tests were scored and computerized by Dr. Selz and her staff.

It was at this time that the project director introduced the C.E. staff to the idea of developing a Career Education lab (similar to an individualized instruction reading lab) for the dissemination of the information accumulated in the previous summer workshop. After discussing the idea repeatedly, the staff began to crystallize their ideas for producing self paced, self testing individualized instruction modules for each of the six knowledge areas identified by the Adult Performance Level Study.

Earlier in our research project we had worked with Dr. Louise Jackson in developing a reading hierarchy for T.S.D. and in coordinating a reading workshop under Dr. Jackson's leadership. Dr. Jackson, formerly from the teaching staff of the University of Wyoming and North Texas State University, was at that time the director of a model reading lab program at Becker Elementary school in Austin. Being familiar with her expertise in developing a well coordinated reading program that was self paced and self testing, we felt her to be the link to developing the Career Education high school lab. Dr. Jackson was contracted to conduct two half day workshops and to guide us in devising a set of procedures for the creation of each module in the lab.

In the first workshop, Dr. Jackson met with the C.E. staff, interested high school teachers and vocational teachers. Dr. Selz and Debbie Hitchcock from the APL

research staff joined us. Meeting with the group, also, were Mr. Ray Hallard, T.S.D. Principal for south campus, and Mr. Gwendel Butler, Coordinating Supervisor for the high school. At this initial meeting, Dr. Selz and Ms. Hitchcock explained the APL Study and their role in its development. Dr. Jackson explained her experience and something of her conversations with the C.E. staff that had led to this meeting. The Career Education staff explained the dissemination problem and our recommendation for at least part of the solution to the problem - the C.E. lab. From this meeting came two major recommendations: 1) that a model prototype module be developed by this group from a selected knowledge area; 2) that a lab be developed and operational by the following school year.

The first recommendation was narrowed down to creating one prototype module on "How to Buy a Car". The recommendation was that in two additional Saturday meetings the group create this first module. The feeling was that with a prototype module it would be easier to explain and to get the money, permission and time to develop the entire process. Everyone involved with the Saturday workshops was excited about the potential of the lab. The C.E. staff was equally excited because they had felt the deep frustration of knowing the need of the students, having the information reasonably available, but without a line for dissemination.

We feel that the Career Education high school lab could provide the necessary skills to function as a

literate adult. Any student who tests out in an area does not work that station and he is recorded as having passed. If a student tests out as working functionally in all areas, then he does not come to the lab. If he tested high in many areas and weak in a few, he would only work on the modules where he is weak.

The workshop participants designed the structure, decided on the kind of packaging and began work on the prototype. They studied techniques for individualizing instruction under Dr. Jackson, and were excited about completing the prototype module and testing it briefly in the late spring. The work on the prototype modules ceased when it was determined that it would not be feasible to fully implement the proposed Career Education program during the following year in the high school department. The following is a statement by Dr. Jackson in regard to "modular learning stations".

> "In curriculum development the inevitable problem arises, how will the materials be disseminated? How can they be organized and/or packaged so that they will be used to their maximum effectiveness in a variety of situations by a variety of people?
>
> One approach used with considerable success involves the development of "modular learning stations." A station is designed to teach a

general concept, primarily on an individualized basis. A variety of self-teaching materials are planned to be appealing to the age group(s) involved. The materials are attractive and varied in approach. Each learning station will contain several separate activities, all intended to teach the same idea, but via differing methods.

Each learner is responsible for using the materials at the learning station in any order he wishes and as many times as he needs until he requests a short test to ensure that an acceptable level of learning has indeed taken. When the test is passed, he moves to the next learning station and begins work on the next concept. Where the age or motivation level makes it appropriate, extrinsic rewards may be offered at the completion of each station. The very nature of "passing" each station and moving along a continuum is in itself a strong intrinsic reward.

The tasks facing a curriculum development team using this organizational structure are to:

1) Break down a major learning goal into a series of smaller, more specific sequential goals.
2) Design a number of self-teaching materials that will provide the necessary experiences to learn each single goal. Included will be short video tapes where other, more traditional, materials are not appropriate.
3) House all the materials for one teaching station together on a table-top desk or in a reinforced cardboard container and clearly label the station with the goal to be accomplished.
4) Design a short test so that goal accomplishment can be determined.

Once the teaching stations are designed for a particular unit, the materials may be checked out for use in a classroom or as an enrichment for continuing education. With basic care, the same materials are reusable for several years."

Chapter VI

Procedures for Program Modification

I. [illegible] for Change at T.S.D.

II. [illegible]s for Program Modification

A. Making teachers a part of the team

1. Workshop
2. Inservice
3. Inter - action
4. Sounding board

B. Change through Structuring Situations

C. Service to Teachers

1. Resources tools and supplies
2. Field trip arrangements
3. Media services
4. Petty cash
5. Technical assistance

D. Personal teacher motivation

1. Personal interest
2. Newspaper publicity

III. Conclusion

Climate for change at T.S.D.

Before the project began, a climate for change had been gathering momentum for several years. The school, under the administration of Mr. Douglas, had expanded and had acquired new technical facilities.

Funding had been secured for a new drivers education program, vocational education program for special students, a computer-assisted instruction lab, and a closed-circuit television studio. The Bobbye Tutt study, which served as a catalyst for Career Education, had also been initiated.

School communications had begun to strengthen between teachers and administrators on campus when Mr. James Howze established a teacher committee to help plan inservice training for the fall of 1971. This committee was retained the following year and served as a source of input to the administration. The growing cooperation between teachers and administrators initiated by Mr. Howze, combined with the Career Education proposal submitted to the Texas Education Agency, made the first Career Education workshop possible and successful. The State had just begun to study and adopt Career Education; the proposal T.S.D. submitted to TEA was among the first to suggest a curriculum change based on Career Education.

During the interim between superintendents and prior to the first workshop held in June 1972, many positive

changes occurred. The school did away with the certification plan for Plan II students; all students were awarded a diploma after earning the proper number of units. The ungraded program was disbanded and every child was put into a grade level.

The general attitude of the participants in the workshop was that they had the full support of the administration. They felt that the administration really cared and that any recommendations made would be considered. In retrospect, all of the elements necessary for change were present: (a) there was a social, political and educational climate created among the people who were in a position to make change and (b) the people who were to bring about change favored this change, understood the reason for it, were sympathetic with the new programs and had a personal dispostion and desire to improve the quality of education provided children and young pepple. (6)

To bring about a significant change within a school, it is necessary that key people be available who have the proper combination of authority, responsibility and funds to alter the curriculum. Most change within a school is effected by new developments in the field. New techniques are most often presented in professional meetings and/or workshops, and later applied at the local school level. The following criteria should be helpful to school administrators in the selection of personnel to attend

meetings and/or workshops, in order to maximize the potential for constructive change within the system.

1. The school should provide sufficient funds and time for personnel to attend meetings.
2. Personnel selected should have time to study the new data after they return to the school.
3. Personnel selected should have some degree of insight regarding their own situation.
4. Personnel selected should have the ability to assimilate new data and extract useful information from same.
5. Personnel selected should have the ability to disseminate acquired techniques and ideas to other staff members.
6. Personnel selected should have the authority and responsibility to make changes within the system.
7. Personnel selected should have the ability to make administrative judgements.
8. Personnel selected should have the ability to persuade other staff members to accept change.
9. Personnel that have money made available to them make changes upon returning to their school, being accountable for the results.
10. Personnel with time and ability to follow through with plans and evaluate results.

The members of the Career Education staff feel they were given many of the above freedoms and responsibilities and consequently believe this is the reason many of the changes in Career Education at Texas School for the Deaf came about between 1972 and 1975.

III. Methods for program modification

We have utilized several ways to bring about change at T.S.D. in this project. We have found that to really bring about change within a school system you must make the teachers and administrators a part of the change. The following paragraphs will give some guidelines of our approach to bring real involvement to the project.

A. Making teachers a part of the team

A program's success or failure depends upon the support of the teaching staff. If teachers do not feel that the program is important to the lives of their students, the program will be of little value. Realizing the importance of the teacher, we brought them into the planning roll through workshops.

