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ABSTRACT

The 1-year project, Career Education in Rural Arizona (CERA), was designed to provide a broad career orientation and realistic exploratory experience for students in a rural farming area covering 1,500 to 2,000 square miles. The project used career education instructional units, available through various educational information centers, which were then modified and adapted to the rural setting. Specific objectives were to: (1) Develop a workable model and test manual for evaluating career education curriculum units in a rural setting, (2) develop pilot test procedures and instruments, for evaluating these units, (3) develop a rural career education matrix, (4) select instructional units for pilot testing, (5) implement pilot testing, and (6) evaluate the pilot testing and report results, conclusions, and recommendations. The evaluator concluded that all project objectives were achieved and that administration of the project had been outstanding. The document includes a project summary, copy of the procedural manual and model with appended materials, the instructional manual for pilot test teachers, project financial report, the CERA matrix, and the third-party evaluation report. The evaluation interview forms and testing instruments are appended. (TA)

FINAL REPORT

Project No. V361054L
Grant No. OEG-0-73-2914

CAREER EDUCATION IN RURAL ARIZONA

Conducted Under
Part C of Public Law 90-576

State Department of Vocational Education
Arizona Department of Education
1535 West Jefferson
Phoenix, Arizona 85007

July 10, 1974
Revised August 31, 1975

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

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July 10, 1974
Revised August 31, 1975

INTRODUCTION

The need for career education has met with growing interest and concern in recent years. The state of Arizona is no exception. Teachers, administrators, and state level personnel have expended time and effort in an attempt to explore and implement career education. Numerous educators throughout the state have attended workshops, seminars, and enrolled in graduate courses, in an effort to become more knowledgeable and subsequently, better serve public interest.

It was felt that career education was largely urban centered. Career efforts seemed to have been produced, implemented, and evaluated in and for urban areas. Career education in rural Arizona seemed to be an extremely worthwhile inquiry due to the geographic conditions of Arizona.

The project, "Career Education in Rural Arizona", (CERA) experienced a time line from June 1, 1973 to June 30, 1974. The project was funded in order to:

> Exploit to as great an extent as possible the reservoir of career education instructional units available through educational information centers such as the Career Education Clearing House of the Arizona State Department of Education in order to modify and adapt these to a rural setting; making available throughout the project district K-12, a broad career orientation and realistic exploratory experience for students.

The major objectives of CERA were:

1. Develop a workable model and test manual.
2. Develop pilot test procedures and instruments.
3. Develop a rural career education matrix.
4. Select career education instructional units for pilot testing.
5. Implement pilot testing of units selected.
6. Evaluate pilot testing.
7. Report results, recommendations, conclusions, and implications in the final report.

Procedures for the CERA project were relatively simple and easily followed. Procedure simplicity and complete dissemination to all project personnel, including CERA board members, project personnel, and interested parties was deemed helpful and contributed to project success and effectiveness.

General procedures were:

1. Select project staff members.
2. Select project test-evaluation task force.
3. Select project needs/goals task force.
4. Conduct workshops and training sessions for all project personnel.
5. Develop and construct CERA matrix and procedural manual.
6. Select instructional units.
7. Implement career instruction.
8. Evaluate career instruction.
9. Develop final report.

The CERA project was somewhat unique in that participating schools were not members of a unified school district. Each school (five elementary schools and one high school) is a sole and separate entity. Each school served their own district and was maintained and guided by their respective superintendents and school boards.

The executive board of the CERA project was composed of superintendents from the participating schools. Consequently, K-12 career education was indeed a reality. Teachers and administrators from all the schools met on several occasions for the purpose of effectively implementing CERA goals and objectives. In addition, teacher and administrators found themselves interested in, and learning from the needs and concerns of the neighboring schools. Career education from kindergarten to senior high school was designed, implemented, and integrated in a cooperative effort that augmented, supplemented, and supported the needs and concerns of six different schoo

The needs/goals task force, the test/evaluation task force, pilot test teachers from all schools, CERA staff members and consultants worked together and developed procedural guidelines, test evaluation procedures, schedule of events and instructio implementation procedures. The pilot test teachers had input regarding the instructional units that were implemented. The pilot test teachers were influential in respect to the development and selection of evaluation items.

Staff and project personnel felt that the CERA project was well funded and provided direct student/teacher career implementation. Approximately 400 hours of career instruction was implemented under controlled conditions. Test results indicated that no major differences between the experimental group and the control group were evident. Item analysis indicated that the measurement devices produced within the project, were for the most part, inappropriate. Several items within the measurement devices were identified however, as having potential for acceptable discrimination capabilities. It is recommended that future studies make use of sound measurement devices or perform validity and reliability checks in order to produce sound measurement instrumentation.

The test results showing little if any difference between the two groups may indicate that adequate cover instruction is currently in effect, and perhaps specific areas of career instruction may need to be emphasized but not all areas of career instruction.

Acceptable instructional units were somewhat difficult to locate or perhaps have not been produced. It is recommended that future instructional units incorporate as part of their development, teacher preparation time, materials needed and cost. Time, material, and cost must be kept within realistic boundaries.

It is further concluded that the model and test manual developed as a result of the CERA project, is adequate and provides for a realistic structure and organizational system for the implementation of similar projects.

It is felt that data produced from the CERA project is extremely valuable and warrants additional statistical handling. Career education evaluation devices appropriate to the CERA project could not be found by CERA staff; therefore, evaluation devices were produced by project personnel. It is recommended that provisions for additional statistical analysis is of considerable value in order to gain full benefit from the CERA project as well as providing valuable information in the career education area.

PROBLEM

The project was unique to some degree in that it combined six different educational agencies into one, striving for a program that articulated career education from grades K-12 in a rural farming area that covers some 1,500 to 2,000 square miles.

It was felt that up to now most, if not all, career education material has been produced for, and evaluated in, urban areas. There was a commitment in the district of this project to the career education concept as demonstrated by the fact that 67% of all teachers have taken a three hour graduate course in career education, its implication and method of implementation. There was a need to research all existing material, decide by field testing and evaluation if the material was effective in a rural setting.

This project provided the money and incentive to accomplish the pilot testing of the instructional units selected from those available. The organization was a governing body of school administrators, project director, testing evaluation coordinator, and two task forces of teachers. Test-Evaluation Task Force and Need-Goals Task Force.

The strongest point in the project was the fact that much of the time and effort was in the classroom with teachers and students in an attempt to exploit existing materials and field test in a rural setting, K-12.

GOAL STATEMENTS

Exploit to as great an extent as possible the reservoir of career education instructional units available through educational information centers such as the Career Education Clearinghouse of the Arizona State Department of Education. Modify and adapt the units to a rural setting; making available throughout the project district K-12, a broad career orientation and realistic exploratory experience for students.

OBJECTIVES

1. Develop a workable model and Pilot Test Manual for pilot testing and evaluating career education curriculum units in a rural setting.

2. Develop a rural career education matrix utilizing the Arizona Career Education Matrix as a starting point.

3. Conduct a pilot test and evaluation of Career Education Instructional Units capable of delivering approximately 400 hours of instruction.