1. Workshops

During the three years of this project we have had five workshops: two for elementary, two for junior high school and one for high school. We have utilized sixty-one participants and had a total of nineteen weeks of workshop. Participants were drawn from our east campus, elementary, junior high, high school, vocational, vocational education and cottage life departments. This wide range of i ut to the program has given most of the teachers a chance to participate. Details of our methods for conducting workshops can be found in other sections.

2. Inservice training

A second way we have made teachers feel a part of the team was through inservice training. This training must be preceded by the staff establishing rapport with the supervisor, teacher and students. When the staff has established rapport, it is easier to determine the needs of the teacher. Once needs are identified, the staff member isolates one need at a time and discusses it with the teacher. It is best if both teacher and staff member can arrive at a process for solving the need. At this point the teacher begins to implement solutions and the staff provides the service and guidance to aid in the implementation. After the task has been completed, honest feedback from the teacher will help both the teacher and staff member in analyzing future problems and solutions. The key to this relationship is again the establishment of a rapport which fosters an honest dialogue between the teacher and the staff.

3. Interaction with teachers

A rapport can be established with some of the teachers during the workshops. These key people usually identify with the staff as having a part in the cause for change. During the first year it was as if the staff and workshop teachers were working together to convince the other teachers to change. A little bit of lounge chat would bring all parties to a point of familiarity and apprecia-

tion of each other. The coordinator found that during the first year, accurate timing was helpful; he planned to arrive in the lounge just as the break was about to close. This gave teachers a chance to ask for something if they wanted to work with Career Education but did not threaten or make uninvolved teachers feel guilty that they were not doing anything in Career Education because it was time to return to class.

The noon hour was used by the curriculum coordinator to talk informally about the exciting things being done in Career Education. The positive attitudes and assessments overheard in informal conversations were quite gratifying. Soon other teachers began to ask for some of the services offered by the staff.

4. Sounding board

The Career Education staff was established as a service and an organizational component in the school. The exact administrative level of the staff was unclear because this was a research project. Their position gave the staff the ability to relate well to all other staff in the school. The project was under the principal, thus allowing the staff to work with all supervisors on an equal basis. This permitted the program to be developed sequentaility regardless of grade level.

Teachers were not under the Career Education staff's supervision; consequently they often consulted the

coordinators regarding problems with the department. Department supervisors likewise felt they could consult with the Career Education staff regarding problems. This sounding board position gave the Career Education staff the opportunity to hear the true feelings concerning many problems, and this input helped the staff seek solutions.

B. Change through structuring situations

All teachers were permitted to decide if they wanted to teach Career Education or not, but the project staff structured several situations to bring about change. The following list identifies methods that were used to promote change in this project:

1. Regular meetings were held in which the progress of the project was discussed.
2. Elementary teachers were encouraged to pair up and work on a new unit.
3. All elementary teachers were put into a block so they could meet together during their preparation time.
4. All junior high school Career Education teachers had a common preparation time.
5. Two hours a day in elementary and one period a day in junior high school was established as Career Education.
6. All students rotated so they could see what was happening in active Career Education classes and this in turn brought pressure on uninvolved teachers.
7. Department units were developed that forced all teachers to participate in solving problems. Units like the bank and store made some participation almost mandatory.

8. Questionnaires were used to get input on issues concerning Career Education. Questionnaire responses were typed the way they were written, compiled, and distributed to the teachers. This way all teachers could see the reactions and suggestions of others to the problem.

C. Service to teachers

Teachers are exposed to many external personnel who wish to force them to change their methods. The tasks of filling out forms for research adds to their workloads, and they seldom see any immediate outcome from their efforts. Teachers are concerned for their children's immediate needs because they must face these daily. Research that demands additional time without providing the teachers relief from the daily teaching responsibilities suffers from teacher apathy.

To soften these problems we have made a continuous effort to provide teachers services that will improve their teaching. We have divided these services into the following categories:

1. Resources, tools, and supplies

Teachers' lesson plans proved to be helpful in anticipating needs of the teacher and provided the opportunity to make suggestions on possible resources that could help enrich the unit. Teacher guide books for each grade were provided and eventually a box full of resource materials for each unit was acquired.

The project was able to purchase several sets of small hand tools, appliances and equipment that teachers could use as realia in their classroom. A check out system was established so teachers could have easy access to these aids. Supplies of all types were necessary to have on hand: hammer-nails, saws-wood, and looms-thread. One of the most valuable assets of the staff members at this point was that they knew who had what, who knew what and where things could be bought. Sometimes it was a simple matter of telling one teacher wanting to do a unit that another teacher down the hall had been working on the unit and just getting these two people together proved helpful.

2. Field Trips

Arranging field trips is difficult for teachers because the red tape involved often cannot be done during the teachers' preparation time. Businesses in the community respond more readily if one contact is made from within the school. This person can develop a rapport with the business and, as he or she becomes familiar with the business, can ask for the right things on the tour and work out transportation problems.

3. Media Services

Media played a big part in helping modify the Career Education elementary program because it gave the teacher a new approach to use with their students. We found that black and white photographs were helpful for language development. Kids wanted to do things so they could get their picture taken. This in turn gave them something to write about in their language class. A second form of media was the video portapack camera. This was used on trips and gave us immediate playback as soon as we got home. Further, we did a lot of T.V. work in our closed-circuit T.V. studio. Career Education played a key role in facilitating communication between the faculty and staff of the instructional media center. A more extensive explanation of media will be discussed in the section on media.

4. Petty Cash

A fourth thing that really helped us modify the program was having access to some petty cash. Many times teachers need little things to help make the unit a success. All of the things that can be bought for under ten dollars is surprising.

5. Technical assistance

The fifth thing we provided for the teacher was technical assistance.. We found that many technical processes were helpful to utilize as activities for

career development and language reinforcement. We brought firemen with their first aid equipment, home decorating experts, florists, ceramic artists, electric power plant foremen and dairymen, to name a few. The staff taught teachers techniques in horticulture, photography, automechanics, home building and printing.

The most important thing, however, was that the elementary teacher began to realize and appreciate the impact technical knowledge could have on her teaching.

D. Personal teacher motivation

1. Personal interest in what the teacher was doing in the classroom seemed to help school morale. The staff was able to go into a classroom to watch a demonstration or do some team-teaching with a teacher from time to time.

2. Newspaper coverage, while not the reason for doing units, always gave that little bit of recognition that is needed by a class and teacher. Pictures and stories of activities that appear in the newspaper reinforced the teacher's and her students appreciation of a job well done.

Conclusion

Change at T.S.D. has come about because of a number of of factors. The staff at the school generally felt that deaf

students lacked adequate exposure to the world of jobs. The administration was willing to provide money and delegate some responsibility to change curriculum. The staff was assisted by virtually all components within the school, thus making the project a unified effort that all could be proud of.

CHAPTER VII

RECOMMENDATIONS

I. Elementary

II. Junior High School

III. High School

Recommendations for the Elementary Department

After three years involvement with Career Education in the elementary department the recommendations for that department by the Career Education staff will be made in regard to structure and schedule, content and materials, evaluation and recording, public relations, teacher training, and general recommendations.

We recommend that for the next two to three years the elementary structure and scheduling remain as it was in the school year 1974-75.

1. Two hour block of time identified as Career Education with social studies the alternative discipline.
2. Every teacher designated as a Career Education teacher.
3. Every student scheduled for a Career Education class.
4. Students rotating among a block of teachers (The block involving from three to six teachers depending on the grade level distribution of students).
5. Every teacher a language teacher.
6. Each teacher having the same class for Career Education and language but not for another discipline during the day.

We recommend that the ontent of the Career Education classes be determined by the same guide lines as stated in the report. In addition we recommend that:

1. The content of Career Education always be learner based and activity (project) oriented so that the processes which brought about permanent attitudinal changes will be preserved.

2. The content as outlined in the Career Education guides serve as a framework for the constant revising, deleting and creating of units for the improvement of the curriculum.

3. The content always maintain flexibility in choice of specific and continuing units, of creation of enrichment units and of length of time to complete a unit.

4. The content, as reflected in the guides, be revised and reorganized, especially considering the younger population in Career Education classes. (The orginal units were designed when many fifth grades were fifteen to sixteen years of age. This will not be true in the future.)

5. The content revision be done by the elementary teachers in a workshop under the direction of a Career Education staff.

6. The content of each unit studied be shared by the Career Education teacher with the other teachers in the the block who have his Career Education class or the other discipline.

We further recommend that:

1. The materials for Career units be updated.

   a. Each file box be supplied with two language masters for the student booklet stories.

   b. Each file box be supplied with at least one complete set of teaching photographs (preferably two sets).

c. Each file box be supplied with all teaching material available.

2. The tools in the CE closet continue to be supplied and resupplied and that money be available through petty cash for such things as yarn, nails, paint, needles, etc.

3. A file be kept and updated of all resource people available in Austin and the surrounding area.

We recommend that the following evaluation instruments be administered and the findings become a part of the student's cumulative file. We recommend that:

1. The Student Outcome Evaluation be completed by each CE teacher on observed improvement during two different periods in a school year.

    a. The CE coordinator should have a conference in September with each teacher and would explain the instrument and its use.

    b. The CE teacher would complete two instruments a year on his CE class.(In December and May reflecting improvement from Sept-Dec. and from Jan-May.

    c. The C.E. staff would take the teacher's sheet and make a copy for each student in that class.

    d. As soon as possible the elementary teachers need to be guided to complete this instrument on each child twice a year so that it can be included in his cumulative file.

2. The Career Education Treatments should be given to the teacher in Sept so that they can keep accurate records of treatments used.

    a. One form should reflect treatments used in Sept, Oct, Nov, and Dec. The second such form should reflect Jan, Feb, March, April and May.

    b. A standard way of tabulating treatments should be devised.

3. The Student Interest Inventory should be given to all fifth grade students and its results included in his permanent file. The school evaluator suggested possible improvement in the pictures used.

   a. Train a photographer in the kinds of pictures needed in the Interest Inventory and take at least six photographs of different jobs at each field trip site or to represent units that did not involve a field trip.

   b. Determine the most effective pictures to be included in the inventory considering the following questions. 1) Should the pictures reflect all units the child was exposed to in grades three, four and five, and 2) should the pictures reflect these units plus general job categories, or 3) should the pictures include all units taught by all in all grades.

We recommend the creation of a single(both sides) page inventory that will reflect units introduced, field trips made, resource people observed and special projects developed. This inventory, to be kept in the students permanent record file, would help the teacher at the beginning of the year to see the Career Education exposure of each child through his school years. It would, also, be invaluable in counseling and curriculum planning.

One of the large areas utilized in the Career Education project was the area of community and public relations. One of the many reasons for the success of the project lies in the careful use of public relations. In these three years many business people and educational experts gave their time, expertise and effort to helping deaf students to a greater awareness of the hearing world and the world of work.

We highly recommend that future work in Career Education be accompanied by the following.

1. Immediate letters of appreciation from the staff and students for any service or effort in behalf of Texas School for the Deaf.

2. Field trips and demonstrations be planned to the smallest detail and accurate records be kept of all such activities.

3. New sources for field trips and units constantly be found.

4. Business people and teachers need to be informed of the expectations and goals of a trip or demonstration

We recommend that teachers in the elementary department be inserviced in Career Education concepts and techniques as described in the body of the report.

In summary we make the following recommendations for implementation of Career Education in the elementary department:

Career Education must be scheduled as a discipline. Career Education at T.S.D. must not be absorbed in a curriculum by deleting the CE period and expecting teachers to "infuse CE" into every other subject area. The infusion of CE into all subjects may be a possibility in the future, but for now, infusion would be a premature action which would destroy the value that Career Education has proved to be to the deaf student at T.S.D. Through the scheduling in the rotating block system, teachers learn to infuse the ideas and techniques of Career Education into their other disciplines.

Career Education, as implemented by the elementary department, is a spring-board to learning, giving relevancy to other academic areas by creating the need to know.

Recommendations for the Junior High School Department

After two years involvement with Career Education in the junior high school department, the recommendations for that department by the Career Education staff will be made in regard to structure and schedule, content and materials, evaluation and recording, and general comments.

We recommend that the school seriously consider the original plan for career exploration. This being the team teaching situation where the academic teacher and the vocational teacher share responsibility for a unit. This would involve a one hour session with the academic teacher and a one hour lab in the vocational department. Both teachers would be interchanging classes so that if both teachers would like to go on field trips they would have the two hour block. Sometimes the classes could be combined the entire two hours. Students would explore two vocational shops each quarter, thus permitting the exploration of six shops per year. The academic teachers could concentrate more on the different types of jobs within a given field rather than skills development which would be stressed in the vocational department.

Advantages

1. It establishes a two hour block.
2. It permits students to be grouped by age to explore vocational courses.
3. The vocational teacher can teach the necessary skills to both the class and the academic teacher.

4. The academic teacher can reinforce vocabulary and career concepts in all of his classes.

5. Students can explore more shops before they enter high school.

6. The vocational teacher would have more time to meet the needs of the high school students.

We recommend that the units being taught be continually revised. It would be best if the vocational education and the vocational departments be considered for team teaching situations.

Realizing the complexity of the above recommendation and due to the fact that many new changes will be developing in the vocational departments in the near future, the following recommendations will consider the junior high school department as it existed the past year.

1. We recommend that no less than five teachers work with Career Education.

2. We recommend that the junior high school department seek units that will unify the department as the bank, store and Career Quiz have in the elementary department.

3. That the department re-evaluate the units taught last year and consider the suggested units and times submitted by the Career Education teachers. These are:

   Sixth Grade
   - Health - six weeks
   - First Aid - twelve weeks
   - Clothing Care - four weeks
   - Graphic Arts - eight weeks
   - Horticulture - six weeks

   Seventh Grade
   - Foods and nutrition - six weeks
   - Science measurement - four weeks
   - Building construction - eight weeks

Business practices - six weeks
Health - six weeks

Eighth Grade
Post Office work - four weeks
Auto Care - four weeks
Electricity - six weeks
Household decoration - six weeks
Household maintenance - six weeks
Citzenship - four weeks
Explanation of careers and evaluation - two weeks
Health - four weeks

We recommend that evaluation instruments similar to the ones begun this year continue to be revised, administered and kept in individual student files. Student Outcome Evaluation forms and Career Education treatments similar to those field tested in the elementary department would provide a means of improving Career Education concepts. (see elementary recommendations)

We further recommend that the materials for Career Education units be updated, each file box be maintained and improved, and the tools for each unit be maintained for the junior high department and that wooden boxes be bought to store all of the tools needed for each unit.

In summary we state that the junior high school level is a critical time for the student. It is a time when the student wants to explore his abilities, try many things and begin to establish his interests. Career Education at this level is important and should not be regarded as a second rate course for it can provide many of the skills that will follow the student throughout his life. Career Education in the junior high school department should be

designed so it can expose the student to many careers, give him some hands on experience in several of these and provide adequate counseling so that he can go into high school with a better understanding and ability to relate his training to his future.

Recommendations for the High School Department

The Career Education staff highly recommends the development of all the modules indicated in the Adult Performance Level knowledge areas. To accomplish this goal a staff must include someone who has the expertise of Dr. Louise Jackson in the skillful, practical and attractive individualizing of instruction in proper sequence, each step building on the previous one. The staff must, also, include someone with the knowledge and experience in the education of the deaf as well as the talent for coordinating and organizing teachers to produce the modules. At least this staff plus secretarial help would be mandatory to complete the modules in a time period of up to two years.

In addition to this, money must be available for the proper packaging, printing and storing of the modules. The services of the media center could shorten the time for completing the modules with the limited staff mentioned above. After the modules are complete, implementation would require the proper space for such a lab, a director and at least one teacher's aide.

The quality of the modules could be much better if they were developed by a task force of educators of the deaf through out the state as opposed to a group of teachers in one locale.

The Career Education high school lab is possible, practical and vital. It is a viable way to close that gap in our students education.

Dr. Jackson has listed below an example of the modular learning station designed for the general area of "Buying a Car", based on the partial set of learning objectives and activities, also included below. The complete list of objectives was field tested in May, 1975 and proved to be appropriate as planned excepting that the pupils using the unit were a little more advanced in vocabulary than had been anticipated. (The underlined words in the objectives indicate the vocabulary to be developed.)