4. Complete overall evaluation of pilot test, this document will include the following:
   (a) A summation of the unique problems or voids that prevent existing Career Education Instructional Units from delivering career education in a rural setting.
   (b) An assessment of additional support services needed to deliver career education.

GENERAL PROJECT DESIGN AND PROCEDURES:

The design of the project was dictated to a large extent by the environment and the objectives. It was necessary to fit the design to many existing factors. First of all we are a very large geography area some 1,500 to 2,000 square miles, yet we have a very small population, some 15,000 people with about 3,000 students K-12. It is, then, a rural farming area located about 30 miles Southwest of Phoenix, Arizona. The shopping center for the area is Buckeye, Arizona, a town of about 3,000 people. A second constraint is the political organization of our school system. There are six different school districts in our area, all six were participants and all six have many things in common. However, each is its own political subdivision, with its own school board, etc. We have one Union High School with the five elementary schools feeding into it. Therefore, whatever is done in curriculum articulation either vertically or horizontally must be accomplished through cooperative effort. There is not one overall authority that can decide direction.

So first of all an organization had to be created through the media of an intergovernmental agreement (Appendix A shows the Organizational chart, page 1). This meant that each school board had to be made aware of the goal and objectives and to agree to participate. Each board was contacted and a presentation made, after which all agreed to become involved. Each board appointed its Superintendent to sit on a Board of Directors to set policy and procedures. The Board of Directors hired the Project Director and the State Department of Education appointed an External Evaluator. Other personnel were appointed or hired by the Project Director with the advice and consent of the Board of Directors. An Evaluation Coordinator, an Internal Monitor and a Secretary were hired to complete the central staff.

A Testing Evaluation Task Force (TETF) was selected. This group also became the lead teacher in each school and acted as an advisory group to the central staff. Each Superintendent of the local schools appointed an experienced teacher who had leadership abilities to serve on this task force (Page 10 and 11 of Appendix A lists the name and duties of this group.)

A Needs Goals Task Force (NGTF) was also appointed. The TETF members and Superintendents conferred and selected the members at each school based on student membership and grade level needed. (The names and duties of this group are listed in Appendix A on page 12 and 13.)

Members of these two task forces were paid for their time and effort. The TETF members received $1,100.00 each and the NGTF members received $600.00 each.

A third group that was selected to participate was the Pilot Test Teachers. These were teachers who would do the actual teaching and evaluating of units in the classroom. (Pages 14 and 15 of Appendix G list the names and duties of this group.) They were also paid in the amount of $180.00 each.

All three groups were given at least a one-day orientation workshop that dealt with the task at hand and the duties and responsibilities of each group. Dr. Stanley Wurster, our internal evaluator, was present at these orientations and helped conduct them as they related to the evaluation of our product. The central staff conducted the orientation in most part. Two documents were prepared and served as guides for the orientation workshops. The Procedural Manual and Model (Appendix A) and the Instructional Manual for Pilot Test Teachers (Appendix B).

Having developed the organization, hired or appointed the personnel, and held orientation workshops, the work began on meeting the objectives.

To develop a Rural Career Education Matrix utilizing the Arizona Career Education Matrix was the objective chosen to be our first undertaking. We felt we needed to know where we really wanted to go with career education in the Buckeye Valley before we selected the units.

This was the primary job of the Needs Goals Task Force. We began by examining in great detail the Arizona Matrix. We came together as a group and brainstormed our ideas. The group then went back to their local school and had further dialogue with other faculty members. This went on for two or three meetings until finally a concensus began to emerge. First of all we wanted to make the Matrix fit us. As we saw it, this meant that we would use parts of the State Matrix but not others and that we would shorten it a good deal as well as make it sequential.

The Matrix that we adopted after much discussion is found in Appendix D. Therefore, our first objective was met. This Matrix also includes the names of the Board of Directors - NGTF and TETF.

At the same time another objective, the development of a model and Pilot Test Manual, had been met as far as we were concerned for our project when we published Appendix A and B.

The third objective was that of the pilot testing of existing Instructional Units. This created several problems. The first being how to select the units. We decided that the people involved, the teachers themselves, should have a large say in that selection. Therefore, we took all personnel, TETF, NGTF, and Pilot test teachers to the WACOP media center and to the RCU media center. These are the two Arizona media centers that have all career education media available in the state, as well as being able to research existing materials throughout the United States. Our personnel spent a full day at each location and made individual trips on later days. From these resources they chose units that seemed capable of delivering successful accomplishments of the goals and objectives stated in our matrix for their classroom.

At this point it became evident that there was not as much material available as had been indicated. We found that sustained units of eight to ten days in duration for a single concept were limited. We also found that not all cells of the Matrix had been filled. There were many short one-hour or less units but not many well defined and complete units to fill out a concept.

At any rate materials were selected, (They are listed in Appendix B on Page 16A). The Unit Number is a CERA number but all units are available by name from RCU Arizona State Department of Education.

A time table was developed for the teaching of the units (Appendix B, page 18). It should also be noted that a control group was selected (Appendix B, page 20) so that evaluation comparison could be made.

The actual teaching of the Units was accomplished in various ways by the teachers so that it blended into their day-to-day activities with as little problem as possible. All of the teaching did take place between January 7, 1974 and May 15, 1974. All teachers taught at least ten hours of career education as it was

presented in the units selected. Some used one hour per week, others chose to complete the unit in ten, one hour sessions. The only requirement we had in this area was that pre and post testing should occur just before and just after instruction.

The teachers were instructed to teach the units just as they were, not to add to or subtract from them. This was probably the hardest part for them and we found that very few units, if any, could be made to fit without some alterations. This has to do with the environment, students, and the teacher being different even from one room to the next in any school.

Because of the variety of units used, the types of activities were varied. Some took field trips but not all. Guest speakers were used and hands-on activities were encouraged. Each unit would have to be examined to determine the exact activities used in each class.

The community was involved in the usual ways through contact by individual teachers, students, and administrators. Presentations were made at all local service clubs. However, the primary source of contact was through the elected representative of the people, the local school board. We feel they are the best qualified, being the only group elected by the people to represent them that we know of. If this group chooses to be active, I feel it is not necessary to appoint another junior school board. Our board did elect to be actively involved and so no other group seemed necessary.

The fourth objective was that of evaluation of the pilot test.

Evaluation instruments were devised in order to measure behavioral changes resulting from career instruction. Pretest/post test, experimental-control test procedures were used in order to control the relevant variables. It was anticipated that pretest/post test, experimental-control test procedures would isolate the independent and dependent variables for the sake of meaningful comparisons. Pretest/post test, experimental-control scores were computed and compared.

The evaluation instruments were subjected to split half reliability checks. An item analysis was performed with the experimental group and control group pretest scores. Item analysis was also performed on the combined experimental group and control group for each of eleven instruments.

Each pilot test teacher listed by rank order five students that responded most favorably to the treatment process and five students who responded least favorably to the treatment process. It was anticipated that rank order and test score comparisons would be performed.