BUYING A CAR
(A partial list of Objectives)

1. There are four American companies that make cars. There are also many foreign companies that sell cars in the United States.
   Activities:
   a. Cut ten company trademarks from a variety of fields from magazines. Mount these inside a manilla folder under the heading: "A COMPANY IS A GROUP OF PEOPLE WHO WORK TOGETHER TO DO OR MAKE SOMETHING." In smaller print, under each logo, write "The people who work for the _____ Company sell insurance" or "make cars," etc. (Make the outside of the folder attractive and label #1.)
   b. On the inside of a manila folder paste a simple world map showing major political subdivisions. Use two captions with necessary arrows, "We live in the United States of America. American companies are begun here." "Foreign companies begin their work in the other parts of the world." (Label #2)

c. Cut out company trademarks for General Motors, American Motors, Ford, and Chrysler plus those of a variety of foreign automobile companies. Paste each on a 3X5 card. Print "American Company" on a card and "Foreign Company" on a second card. Directions: Sort these cards under the right heading. Put A and F on backs of cards for self-checking.

Test: List the names of ten automobile companies. (All four American Companies and six others. Ask pupil to write A by the American Companies and F by the foreign companies.) May not miss any.

"Sets of units developed in modular form have several advantages that are immediately apparent:

1. A teacher is far more likely to implement new curricular approaches if the materials are available in an organized form that is easily deliverable to the classroom.

2. As described in this paper, a modular learning unit, consisting of a set of learning stations, could easily be transported via a van or station wagon away from a school environment to a central location for use in adult education.

3. Pupils enjoy this learning approach because they move at their own speed and the teacher is free to respond to their individual needs rather than being tied down by a group instructional approach."

PAGE 179 CONSISTING OF A DECORATIVE DIVIDER WAS NOT REPRODUCIBLE AND WAS REMOVED FROM THIS DOCUMENT PRIOR TO TIS BEING SUBMITTED TO THE ERIC DOCUMENT REPRODUCTION SERVICE.

CHAPTER VIII

Mediation

I. Career Education Media

A. Television series

B. Photography

C. Graphics

D. Technical consultation

II. Production of Career Quiz

III. Career Education through a camera

Career Education Media

As an educational movement, Career Education has not reached the stage where textbooks are available to implement its aims. For the media services which were added to the program during its second and third year at T.S.D. this posed a practical problem. Media needed to compenstate for the lack of instructional material available for classroom use. Many of our projects were executed in response to this need and followed guidelines prescribed by the teachers. Examples of this would be: illustrated career description booklets for elementary school, posters that teach, photographs of tools, or any illustration of a didactic nature.

Owing to the fundamental research nature of the program and to the incentive to experiment thereby understood, media personnel also enjoyed the freedom to initiate projects which related to the social situation at the school and were not specifically didactic in purpose. Much of our television production would fit this description.

To practice media with a social purpose requires experience with the institution as the basis for determining ones purpose plus freedom of movement as media personnel within the institution as the basis for effecting ones purpose. Our initial staff, consisting of Mr.

Fred Roy and Mr. Don Harms enjoyed both. Fred had previously worked as a houseparent, Don as a media specialist.

Career Education media was an outgrowth of the Media Center proper. The year prior to the start of Career Education saw the Media Center climbing towards peak production. It was a prestigious unit within the school and its unique struggle for influence seemed to have been won. Teachers welcomed services and advice from its personnel. Career Education media started in this climate, inheriting full access as well to a splendid television studio and darkroom which were the chief features of the Media Center. These had been purchased, installed, staffed and promoted under the direction of Mr. Dean Cunningham in the two years prior to the initiation of the Career Education program.

The status of the Media Center at the inception of the Career Education program accounts for the initial impact of video and photography upon the project. A large quantity of video tapes and photographs were made during the first year of the project before specific media services to Career Education were established. Mr. Randall had himself been promoted to the directorship of Career Education from the position of Media Specialist to the Statewide Project which had allied him closely to the operation and staff of the Media Center at the Texas School for the Deaf.

For purposes of this report Career Education media will be divided into four aspects:

1. Television

   This refers to video programs designed according to a format lending itself to repeated and regular production.

2. Photography

   Here we include taking and/or developing black and white photographs for teachers.

3. Graphics

   This includes free-hand and photographic illustration for texts, instructor's manuals, television programs, and posters.

4. Technical consultation

   This covers aid given to teachers on production or instruction involving technical skills where in media staff were comprtent.

After discussing these four areas a fifth section on the recruitment of volunteer help will be explained.

1. Television series

A. Career Quiz

Instruction in the Career Education elementary program is divided into units relating to different job clusters. The ideal unit includes a field trip to a local business or agency during which the child observes adults performing tasks similar to what has been learned in the classroom. It occurred to Mr. Randall that upon completion of a unit the traditional written examination could be replaced by a television quiz program, a competitive

game for which the children would prepare by reviewing the material from their latest unit. The idea for this was suggested by a Who Knows It? program that had been produced the previous spring. We dubbed the new program Career Quiz. It featured a panel of three contestants (later altered to two teams of three contestants each) who answered questions posed by the moderator. Some of the questions were sparked by rear screen projection of photographs taken during the field trip. The moderator was Judy Weigand, a young and highly personable deaf secretary who worked with Career Education. Answers and questions were frequently captioned. The program was well received and it was produced for two and a half years.

Career Quiz was our most successful format and, as we have said, it was an extension of a previous TSD-TV program, Who Knows It?. Among a half dozen other series which had been produced by the Media Center prior to the start of Career Education, two others also proved adaptable to Career Education purposes. These were World News and On the Spot.

World News

It had been customary for the Media Center to provide news service to deaf students and teachers at the school. This had originally involved taping for repeat a local news program featuring a sign language interpreter.

When this option was canceled, we tried inserting our own interpreter into the corner of the screen during a daytime network newscast. There was one serious drawback to both procedures. The interpreter signing to the pace of the speaking newscaster was forced to sign so rapidly that few of the students could understand it.

In the spring before Career Education began, Darrel Randall and Don Harms altered the news format. They selected items from readily available sources and rewrote them in more intelligible language without assuming pre-acquaintance with the topics. They added visual illustrations by making photographic transparencies from magazine pictures and rear-projecting these onto a screen behind the newscaster. Due attention was given that all visual aspects of the newscast would have a network quality appearance. The news began reaching a much larger student population. The program was produced daily for more than two years thanks to volunteers who eventually assumed responsability for most of the necessary tasks. Students were exposed to the major news events of those years, including the United States involvement in Vietnam, the continuing struggles of minorities for social rights, rising inflation, and the demise of the Nixon administration. Historical events were brought home; our students were consequently free to approve or oppose the decisions of leaders from the vantage point of their own developing

sense of integrity. The staff assumed this would foster an attitude toward life at once more personal and more comprehensive.

The World News program promoted higher awareness of quality in sign language. Mrs. Helen Sewell monitored the signing of the hearing volunter newscasters. Deaf teachers also volunteered to serve as newscasters. The choice of signs used on the program encouraged discussion among the students on the issue of language.

On the Spot

Another program the Career Education staff continued to produce and promote after their transfer from the Media Center to Career Education was an interview program called On the Spot. Mr. Gwendel Butler, a deaf man who is supervisor of the High School department, played host to guests including administrators, students, and important visitors to the school. Students followed this program avidly. It ranked consistantly high if not highest in numerous surveys made by the Media Center to determine viewer response. In seasons of peak television production it was not uncommon to make two On the Spot programs per week. Mr. Butler's knowledge, humor, and forthright opinions made him a focal point for a student body eager to identify with palatable authority.

The three television programs just described were initially developed by Career Education staff in the Media Center before Career Education got its start. It is no surprise that Career Education found these programs adaptable to its needs. Darrel Randall and Don Harms had produced the quiz and the world news programs at a time when the factors which later determined the initial philosophical tone for Career Education at TSD were most intensely operative in their work and thought.