Each pilot test teacher maintained a daily time log that provided an accurate account of the treatment process in terms of hours of instruction.

Each pilot test teacher completed an Arizona State Department instructional unit evaluation form. The evaluation form was modified by CERA staff in order to provide more meaningful information.

Statistical data regarding the test scores of the experimental group and the control group showed no difference between the two groups. The experimental group scored a differential of .70 score points from pretest to post test (n=584). The control group scored a differential of .71 score points from pretest to post test (n=430).

Instrument item analysis indicated that some items were acceptable for meaningful interpretations. Project personnel are of the opinion that instruments developed as a result of the CERA project may be a significant contribution for further studies.

Acceptable items for the individual test were selected as a result of the following criteria:

1. Discrimination index for the items had to exceed or be equal to .30.

2. For those items fulfilling criteria number one, a corrected index of difficulty was calculated to take into consideration the factor of guessing.

3. Those items were then selected which had a discrimination index equal to or in excess of .30 and also a corrected difficulty index greater than or equal to .30 but less than or equal to .75.

4. Finally, since the item analysis was on a pretest, those items fulfilling criteria number one for which the percentage answering the item correctly exceeded the percentage answering the item incorrectly, and the uncorrected index was between .40 and .70 were also included.

Items fulfilling criteria number three:

Test Number	Item Number
1	2,3,4,6,12
2	3,4,8,13,15,17
3	5,10,11
4	5,12,14,24
5	5,10,11,13,16,20
6	4,10,12,13,17,19,20,21
7	1,9,12,16
8	4,10
9	2,6,8,13
10	9,12,14
11	7,11,18

Items fulfilling criteria number four:

Test Number	Item Number	Split Half Reliability Coefficient
1	---	.74
2	12	.49
3	3,8	.36
4	21	.41
5	---	.62
6	7	.64
7	4	.31
8	---	.22
9	1,2,18	.61
10	4,6,8,13	.81
11	14	.65

Computer printout for which the above information was based, is available on request.

The evaluation of the project was conducted by Dr. Bruce Wainwright of Behavioral Consultants, Suite 312 Atlas Bldg., Salt Lake City, Utah. His report is, I believe, very comprehensive and is included here to satisfy the requirement of evaluation of the project. See Appendix E.

RESULTS, CONCLUSION, AND IMPLICATION

It is the opinion of the project staff that all the objectives of the project were met. We did in fact establish a matrix, prepare a procedural guide, pilot test and evaluate instructional units. We did in fact do this in all grade levels K-12. All people who participated were positive in their assessment of the project.

Although results of testing do not show a significant change in students as compared to control groups we feel and teachers do agree that a large contribution was made to the students of the Buckeye Valley. Certainly Career Education will continue in our school systems.

The major objective of pilot testing or field testing units was accomplished and our conclusions concerning this area are that there are simply not enough units available, they cannot be used without some modification, and in some cases cannot be used because of the activities not being of universal application. Nevertheless, some units were found that were excellent. It is also our opinion that there is no significant difference between the needs of rural and urban students in this area. The medias of T.V., newspaper, and transportation seem to have narrowed to almost nothing any gap that may have at one time existed. As a matter of fact, it is our opinion that the rural student may have decided advantages over the urban students in that they do take advantage of opportunities of the city via fast transportation and at the same time have all the advantages of rural life where as the city student does not seem to do the same in reverse.

It is also our opinion that Career Education cannot be a piece tacked on to the curriculum but must be taught as a continuous part of the total life of the student. This is very difficult and can only happen when the teacher has internalized the concept. Because this project was in effect tacked on it has not had the total impact it could have. It is a good beginning but much more work is necessary. Career Education must be included in the total goals and objectives for the school system. Therefore, we are all reorganizing our curriculum making an attempt to have true articulation. This is however, not only in Career Education, but in all areas of the curriculum fitting them together by priority and goal setting from K-12. There will be no changes in the educational system until the change agent (in this case all administrations K-12) makes or allows those changes to occur. In our case, we now have, because of CERA and other projects, all change agents actually engaged in making this happen.

APPENDIX A

PROCEDURAL MANUAL AND MODEL

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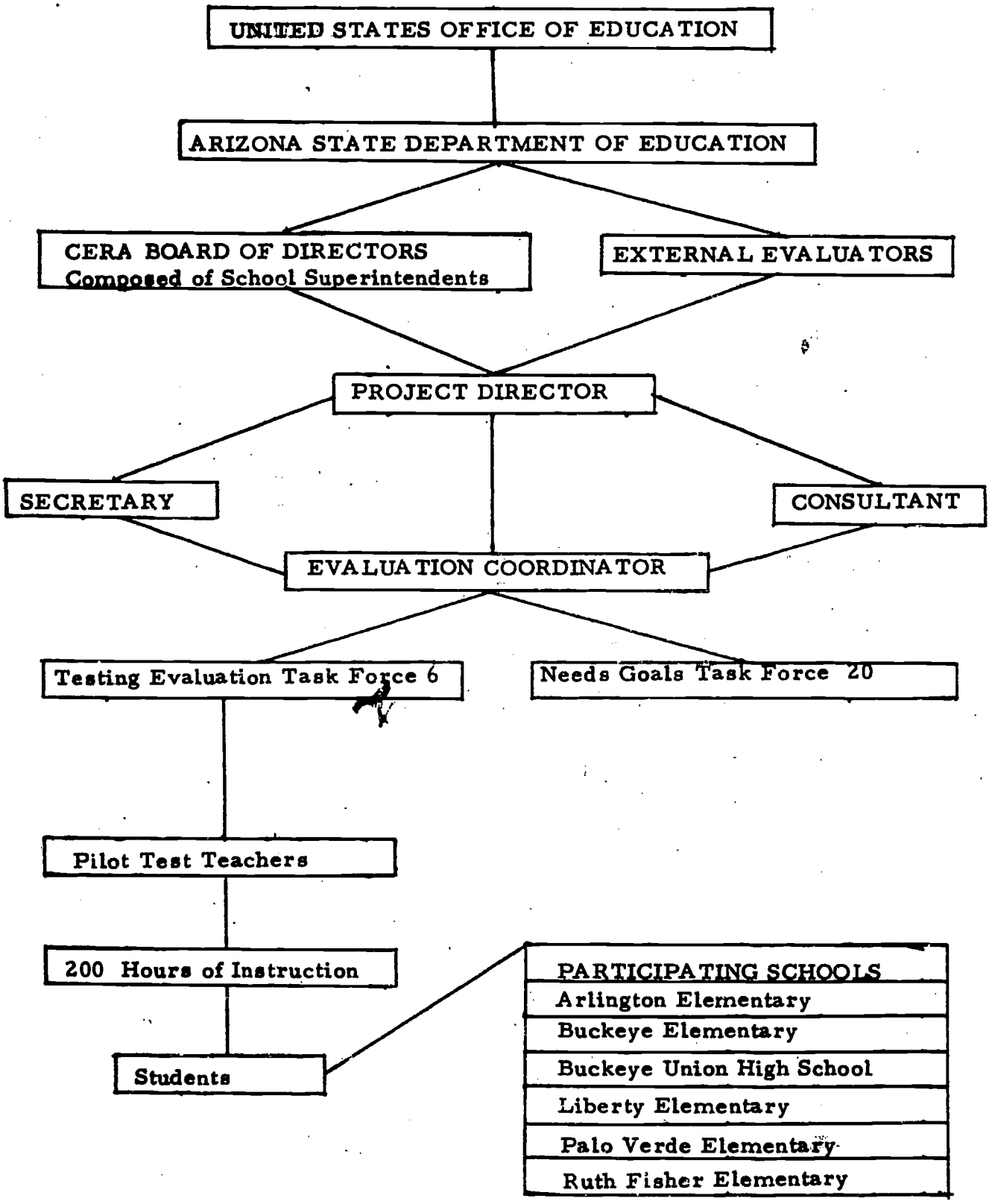
ORGANIZATIONAL CHART