The conviction was held that the more basic tasks a person can perform, the more he or she is freed from technological dependency. In the first workshop, for example, the teachers not only wrote the guide books but also made the zinc plates for printing the guide books in the school print shop. Most were delighted when they discovered they could perform tasks previously deemed unlikely for lack of technological or artistic proficiency.

Focus

Focus was Career Education's last and most ambitious television series. For two years prior to production, the ideas for Focus were nurtured by Bettie Davis, C.E. curriculum coordinator, and Jim Spears, Media Center technician. Focus featured a deaf employee and his hearing employer, speaking and answering questions to an interviewer-moderator

and a panel of students. Taped live in the evening for a viewing audience in the cottages, Focus featured two interpreters so that everything spoken or signed was totally communicated for the hearing and the deaf. The studio set-up was complex and preliminary work involved locating appropriate and willing employers and employees and interviewing and photographing them at home and at work. Both Mrs. Davis, producer of Focus, and Mr. Spears, director, devoted considerable effort to directing this series.

Photography

Under photography we shall limit ourselves to a few remarks concerning our routine assignments, saving one notable special project to be discussed in the following section on graphics.

The teachers had been accustomed to checking Kodak Instamatic cameras out of the Media Center whenever desired. With the start of Career Education in the elementary department, field trips became prevalent and there was, consequently, an increase in the demand for black and white photography. The photographs were used by the teachers primarily to teach language relating to the trip. Students wrote paragraphs under the photographs which were then displayed on the walls and windows of the classrooms. Mr. Randall often accompanied field trips in the capacity of photographer during the first year and teachers continued to request staff photographic

coverage of their trips and classroom activities during the remainder of the program. In addition to this, teachers also increased usage of the Instamatic cameras with media staff developing and printing the negatives.

The third year of the program saw a decline in television production prompted by a change in the school's policy. This led to a compensatory heightening of the quality and quantity of black and white photography. Photography had previously held second place to television. As the spirit of the program grew less expansive, less extroverted, media personnel took to the photographic image as a more appropriately passive medium for heightening self-esteem among the student body. Students and teachers responded very strongly to the quality of the phographs and not merely to the fact of a subject being recorded.

Graphics

The initial contact between media and Career Education occurred when Mr. Randall solicited the aid of Mr. Harms in designing the lay-out and cover for the guide books written in the teachers' workshop. The graphic designs made the guide books look more prestigeous, which especially pleased those who wrote them. Mr. Randall never underestimated the value of graphic design in promoting whatever activity was at hand, and he scored high in dealing with artists. We designed covers for

reports and made posters to promote concepts and publicize events. We utilized the diazo machine, the school's printing facilities, and even developed proficiency in silk-screen printing in order to reproduce our work for multiple distribution. The several artists who worked for the program were repeatedly given the time, freedom and seclusion necessary to involve themselves creatively in their work.

Our most ambitious project involved photographing over forty businesses and factories in and near Austin, averaging a hundred photographs per business. These photographs detailed the stages of operation of each business. From these the teachers selected photographs which illustrated the student manuals used in the elementary program.

Technical consultation

In whatever capacity, media staff served the program's continual need for technical advice. This often involved working directly with students: teaching photography, silk-screening, and doing carpentry alongside the regular teacher until the latter felt comfortable teaching it alone. Teachers were aided in making their own video tapes, in using more sophisticated photographic equipment and in planning units on photography and carpentry also. Consultation of this nature constituted the bulk of the media staffs' in the junior high school

department.

Teachers were wholly responsible themselves for a considerable production of media particularly for video tape and photography. On several occasions teachers displayed remarkable creativity and ambition in writing and directing scripts for television and in making props and costumes for their own programs.

Production of Career Quiz

The medium of television has to offer two major areas of involvement participating in the production of the program and viewing the program of the television screen. For the vast majority of Americans the passive screen viewing is their only mode of television experience. Television has massive powers of information dissemination via this mode of experience and it has proven to be a useful teaching medium. However Career Education decided to also expose its students to the other half of the video experience-participation in the program itself. Thus Career Quiz functioned both as an adjunct to the academic class room experience and as a live experience in its own right which had the power to heighten the personal and group identity of the students.

A live television studio production with lights cameras, equipment, crew and time limitations provides the students with a special event outside the classroom, a different environment in which to learn about themselves as well as about the class subject matter. This type of special event learning experience always was in conjunction with and followed the lead of the classroom teacher and classroom subject matter. Career Quiz was a surrogate for a written test on the Career Education unit that class had studied. Teachers had written the script much as they would have written a traditional class-

room test.

The finished program was then returned back to the classroom via TSD's closed circuit TV network. The viewing session was accompanied by a written review test over the program questions. Thus Career Quiz could benefit other classrooms that had not been involved in the original taping. The effectiveness of the program as a learning instrument could be measured with the accompanying written classroom test. At the viewing stage the students who had been on the program could learn something about themselves by watching their own performance in the game as it was being played back to them.

The quiz program was comprised of questions given by the moderator to two teams each having three students. The first student to press his button and light up his name on the panel was allowed to answer. If the answer was correct, then that was a point for their team. If the first answer given was incorrect then anyone on the other team had the opportunity to respond. The team with the most points won and received five dollars in TSD money to spend at the TSD store.

Career Quiz was a reinforcement and learning experience on specific units in Career Education. The questions asked by the moderator were the teachers own questions whose class was scheduled for that week. Teachers

signed up at the beginning of the year for the production time of their class's Career Quiz. The program always came at the end of the unit and usually the class participated in more than one program. The Career Education staff would receive the script from the teacher ten days in advance so that all preproduction work could be completed on time for taping and the preproduction work for the next program could begin. We would first rewrite the script, changing or omitting any unclear question and putting all answers into complete statements, so as to emphasize vocabulary and sentence structure. At this point visuals, selected both by the Career Education staff and teachers, were matched with the appropriate questions. The visuals were usually photographs that had been taken on field trips during the unit, although pictures from magazines, demonstrations of real objects and pictures that students had made were also used.

The entire script was typed and kodal captions were made of the complete statement answers. We experimented with different amounts of captioning. At first we captioned both the question and the answer but found this too burdensome for the pace of the show so then we captioned only the complete sentence answer. This freed us to show more of their faces in their expressions and reactions. And in turn, this enabled the students to

learn more about themselves and their classmates as they viewed the program in the classroom.

A typical question answer sequence in the show would go thus: moderator would sign question, a visual to illustrate question would be shown, a student from one of the teams would answer, the moderator would indicate whether the response was correct, and sign the complete answer while the caption of the complete answer was shown.

The script frequently called for multiple choice questions. The multiple choices as well as the captioned answers were typed on a long roll of paper and then photographed on the copy stand with kodalith film in a 35mm ½ fram camera. The captions were then put into the multiplexer , a unit composed of a slide projector and video camera, and then feed into the video switcher to be utilized at the right moment with the push of a button. The multiple choices as well as some of the visuals were rear projected onto a screen beside the moderator. This could be seen by the contestants and picked up the camera on the moderator. Photographs were usually enlarged to 11"X14" dry mounted, and brought on by a student who was not a contestant or held up by the moderator.

The studio set up was simply arranged so that the moderator faced the two teams. One team was in a booth standing up while the second team was directly below the first sitting down. The moderator had a rear screen

projection system just to one side to display visuals to contestants and camera. There was one camera for the moderator placed opposite of her and to one side of the two panels and two cameras for the panels opposite to them. Quick reaction shots of the students during and after the questions played an important role maintaining the liveliness and interest of the program, all of which called for quickness,skill and co-ordination from director and crew.

The format of Career quiz was simple and practical. The questions were very traditional classroom test questions-fill in the blank, multiple choice, true and false. Career Quiz enabled us to transform the classroom test into a more enjoyable and interesting experience for the student. The program provided for scholastic evaluation as well as self evaluation by the student. This self evaluation touched not only academic achievement, but also the student's interaction within a group and his own personal behavior and appearence. His own image in action appeared before him on the screen, providing for self criticism and self reinforcement.

The process of learning includes confronting your own self image and performance. Video tape is one means to this confrontation.. Thus Career Quiz was both a yardstick for accumulated knowledge and an identity awareness instrument.