ABSTRACT

This project is unique to the degree that it is combining six different educational agencies into one. The six educational agencies are:

Arlington Elementary School #47
Buckeye Elementary School #33
Buckeye Union High School #201
Liberty Elementary School #25
Palo Verde Elementary School #49
Ruth Fisher School #90

The project will strive for a program that articulates Career Education from kindergarten through the 12th grade in a rural farming area that covers some 1, 500 to 2, 000 square miles.

It is felt that up to now most, if not all, Career Education materials have been produced for and evaluated in urban areas. There is a commitment in the districts for this project and to the Career Education concept. This commitment is demonstrated by the fact that 67 percent of all teachers have taken a three-hour graduate course in Career Education, its implication and method of implementation. It is felt that they are ready to proceed, but need the financial aid of this project to make further progress possible. There is a need to research all existing materials and decide by field testing and evaluation if the materials will work in a rural setting. If the materials are found to be lacking, editing or creation of new units must be done.

This project provides the money and incentive to accomplish the field testing of approximately 200 hours of Career Education instructional units. The strongest point of this project is the fact that as many resources as possible will be put to use in the classroom with teachers and students in an attempt to utilize existing materials and field test them in a rural setting. This application will provide realistic orientation and exploratory experiences for students in the participating schools.

The general goal of this project is to utilize as much as possible the reservoir of Career Education instructional units currently available. These units will be modified and adapted to a rural setting.

The specific objectives to be accomplished in meeting this goal are as follows:

1. To develop a workable model and manual for evaluating career Education curriculum units in a rural setting.

2. To define a rural Career Education program utilizing the Arizona Career Education Matrix as a starting point.

3. To conduct a field test and evaluation of Career Education instructional units capable of delivering approximately 200 hours of instruction.
   This will be distributed as follows:

Grade Level	Hours
K-3	50 hours
4-6	50 hours
7-9	50 hours
10-12	50 hours

   Note: This is a suggested schedule and may require adjustment after screening of available units.

4. To conduct an overall evaluation of the field test. This evaluation will include the following:

   (a) A summation of the unique problems or voids that prevent existing Career Education instructional units from delivering Career Education in a rural setting.

   (b) An assessment of additional support services needed to deliver Career Education in a rural setting.

GOAL STATEMENT, OBJECTIVES, AND ACTIVITIES

Goal 1 Exploit to as great an extent as possible the reservoir of career education instructional units available through educational information centers such as the Career Education Clearinghouse of the Arizona State Department of Education in order to modify and adapt these to a rural setting; making available throughout the project district K-12, a broad career orientation and realistic exploratory experience for students.

1.1 Develop a workable model and Pilot Test Manual for pilot testing and evaluating career education curriculum units in a rural setting.

1.1.1 Project Director will appoint a Test Evaluator Coordinator and Test Evaluation Task Force (T/ETF), with approval of the Governing Board. This task force, will have a minimum of six members.

1.1.2 Project director will conduct orientation meeting of T/ETF to determine resources and capabilities.

1.1.3 Project Director and T/ETF will consult with evaluation specialist to develop required pilot-test procedures and instruments. Construct the first draft of the Pilot Test Manual.

1.1.4 Select a small sample of potential pilot test teachers to validate Pilot Test Manual.

1.1.5 Make necessary revisions in Pilot Test Manual and submit to Arizona Department of Education (ADE) for approval.

1.2 Develop a rural career education matrix utilizing the Arizona Career Education Matrix as a starting point.

1.2.1 Project Director with approval of Governing Board (GB) will appoint a Needs/Goals Task Force (N/GTF) with a minimum of 20 members.

1.2.2 N/GTF will review Arizona State Career Education Matrix to determine required modification for rural context.

1.2.3 N/GTF will develop procedures for executing required revisions to matrix.

1.2.4 N/GTF will execute revision plans.

1.2.5 N/GTF will draft tenative rural Career Education Matrix.

1.2.6 N/GTF will select Career Education Instructional Units to be pilot tested against tenative rural Career Education Matrix.

1.2.7 Project Director will submit list of Instructional Units selected to ADE for approval.

1.3 Conduct a pilot test and evaluation of Career Education Instructional Units capable of delivering approximately 200 hours of instruction. This will be distributed as follows:

K-3	50 Hours
4-6	50 Hours
7-9	50 Hours
10-12	50 Hours
Total	200 Hours

This is a suggested schedule and may require adjustment after screening of available units.

1.3.1 Project Director will assign members of T/ETF to appropriate schools with approval of GB.

1.3.2 T/ETF, Coordinator, and Project Director will select pilot test teachers subject to approval of GB.

1.3.3 T/ETF, Coordinator, and Project Director will design initial training program for pilot test teachers.

1.3.4 Project Director will make final assignment of units to pilot test teachers.

1.3.5 Project Director will conduct training of pilot test teachers using T/ETF members and appropriate consultants.

1.3.6 Develop calendar of when each Instructional Unit will be pilot tested.

1.3.7 Conduct pilot test according to procedures outlined in Pilot Test Manual.

1.3.8 Submit copies of pilot tested units with required documentation and evaluation to ADE Career Education Clearing House.

1.4 Complete overall evaluation of pilot test, this document will include the following:

(a) A summation of the unique problems or voids that prevent existing Career Education Instructional Units from delivering career education in a rural setting.

(b) An assessment of additional support services needed to deliver Career Education.

1.4.1 Determine additional data requirements for pilot test manual for completing evaluation report.

1.4.2 Prepare format for final report.

1.4.3 Collect required data during and after Instructional Unit Pilot Test.

1.4.4 Analyze data.

1.4.5 Prepare 1st draft of final report.

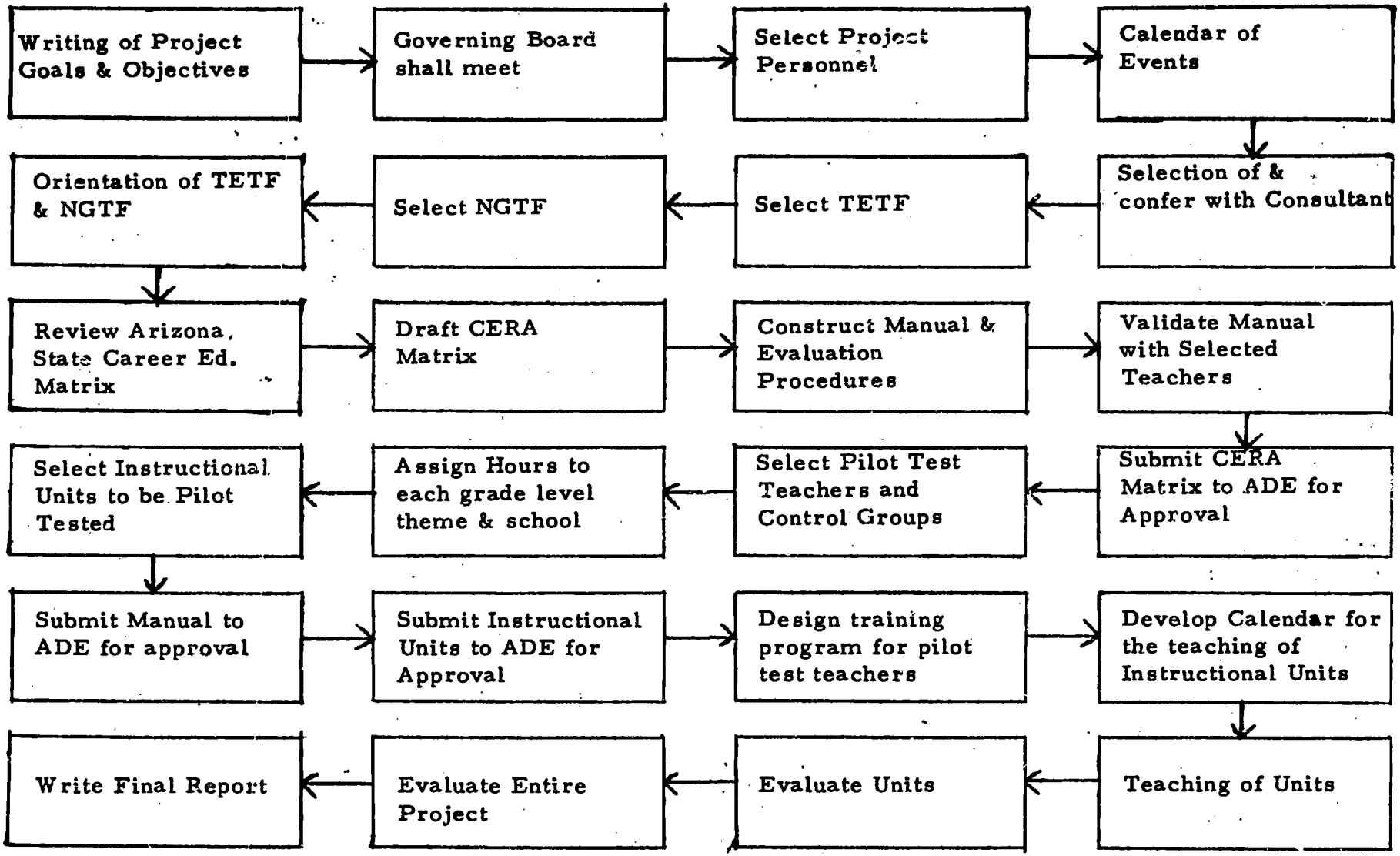
1.4.6 Review draft with appropriate people.

1.4.7 Revise and submit final evaluation report to ADE.

CALENDAR OF EVENTS

By the following dates	these items shall be completed
June 1, 1973	The Governing Board will appoint the Project Director, Test Evaluation Coordinator, and the Secretary.
June 2, 1973	Project Director will appoint a Test Evaluation Task Force of six teachers with the advice and consent of the GB.
June 5, 1973	Project Director will appoint a Needs-Goals Task Force of 20 Members with the approval of the GB.
June 15, 1973	Project Director and Coordinator will conduct orientation meeting with the T/ETF. Project Director and Coordinator will conduct orientation meeting with the N/GTF.
July 1, 1973	Review Arizona State Career Education Matrix for modification and adoption in this project.
August 1, 1973	Project Director and Coordinator will select an evaluation specialist as a consultant in the preparation of the Pilot Test Manual.
August 15, 1973	Project Director will make necessary revisions and draft tenative rural Career Education Matrix.
August 30, 1973	Coordinator and T/ETF will construct the first draft of the Pilot Test Manual.
September 1, 1973	Submit Matrix to ADE for approval.

By the following dates	these items shall be completed
October 20, 1973	1st Quarterly Report Make necessary revisions in Pilot Test Manual and submit to ADE for approval.
November 1, 1973	Project Director and N/GTF will select Career Education Instructional Units to be pilot tested against Rural Career Education Matrix. Submit these Units to ADE for approval.
November 20, 1973	Project Director, Coordinator, and T/ETF in cooperation with the consultant hired for this purpose will design the training program for Pilot Test Teachers.
December 1, 1973	Selection of Pilot Test Teachers.
December 31, 1973	2nd Quarterly Report.
January 1, 1974	Project Director will make final assignment of units to Pilot Test Teachers. Conduct training of Pilot Test Teachers and develop calendar of Instructional Units used by Pilot Test Teachers.
January 1, to May 30, 1974	Pilot Test and Evaluate selected units per above calendar. Submit copies of pilot tested units to ADE.
March 31, 1974	3rd Quarterly Report.
June 28, 1974	Submit Final Evaluation to ADE.


Writing of Project Goals & Objectives
Governing Board shall meet
Select Project Personnel
Calendar of Events
Selection of & confer with Consultant
Select TETF
Select NGTF
Orientation of TETF & NGTF
Review Arizona, State Career Ed. Matrix
Draft CERA Matrix
Construct Manual & Evaluation Procedures
Validate Manual with Selected Teachers
Submit CERA Matrix to ADE for Approval
Select Pilot Test Teachers and Control Groups
Assign Hours to each grade level theme & school
Select Instructional Units to be Pilot Tested
Submit Manual to ADE for approval
Submit Instructional Units to ADE for Approval
Design training program for pilot test teachers
Develop Calendar for the teaching of Instructional Units
Teaching of Units
Evaluate Units
Evaluate Entire Project
Write Final Report

TASK FORCE PERSONNEL

TESTING EVALUATION TASK FORCE (TETF)

There are six members of the TETF, one from each school involved in the project. They are the first teaching personnel to be selected. The Project Director shall contact each Superintendent personally to explain the function of the task force and assist him with the selection process. The Superintendent shall be asked to make the selection on the following criteria:

1. Leadership within the school.
2. Knowledge of Career Education in general.
3. Acceptance of Career Education Idea.
4. Knowledge of Evaluation Procedures.
5. Successful and Respected Teacher.