Career Education through a camera

It was probably an unlikely place for a photographic studio but among the books, chalk, and blackboards students paused to comb their hair and straighten their clothes in preparation to have their portraits taken by fellow students. Lines formed outside the classroom as a receptionist filled order forms. Other students were busy arranging lights, sitting clients, and adjusting camera settings. From the viewpoint of an outsider this was a booming business, and indeed it was. From the proceeds of this one afternoon the next photographic class would have enough supplies to carry them through for another six weeks.

What has been described to you is one creative approach to a Career Education unit on photography. The students were learning not only the mechanics of photography but the inner workings of a business. In a six week period they learned a technical vocabulary, the parts and functions of a camera, the differences in film, the process of exposure, some principles of composition and aesthetics, and the procedures for developing film and using an enlarger to make prints. Add to this an experience in self-expression, a broader social vocabulary, an exercise in responsibility, and a valuable and unusual opportunity to learn some basic principles of supply and demand.

That is a rough idea of a Career Education photography unit we put together through a unique collaboration between a professional photographer, a progressive Career Education department, an extremely motivated teacher, and the Fotomat Company. Fotomat supplied cameras, film, textbooks, flash cubes, small camera kits, photo albums, and free processing.

Yes, maybe the classroom is an unlikely place for a darkroom and studio, but photography can be a very stimulating course. It can help students enjoy and understand their environment, and indeed give them an opportunity to express themselves. What is required is a small budget, and an industrious teacher, and a desire to learn the fundamentals of photography.

The following is a list of supplies:

Item	Quantity
1. Kodak Instamatic cameras	10
2. 126 black and white film	300
3. 126 color slide film	100
4. GE flash cubes	60 packages
5. small enlarger	1
6. 8" x 10" trays	4
7. liquid thermometer	1

Items	Quantity
8. 32 oz. graduate	1
9. paper tongs	4
10. photographic enlarging paper	2 packages
11. easel	1
12. D-76 film developer	6 quart size
13. Dektol paper developer	6 quart size
14. Stop bath solution	
15. Fixer	

WEEK	TOPICS	ACTIVITIES
1	Demonstrate the principles of light reacting to photo-sensitive chemicals.	Students make photograms.
	Care and handling of a camera.	The camera should be passed out in class and the students practice with them.
	Using the camera outside.	Students go outside and take pictures of anything they wish. (after processing the film the slide can be used to help the students understand common errors.
	Different ways to process film.	Teach students how to fill out processing mailers and what type of processing to ask for at a store.
2	Composition	Go out and take pictures to illistrate the following balance, perspective, dominant feature.

Different types of films.	Illustrate the difference between black and white films and color films, also the difference between print and slide film.
Making pictures say something.	Set up a photo contest where the three most interesting photographs win.
How a camera works 77	Take a camera apart and explain how it exposes.
Processing film	Film, and film moved in the camera. Show students how to process film. Let them process their own film.
Processing prints	Give example and allow students to make prints in the class room.
Different jobs in photography	
Introduction the studio	Different jobs, equipment, etc.
Lighting for portraiture	Set up some studio lights in the classroom.

The Studio

The student operated photography studio was the last activity of the unit. Here the students had an opportunity to utilize not only their new knowledge of

photography but learn some principles of business operation. It was their responsibility to: (1) serve in a specific job, (2) determine the costs of their product based on the expenses of production, (3) prepare chemicals and equipment, (4) make out order forms, (5) sit and prepare clients, (6) arrange lighting and take the pictures. After the one day of shooting the students turned to the next half of the problem, developing negatives, making prints, packaging and delivery. The entire project took one week of the unit, cost around $30.00 and was paid for through the profits of the studio itself.

SELECTED REFERENCES

1. Tutt, Bobbye (Mrs.), An Employment Analysis of Deaf Workers in Texas, Austin: Texas School for the Deaf and Texas Education Agency; 1972.

2. Schein, Jerome D. and Marcus T. Delk, The Deaf Population of the United States, National Association of the Deaf in cooperation with the Deafness Research and Training Center, New York: 1974.

3. Developmental Associates, Inc., Draft Guidelines for the Evaluation of Career Education Programs, Contract No. OEC-0-73-6663 submitted to U.S. Office of Education Department of Health, Education and Welfare: Washington D.C.: 1974.

4. Northcutt, Norvell W. and others, The Adult Performance Level Study, Division of Extension, The University of Texas at Austin, Austin: 1973.

5. Olson, LeVene A., A Study of Elementary and Secondary Career Education In Lincoln County, Department of Occupational and Adult Education, College of Education Marshall University, West Virginia: 1974.

6. Wiles, Kimball, Ronald Lippitt, Herbert Lionberger and Ralph Kimbrough, Strategy for Curriculum Change, Association for Supervision and Curriculum Development, Washington D.C.: 1965.

7. Stuckless, Ross E., "Career Development: Recurrent Themes", Career Development of the Deaf Student and Worker, National Technical Institute for the Deaf, Rochester, New York: 1973, pages 46-47.

8. Advisory Council for Technical-Vocational Education in Texas, Education for Living and Making a Living: Community Conference Handbook, Advisory Council to the State Board, Austin, Texas: 1974.

9. Advisory Council for Technical-Vocational Education in Texas, Career Development Up Close and Personal, Advisory Council to the State Board, Austin, Texas: 1973.

Appendix A

MONTHLY PROGRESS REPORT

MONTHLY PROGRESS REPORT

Report of Phase I

June, 1972 — A workshop with fifteen teachers representing all departments from South Campus of the Texas School for the Deaf was held. Members of this workshop, after familiarizing themselves with state, national, and local concepts relating to Career Education, began writing a curriculum for levels three, four, and five to be implemented in the fall of 1972.

July, 1972 — Work was completed on teacher's manuals for grade levels three, four, and five. These manuals contained a total of thirty-six units, each unit focusing on a different career field. The three manuals were then printed by members of the workshop in the Texas School for the Deaf vocational department.

August, 1972 — The class scheduling of levels three, four, and five was revised to permit all elementary teachers to teach a

daily two-hour Career Education class. The revised schedule placed teachers in groups of six to allow common preparation time and facilitate inter-class activity. During the last week of August inservice training in Career Education concepts was given to the elementary teachers.

September, 1972

Career Education classes began with the unit on "The Family", utilizing our then vacant superintendent's house for various activities relating to jobs in the home. Project Share was initiated, whereby students from South Campus share knowledge and skills with the mentally retarded deaf children from Austin State School. Many field trips were made; video tapes and black and white photographs promoted follow-up instruction. Representatives from the Agricultural Extension Office spent a day with our staff promoting services and media available through their office. As a result many of their materials were incorporated into the curriculum.

October, 1972 — The Little Worker, a newspaper with articles related to Career Education began publication. It is written and edited entirely by children. This newspaper continued to be printed every two weeks throughout the year. A mock bank was founded. This student-operated bank permitted our older fifth grade students to perform the jobs appropriate to a bank as well as learn practical math concepts. Enthusiasm for field trips remained strong. Worth noting was a personal reception by Mayor Roy Butler in the City Council chambers.

November, 1972 — A series of meetings among the teachers in the department were held for critical re-examination of the program. The guidelines determined by the summer workshop were reaffirmed. One immediate change was recommended, however. This was to adjust the art schedule tc allow teachers an additional hour of preparation.

December, 1972

1) Special emphasis was given to students finding and applying for jobs. Various mock and real jobs were advertised in The Little Worker. Children filled out applications and had practice job interviews with the coordinator.

2) The effectiveness of the teacher's manuals produced during the summer was reviewed and recommendations were made for future revision. Teachers began collecting material to aid in this revision.

3) The lower auditorium was cleaned out to meet an increasing demand for work space beyond the classroom.

January, 1973

1) The stage in the auditorium was temporarily equipped to provide a subsidiary television studio, Studio #2, designed for teacher and student production.

2) Career Quiz, a TV program based on a quiz-panel format was developed by the professional Media Center staff and

proved successful in stimulating all classes to simultaneous review of the essential facts of a given unit.

February, 1973 — A miniature model community was constructed in the upper auditorium to spark interest in community development and establish a foundation for understanding personal problems via their relationship to community life.