DUTIES OF THIS TASK FORCE SHALL BE:

1. Contact person in the school building for the project.
2. Assist in selection of Needs Goals Task Force Members.
3. Assist in Selection of Pilot Test Teachers.
4. Assist Coordinator in setting up Evaluation Systems.
5. Assist in selection of Instructional Units.
6. Attend meetings as needed.
7. Help in Evaluation of Instructional Units.
8. TETF shall serve for the entire project.

The Superintendent shall submit names of his appointees to the Project Director. The Project Director shall personally contact each appointee, explain the project, and the duties of this task force in detail. If the appointee is willing to serve, issue him a contract, if he is not willing, the process should begin again with the Superintendent.

MEMBERS OF TESTING EVALUATION TASK FORCE

Name	School Represented	Address	Phone
JACK SWEENEY	B. U. H. S.	Box 472 Buckeye	386-2804
DONNA BROWN	B. E. S.	Route 1 Box 16 Goodyear	932-0027
RUBEN JIMENEZ	R. F.	116 6th Ave. W. Buckeye	386-4263
LES MEREDITH	Arl.	Arlington, Arizona	386-2190
JOE A. PALUMBO	P. V.	Box 92 Palo Verde	386-2066
OLLIE CLEMENCE	Lib.	Route 1 Box 62 Buckeye	386-2376

NEEDS GOALS TASK FORCE (NGTF)

This NGTF consists of 20 members alloted among the schools on the basis of student membership and grade level.

	Enrollment	Teachers
Arlington Elementary	200	1
Buckeye Elementary	1000	5
Buckeye Union High School	800	4
Liberty Elementary	600	4
Palo Verde Elementary	200	3
Ruth Fisher Elementary	100	1
Totals	2900	20

The Evaluation Task Force Member and Superintendent at each school shall confer and select teachers in their school to serve on the Needs Goals Task Force, using the following criteria:

1. Knowledge and acceptance of the Career Education Idea.
2. Selections should be made from as many of the grade levels as possible K-3, 4-6, 7-8.
3. Successful and Respected Teachers.
4. Willingness to Serve.

The names shall be submitted to the Project Director who shall notify the appointee of his selection and set up an initial orientation meeting which both task forces shall attend. If appointees are still willing to serve, issue contracts.

DUTIES OF THIS TASK FORCE SHALL BE:

1. To help in preparation of the project Matrix.
2. Help in selection of instructional units that correlate with the project Matrix.
3. Attend meetings as needed.
4. Shall serve for the first six months of the project.

MEMBERS OF NEEDS GOALS TASK FORCE

Name	Represented	Address	Phone
CAROLE CAMPBELL	B.E.S.	1209 Ash Buckeye	386-2435
JAMES D. GROSBACH	B.U.H.S.	710 Eason Buckeye	386-4180
DOLPHA YULE	Arl.	208 3rd Ave. W. Buckeye	386-2470
FRANCES NARRAMORE	P. V.	P.O. Box 48 Palo Verde	386-4065
BOB ROBERTS	B.U.H.S.	1311 Ash Buckeye	386-4702
BARBARA HENDERSON	B.E.S.	712 Eason Buckeye	386-4898
WILLIE HIGHTOWER	Arl.	Arlington, Arizona	386-2259
JOHN C. LEFFUE	Arl.	Arlington, Arizona	386-2031
MIRIAM GLOVER	R. F.	275 Star Route Buckeye	386-3900
RICHARD J. SMITH	P. V.	P.O. Box 37 Palo Verde	386-2776
PAT ROVEY	B.U.H.S.	Route 1 Box 202 A Buckeye	386-4512
SUE WITHERSPOON	Lib.	Route 1 Box 60 G Buckeye	386-4852
ANNA ECKLEBERRY	Lib.	Route 1 Box 163 Buckeye	386-2386
ALICE FORSYTHE	P. V.	P.O. Box 97 Palo Verde	386-2533
SALLY HINEMAN	Lib.	Route 1 Box 76 Tolleson	936-3465
CHARLES A. DAHM	Lib.	136 Las Flores, Goodyear	932-3859
GLEN SMITH	B.U.H.S.	814 Roosevelt Buckeye	386-4684
CHUCKLES SCHETTINO	B.E.S.	601 Date Circle Buckeye	386-2755
EILEEN L. REILLY	B.E.S.	503 Edison Buckeye	386-4620
HENRY ESTRADA	B.E.S.	813 Clanton Buckeye	386-4735

CERA MATRIX

The Matrix for this project shall be prepared in cooperation with the Needs Goals Task Force using the Arizona State Career Education Matrix as a starting point .

The Project Director shall obtain sufficient copies of the State Matrix for each member of the Needs Goals Task Force. The NGTF shall study and make suggestions in writing to the Project Director. This shall be accomplished within two to four weeks of the beginning of the Project.

Meetings of NGTF shall be directed by the Project Director, as necessary for the development of a project Matrix. Meetings and inservice training shall occur within the time line as indicated by the Calendar of Events.

The proposed Matrix shall be submitted to the Arizona State Department of Education for Approval.

After approval the Matrix shall be printed in a readable and attractive manner in sufficient copies for distribution to interested parties.

The Matrix will form the framework for the selection of Instructional Units, and the evaluation of the impact of instruction in this project.

PILOT TEST TEACHERS

The teachers who shall actually teach the units in Career Education shall be chosen by the Testing Evaluation Task Force, School Superintendents, and the Project Director.

The procedure shall be that the TETF members shall make recommendations to the Project Director who shall in turn make recommendations to the Superintendents at a CERA Governing Board Meeting. Upon approval by the Governing Board each teacher selected shall be contacted by letter from the project director, informing them of their selection, and scheduling an orientation meeting.

DUTIES OF PILOT TEST TEACHERS

1. Attend Workshops.
2. Attend Meeting as necessary.
3. Help in selection of Instructional Units.
4. Make preparation for and teach Instructional Units in their classroom.
5. Pre and Post Test Students.
6. Make Evaluation of Units.

INSTRUCTIONAL UNITS

There shall be 200 hours of classroom instruction using Instructional Units selected to meet the objectives in the Matrix. These 200 hours shall be distributed among all schools at all grade levels and shall cover the Matrix as completely as the limited number of hours shall allow.

Instructional Units shall not be prepared within this project but shall be obtained from existing units available from other sources. The criteria shall be:

1. Units must be in existance.
2. Units must be available to this project for use.
3. Units must fit the project Matrix.
4. Units must be evaluated. (See Evaluation Section.)

All sources known to the project personnel shall be researched and Instructional Units screened and selected. The following outline could be employed:

1. Project Personnel locate sources, complete preliminary screening, make initial contact, gather material, and schedule meetings with appropriate people.
2. Where possible Task Force Members will visit resource centers.
3. Where practical project personnel will research and bring representative Instructional Units to the Task Force Members in project area.
4. Final selection shall be made on basis of Evaluation of Units by Task Force Members and Pilot Test Teachers who shall give input to the project staff. The project staff shall make the final selection of Instructional Units.

Each Instructional Unit shall be evaluated by the use of a pre and post test, by Teacher evaluation, and by the project staff in its total evaluation procedure. The following chart is a suggested assignment of placement by grade level, by theme, by number of hours, and by school.

DATA SHEET PILOT TESTING INSTRUCTIONAL UNITS

	K	1	2	3	4	5	6	7	8	9	10	11	12
eciations & udes ol-Hours	BES 10	Lib 10	Lib 10 BES 10	BES 10	P.V. 10								
Awareness ol-Hours	P.V. 10	BES 10	Arl 10	Lib 10 R.F. 10		R.F. 10	BES 10						
ational reness ol-Hours					BES	Arl 10 BES 10 Lib 10	P.V.						
er areness ool-Hours								Arl 10 Lib 10 BES 10	PV 10 BES 10 RF 10				
onomic areness ool-Hours								Lib 10 BES 10	Lib 10				
cision king ool-Hours									Lib 10 BES 10	BUHS 40			
ginning mpetency ool-Hours											BUHS 20	BUHS 20	
ployability lls ool-Hours													BUHS 20
tals 400	20	20	30	30	20	40	20	50	70	40	20	20	20

REVISED SEPTEMBER 24, 1973

Schools	Approx. Enrollment	% of Total	Times 400	Actual Hours Assigned	+ or -
Arlington	200	.07	28	30	+2
BES	1000	.34	136	120	-16
BUHS	800	.28	112	100	-12
Liberty	600	.21	84	80	-4
P.V.	200	.07	28	40	+12
R.F.	100	.03	12	30	+18
TOTALS	2900	1.00	400	400	+32 -32

PILOT TEACHER WORKSHOP

A workshop shall be held for the purpose of giving the Pilot Test Teachers the information, materials, and help they may need when teaching the Instructional Units.

The workshop shall cover the following items:

1. Broad overview of project.
2. Study and Instruction on Matrix.
3. Overview of Evaluation System.
4. Schedule of when to teach units.
5. Instruction on pre and post testing.
6. Instruction on Control Groups.
7. Outline of what the teachers responsibility will be in reporting results.
8. Forms that will be necessary.
9. What teachers can expect in way of observation and by who.
10. Help in obtaining or producing materials needed in teaching units.
11. What feed back teachers and students will receive.

Control groups will also be established. These teachers will be briefed on an individual basis by project personnel. Basically they will be instructed to do nothing differently than they normally do except to administer pre and post test.

Rating_____

PACKET SELECTION CHECKLIST

TITLE OF PACKET_____

PACKET IDENTIFICATION_____
(call number, storage place)

EVALUATOR_____
(Name) (Grade/Subject Taught)

After previewing the packet, answer "yes", "undecided", or "no" by placing an "X" in the appropriate columns. Upon completion of the checklist, place the rating score at the top of the page. The rating score is determined by adding the numerical value of each response. Yes=2 Undecided=1 No=0

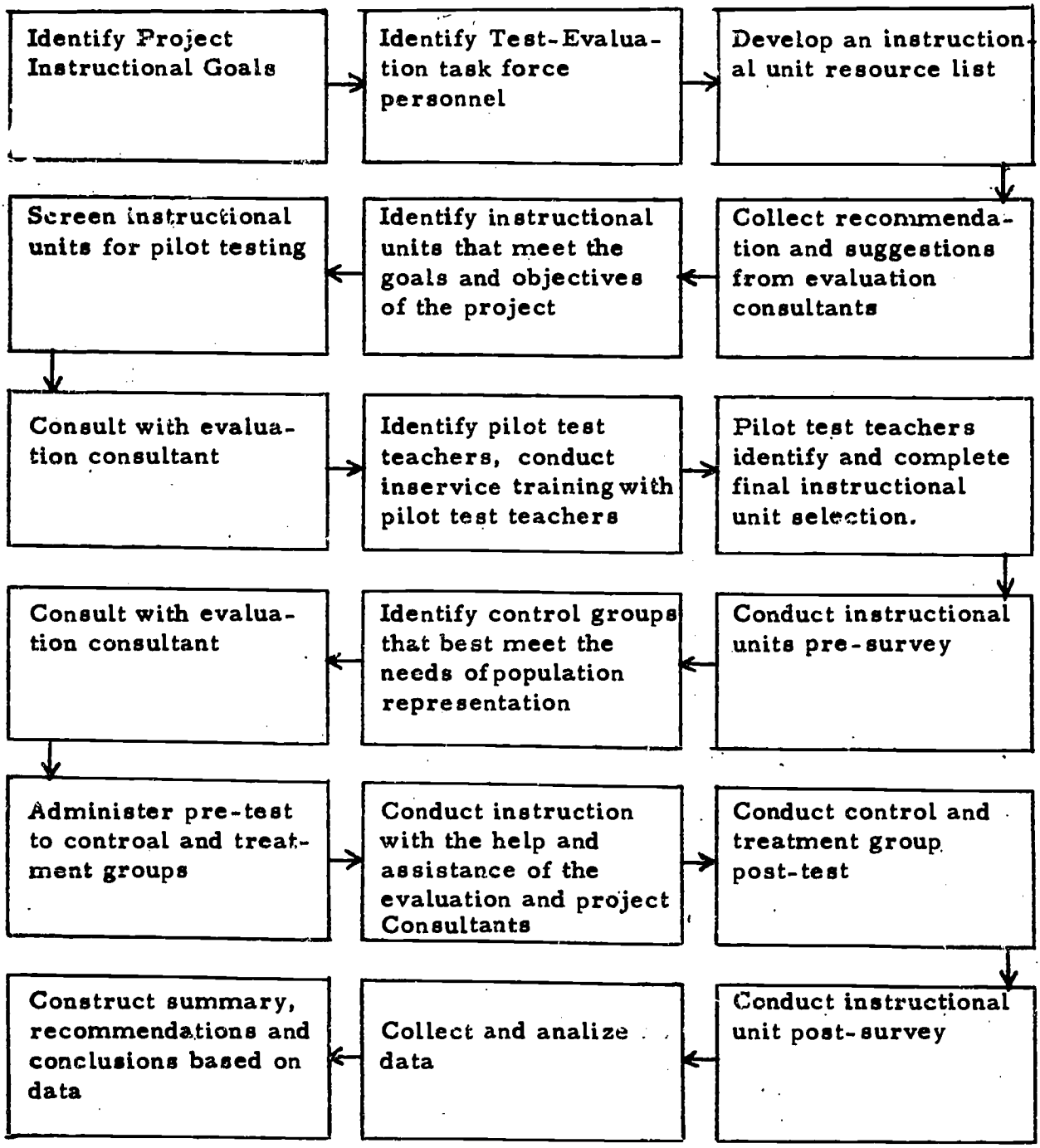
	YES	UN	NO
1. Is the grade level appropriate?	____	____	____
2. Is the concept appropriate to the goal matrix?	____	____	____
3. Is the concept clear, the goal obtainable?	____	____	____
4. Are directions clear and complete?	____	____	____
5. Is an evaluation section included?	____	____	____
6. May the packet be used without excessive amounts of preparation, expensive equipment, etc.?	____	____	____
7. Is the packet (or some section of it) within the teaching time limit?	____	____	____
8. Does the packet avoid cultural bias?	____	____	____
9. Is the packet appropriate to a rural area?	____	____	____
10. Are the activities appealing or interesting?	____	____	____
11. Does the packet make sense to you, do you like it?	____	____	____
12. Does the packet have an educational value?	____	____	____

(Please determine and record rating score, thank you.)