March, 1973 — The Career Education Curriculum Committee, which had met periodically during the year, submitted its recommendations for the summer workshop of 1973. These recommendations were developed into a proposal. Superintendent Gary Curtis established a Vocational Education Advisory Committee for Texas School for the Deaf. The project received a van from the state. This van is large enough to be used as a portable classroom for two classes. The van contains its own generator and media equipment thus permitting classroom instruction on various locations.

April, 1973

The Vocational Education Advisory Committee agreed to accept the recommendations of the State Advisory Council urging that top priority continue to be given to Career Education. April 19th was set aside as Career Day at Texas School for the Deaf. Colleges and universities sent staff to our school to talk with junior and senior students concerning future training. A carnival in the evening featured 40 booths with educational displays; the majority of these were designed by Career Education classes. The van made its debut as a total media classroom complete with slide and video presentations, photographs, and posters. A highly favorable student response recommended future utilization of the van in this manner.

May, 1973

Project Share was planned and our students went to the San Antonio Countywide School for the Deaf. Our fifth grade classes taught skills used in the garment factory through making a wall hanging. A video tape was made and our port-

able classroom van was used as a viewing room. Children were paid in play money for working in various Career Education projects. The children then purchased items from their Career Education store.

Progress Report of Phase II

June, 1973

A workshop was held with 24 teachers representing all departments of the Texas School for the Deaf. A group of nine elementary teachers revised the career awareness teacher's guidebooks used the previous year. This group also developed three levels of stories for each unit to be used as student booklets. Pictures to accompany these stories were taken throughout the community. These stories and photographs were then printed at the school's print shop. A second group of teachers developed teacher's guides for Career Education, grades six, seven, and eight. Portions of these guides were printed in the school's print shop.

The instructional director was asked to present the school's program on Career Education to the National Convention of Instructors for the Deaf held in Indianapolis. As a result of this presentation we received many requests for copies of our teacher's guides.

July, 1973 — Work was completed on the materials developed in the workshop.

August, 1973 — During the last week of August at an in-service training session, Career Education concepts were presented to the staff involved in this area.

September, 1973 — Elementary teachers continued implementation of their programs. Student booklets were used as units were developed. A new studio set for a TV program, "Career Quiz," was constructed.

As the school year began in junior high school, it was decided to have the science teachers work with Career Education. Units on fire prevention and first aid were conducted.

October, 1973 — Elementary classes re-established the T.S.D. bank. The 5th grades were responsible for opening checking accounts for all students in the department. A fall garden was prepared and planted by the students.

It was decided to reorganize the junior high school schedule so that all teachers could work with Career Education.

November , 1973 — Many field trips were taken by classes in the elementary department. The fifth grade continued Project Share by sharing a unit they had developed with Austin State School for mentally retarded deaf. An educational economy for the department was established so all students would be "paid" for working at the same wage scale.

December, 1973 — Elementary classes worked on many skills involved in making articles for Christmas. A florist taught children how to make corsages. Ceramic figurines were made. Children used basic woodworking and sewing skills to produce gifts. A

salad, made from vegetables harvested from the garden, was given to the teachers for their Christmas dinner.

Junior High School classes began to be paid by check for studying and operating a business in the model city. Some classes opened accounts in the bank. Property deeds were given to each class and some classes made model buildings for the city. Field trips to the electric company, hospital, and the newspaper reinforced class study about specific jobs.

Southern Regional Media Center for the Deaf offered to print all of our Career Education guide books for levels three, four, five, (Career Awareness) and levels six, seven, and eight (Career Exploration). These were printed and are being distributed to other schools throughout the nation.

January, 1974

The elementary department continued to produce Career Quiz with approximately thirty-five of these TV programs being produced during the year. A vacant

house on campus was used extensively for cooking projects and related family units. Junior High School classes continued some work on the model community but found that scheduling made interaction between classes very difficult. Many classes began working to utilize the units developed in the summer workshop. January was designated as Career Month for the high school students. One day each week was set aside for meetings with representatives from four different Texas colleges, Gallaudet College in Washington, D.C., and N.T.I.D. in Rochester, New York. Men from industry and deaf workers, also, made presentations in this series of meetings.

February, 1974 — The T.S.D. store was opened for elementary students. Merchandise was donated by parents and businesses from all across the state, making it possible to stock this store. The fourth grade is responsible for inventory, management and accounting for all merchandise. Nine

different jobs are required to operate this store. All students in grades three, four, and five use their T.S.D. money to buy items.

March, 1974

Fourth grade elementary students harvested the garden, prepared and cooked a vegetable dinner, and invited members of the school staff. A permanent stone wall was constructed around the garden plot by students and a spring garden was planted.

The Junior High School continued projects in working with small motors, woodworking, and weaving. For the first aid unit the Basic First Aid Book was used as the text, and resource people from the Red Cross were utilized.

The TV program, "Focus", began production. This was a monthly interview program that brought deaf workers and their employer to our campus. This program was used on Austin Community T.V. and was sent to other schools for the deaf.

April, 1974

A spring festival featuring educational booths, TV programs, games, and classroom

demonstrations were held. This festival in which many students produced and sold goods, provided practice in profit, loss, and overhead concepts.

Fifty-five T.S.D. teachers attended a language arts workshop developed by the Career Education Department. This workshop emphasized techniques for the development of a reading and language hierarchy at all levels.

Fifteen volunteers from the University of Texas Art Department and members of the Career Education staff worked with approximately 100 T.S.D. students to develop artistic skills and promote creative imagination. T.S.D. students then displayed their work at the University Union Art Gallery.

Progress Report Phase III

May, 1974

An outline was prepared for a Junior High School workshop, and research was conducted to design a junior high school program. Junior High School teachers were selected to participate in a summer workshop for three weeks and a

proposal was written to extend the project year for one month. Some materials for a high school workshop were gathered.

June, 1974 — A three-week junior high school workshop was conducted. A complete revision of the units and schedule was made. Many contacts were made with business people, materials were gathered for different units, and $1600 worth of tools were ordered to implement the junior high school program. The last week of June the project director and the curriculum coordinator attended a two-week career development workshop in Rochester, New York. This workshop emphasized self-awareness in relationship to career development.

July, 1974 — A two-week high school workshop was planned. We identified the Adult Performance Level study as a potential source of development and selected participants for the high school workshop.

August, 1974 — A two-week workshop was conducted to intro-

duce high school teachers to Career Education. Participants worked with the goals and objectives in the APL Study and wrote activities for each of the five knowledge areas. Teachers also located resources in the community and resource people that could be contacted as the units were taught.

September, 1974

School started the first week in September. Mrs. Davis inserviced elementary teachers every day during the first week. It was found that tools for the junior high school had not been ordered. Mr. Randall inserviced the six junior high school teachers and bought tools that were necessary. The revised junior high school program based on a six-weeks unit got underway. Work was begun to re-establish the elementary school bank.

3 demonstrations
5 field trips

October, 1974

The elementary school store was set up in the auditorium, Career Quiz started, and a garden planted.

Junior High School students established a

flower shop, made and sold corsages for homecoming and kept books on the transactions.

Visitors from the Model Secondary School in Washington D.C. visited the Career Education project to get ideas for their school.

3 demonstrations
4 Career Quizzes
5 field trips

November , 1974

New units in the elementary department were developed as, for example, a unit on a catfish farm.

A unit on photography using the Fotomat corporation materials was started. A unit using these materials was taught each of the five remaining six weeks.

The Career Education Director and Coordinator attended meetings of a Regional Career Education Conference and the Governor's Conference on Human Resources.

An evaluation for junior high school and an interest inventory for each unit were developed and started.

2 demonstrations
6 field trips
4 Career Quizes

December, 1974

Units in junior high school and elementary were progressing well. Teachers in Junior High met every Friday with Mr. Harry Boyd who was assigned the responsibility of assisting them.
Material developed in the high school summer workshop were being used by a few teachers. Career Education staff attended a TEA meeting with the Regional Career Education coordinators. Contact was made with staff from the APL study.

3 demonstrations
8 field trips
3 Career Quizzes
1 Christmas program

January, 1975

An outline for the final project report was underway. Career Quiz worksheets were introduced so participating students could work with the panel. Don Harms made several sets of black and white photographs for the high school vocational education department. These photographs were also used in the academic high school department.
Dr. Ninge Selz from the University of Texas come to our campus to begin planning for

the use of APL material in high school. Plans for Career Month were made and a trip to Dallas was undertaken to attend a national conference on Career Education. Mr. Russ Schub from Developmental Associates discussed evaluation procedures with the Career Education staff. Bettie Davis met with each elementary teacher to explain the use of student outcomes and treatment instruments. Teachers tabulated the utilization of the twenty-six treatments. Student outcomes were also taken to cover September-December.

2 demonstrations
1 Career Quiz
4 field trips

February, 1975

Three new units were introduced: film-making and taxidermy in the elementary and nutrition research in junior high school. As a part of Career Month representatives from six colleges and universities came to our campus to discuss post secondary opportunities for high school students.
A meeting was held with Dr. Louise Jackson (reading specialist), Mr. Ray

Hallard, Mr. Gwendel Butler, and other people from the APL group to discuss an approach for high school.

Ms. Marian Pharr revised the APL test, rewriting the language for our high school students.

An electricity unit in the junior high school featured checking all cottages for electrical failure.

Activities :

4 Career Quiz programs
9 classes viewed demonstrations
17 classes went on field trips

March, 1975

Ms. Marian Pharr began testing high school students with the APL test.

Mrs. Nancy Beane began to design a test for elementary students.

A junior high school student was employed at the Nigh Hawk restaurant as a result of a Career Education field trip.

Junior High School students operated their own Photo Studio and sold portraits. The third Spring Spirit festival was held with a record attendance and forty-three booths, most representing Career Education projects.

Activities: 15 field trips
4 Career Quiz programs
3 demonstrations

April, 1975

A Saturday workshop was held with high school teachers to design a prototype unit for a recommended lab for high school.

The staff became heavily involved with writing the report.

Activities: 31 field trips
2 demonstrations
1 Project Share

May, 1975

The staff gathered material for a presentation before the dissemination conference. Evaluation instruments for the report were sent out and tabulated.

Activities: 12 field trips
4 demonstrations

Appendix B

EXPLANATION OF TERMS FOR

TEACHER OBSERVATION OF STUDENT PARTICIPATION
(Junior High School)

People

1. Sociability - Does the student talk to others in the class about what he is doing? Is there interaction among the students regarding the unit or does the teacher do all of the talking?

2. Self-expression - Does he ask questions about the unit? Does he express an interest or disinterest in the work? Expression can be communicated through words, signing or action. (Action shows obvious interest in working on a project.)

3. Teamwork - Can he work in a group? Can students work together as a team or do they play around, quarrel or indulge in other unfruitful behavior?

4. Communication - Does he use any of the concepts, terms, or words learned in the unit? Does he use the signs, fingerspell the words or just point?

5. English fluency - When he communicates about the unit or asks questions or talks about it, how does he do so? With the actual mechanical terms in fingerspelling or sign? Or does he merely gesture or point?

6. Self-confidence - Does he need constant help, support, encouragement and direction or can he, once he has learned how to do something, do it on his own?

7. Accepts criticism - When help or redirection is given, is he receptive to the change and will he incorporate constructive criticism by changing the way he does the task, or is he stubborn, not listening or responding to help?

8. Organization - Can he organize his work and his tools in an effeicient manner best suited for his way of working, or is he constantly getting up for something he forgot?

Things

1. Degree of dexterity - Can he manipulate objects, tools, small points easily? Does he have fingertip dexterity or does he clutch at tools, drop things frequently, have trouble picking up small parts or experience other difficulties along these lines?

2. Timing - Can he work quickly and efficiently? Does he make use of work time?

3. Pace - If the task is lengthy or strenuous, does he pace himself so he doesn't work too hard at first and become too exhausted to complete the task?

4. Tactile quality - "Degree of dexterity" and "tactile quality" might be changed to the following:

   Finger dexterity - This is the ability to move the fingers and manipulate small objects with the fingers rapidly and accurately.

   Manual dexterity - This is the ability to move the hands easily and skillfully, to work with the hands in placing and turning motions.

5. Ambulatory efficiency - If additional handicapping conditions are present (such as polio, cerebral palsy, or crippled legs, arms), do they interfere with the abilities to do work tasks (such as walking, stooping, reaching, pulling, bending, running and grasping)?

6. Stamina - Does the student have sufficient energy or work tolerance to complete the task, or is he lazy, apathetic, interested at first but then energy fizzles?

7. Caution - Does student observe safety rules and have a healthy respect for dangers or does he need to learn by experience before he uses caution (i.e., burning himself with a soldering iron before he really believes it is hot)?

8. Directional spatial concept - This might be changed to form perception which can be defined as "the ability to perceive pertinent detail in objects or in pictorial or graphic material; to make visual comparisons and discriminations and see slight differences in shapes and shadings of figures and widths and lengths of lines."

Spatial is more the ability to visualize objects of two or three dimension or to think visually of geometric forms or to look at a schematic, flat, diagram and be able to understand its relation to a model (three-dimensional).

9. Ability to learn tasks - This may be termed comprehension. Is the student able to learn and demonstrate successfully that he has learned a task? Can he remember and do what he has been taught to do?

Data

1. Degree of abstract thinking - Does the student seem able to understand a diagram or must he have the actual piece or things in his hands? Can he understand how parts relate to a whole. Does he seem to understand that intermediate steps lead to a finished product. This would really be tough to measure.

2. Reading level - Has the student learned the terms, names and other words appropriate to the unit and can he follow simple written directions for completing tasks relating to the unit?

3. Degree of problem-solving ability - This could relate to math (measuring the wire needed, measuring soil or figuring the fertilizer needed) or could relate to more abstract thinking as "how to _____"; i.e.,

how to fix a lamp that won't work by tracing down the problem to its pieces and putting it back together without instructions. How to get a plant from a small pot into a bigger one without breaking the plant is another example. Some students have very unique ways of solving these problems; others can't do anything without step-by-step instructions.

4. Memory - This is related to retaining instructions. Can the student remember how to do something or remember directions over a period of time or does he always have to start from scratch?

5. Accuracy - This refers to the quality of work. Is it done precisely and accurately, following directions or is it sloppy, mistake-ridden, flawed in other ways?

6. Numerical ability - Can the student do the math necessary in this unit? It may involve measuring with a ruler, calibrating with a meter, measuring with a cup or spoon, adding, multiplying and the like.

7. Neatness - Is the work area kept neat by the student? When he has finished with the project, does he clean the tools and put them away properly?

Personal Characteristics

1. Attitude - Does the student seem interested and attentive to what is going on?

2. Attendance - Does he come to class and is he on time? ("Punctuality" may be preferred here rather than "attendance.")

3. Appearance - Is he neat and clean, dressed in an appropriate fashion for the job?

4. Work independently - Can he work on his own with a minimum of supervision needed once he knows the task and what is expected of him? Does he work or does he goof off?

5. Vision quality - Is he able to see what he is doing easily or does he need to get very close to the work, squinting.

6. Speech quality - If he has any speech, is he encouraged to use it and does he use it? Can he learn to articulate the new vocabulary and incorporate it into his speaking vocabulary?

7. Perseverance - Does he give up or frustrate easily or does he continue to try? (This is related to work tolerance and stamina.)

8. Choices - Is the student capable of making choices or decisions about: which task to do, the best way of doing it, which tools to use? Can the student decide and tell if his work is good or not?

9. Ability to maintain interest - This would be served or explained through such terms as attitude perseverance and stamina. A person need not maintain a constant interest in a job to complete it satisfactorily. In fact, he may often lose interest and complete it satisfactorily.

10. Initiative - This may correlate with working independently. Can the student do things on his own? When he is finished with a task, will he ask for more work, or help other students who are having trouble? Or does he do the bare minimum and then quit.

11. Follows directions - For a particular unit, does a student obey the following?
1) simply written directions;
2) manual directions and 3) illustrated directions.

12. Responsibility - This correlates with working independently. Can the student complete an understood task with a minimum of supervision or does he need direction, constant supervision before he will work?