OVERVIEW OF EVALUATION SECTION

Evaluation Flow Chart
Pilot Test Procedures and Organization
Evaluation: Goal 1 Consultant
Goal 2 Implimentation
Goal 3 Analysis of Data
Goal 4 Summation
Goal 5 Overall Assessment

EVALUATION FLOW CHART



PILOT TEST PROCEDURES

I Project Goal: Exploit to as great an extent as possible the reservoir of Career Education instructional units available through educational information centers such as the Career Education Clearinghouse of the Arizona State Department of Education in order to modify and adapt these to a rural setting; making available throughout the project district K-12, a broad Career orientation and realistic exploratory experience for students.

A. The Governing Board, Task force personnel, evaluation consultant, project director and coordinator discussed and identified preliminary procedures and objectives.

B. An instructional unit resource list was constructed by directly or indirectly consulting the following organizations and individuals:

1. Arizona Educational Information System
   Bureau of Educational Research and Services
   College of Education Arizona State University
   Tempe, Arizona

2. Career Education Clearinghouse
   Arizona State Department of Education
   1535 W. Jefferson
   Phoenix, Arizona

3. Direct access to Reference Information
   University Microfilms, Xerox Corporation
   Ann Arbor, Michigan

4. Mr. Julis Johnson
   428 S. Wilber
   Mesa, Arizona

5. Needs/Goals Task Force Personnel
   Career Education in Rural Arizona Project
   902 Eason Ave.
   Buckeye, Arizona

6. Testing/Evaluation Task Force Personnel
   Career Education in Rural Arizona Project
   902 Eason Avenue
   Buckeye, Arizona

7. Westside Area Career/Occupations Project
   902 Eason Avenue
   Buckeye, Arizona
   Ed Burton: Consultant

8. Westside Area Career/Occupations Project
   6826 N. 58th Drive
   Glendale, Arizona
   John Glur: Director

9. Dr. Stanley R. Wurster
   Department of Elementary Education
   Arizona State University
   Tempe, Arizona

EVALUATIONS GOALS

II Evaluation Goals

Goal 1: Consult with evaluation specialist to develop required pilot-test procedure and instruments.

A. The evaluation specialist, project director, coordinator, task force personnel were consulted in order to develop the following procedure.

a. Instructional units were screened and evaluated by use of a pre-test, post-test survey. (Sample copies are contained at the end of this section.)

b. Student behavioral changes were assessed by the use of: (1) evaluation contained in each individual instructional unit. (2) A teacher devised pre-test, post-test, evaluation with control group, treatment group comparisons. (3) Career Inventory pre-test post-test design with control group-treatment group comparisons.

B. Additional resources consulted were:

1. American College Testing Program
P.O. Box 168
Iowa City, Iowa 52240

2. American Guidance Service Inc.
Publisher's Building
Circle Pines, Minnesota 55014

3. American Personnel & Guidance Association
1607 New Hampshire Avenue N.W.
Washington D. C. 20009

4. Eric Clearing House
Tests, Measurement & Evaluation
Educational Testing Service
Princeton, New Jersey

5. Federal Job Information Center
Balke Building
44 W. Adams Street
Phoenix, Arizona

6. Human Behavior Consultants
P.O. Box 26217
Tempe, Arizona 85282

7. Instructional Packets
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210

8. The Psychological Corporation
304 E. 45 St.
New York, New York 10017

9. Research Coordination Unit
1535 W. Jefferson
Phoenix, Arizona

10. Science Research Associates, Inc.
259 East Erie Street
Chicago, Illinois 60611

Goal 2: Select and impliment Career Education Instructional units to be tested.
Instructional units were selected and implimented by use of the procedure described in goal 1 of this section.

Goal 3: Analyze Date. Data was collected and analized by use of statistical methods and procedures set forth by the evaluation consultant.

Goal 4: *(Summation of unique problems or voids.)

Goal 5: *(Assessment of additional support services needed to deliver Career Education in Rural Arizona.)

*Items pending implementation.

FINANCIAL STRUCTURE

This project is funded by the United States Office of Education in Cooperation with the Arizona State Department of Education. The funds have authorized for expenditure by the BUHS District and its Superintendent. The actual funds are kept on deposit at the County level with the County School Superintendent having jurisdiction over their legal expenditure. All payments are requested on proper vouchers and checks are issued at the county level. All purchases are made by purchase orders signed by the project director. Salaries and other expenses are paid over the signature of the project director, reviewed by the BUHS Business Office and finally by the County School Office.

A set of books are maintained by the project director which includes:

Purchase Order File
Paid Bills
Personnel payroll information
Ledger of Accounts
Accounts encumbered

The following items are included in the Appendix:

Copy of Budget
Copy of Contracts
Copy of Purchase Orders
Copy of Expense Statements
Copy of Mileage Request Schedule

APPENDIX

REVISED BUDGET

BUCKEYE UNION HIGH SCHOOL
CAREER EDUCATION IN RURAL ARIZONA

TIME LINE
July 1, 1973 - June 30, 1974

I. Direct Cost	% of Time	Federal	State	Local	Total
A. Personnel					
1 Project Director $20,000 Per Year July 1, 1973-June 30, 1974	100	$20,509.12			$20,509.12
1 Test Evaluation Coordinator $1100 Per Month July 1, 1973-June 30, 1974	11/13	$12,100.00			$12,100.00
1 Secretary $335 per month July 1, 1973-June 30, 1974	100	$ 4,113.05			$ 4,113.05
6 Testing Evaluation Task Force $100 Per Month Each July 1, 1973-June 30, 1974	11/13	$ 6,100.00			$ 6,100.00
20 Need Goals Task Force $100 Per Month Each July 1, 1973-June 30, 1974	6/13	$10,100.00			$10,100.00
20-35 Pilot Test Teachers Workshop $30 Per Day Each	11/2 dy	$ 1,575.00			$ 1,575.00
Pilot Testing of Instructional Units - 200 hours @ $30 Per Hour		$ 6,000.00			$ 6,000.00
Consultants Project Consultant 10 days $100 Per Day	10 dys	$ 1,000.00			$ 1,000.00
B. Employee Benefits					
Retirement	5%	$ 1,813.59			$ 1,813.59
Insurance				585	$ 585.00
Social Security		$ 2,183.29			$ 2,183.29
Industrial Insurance				1,000	$ 1,000.00
C. Supplies & Materials					
Office Materials		$ 474.61		500	$ 974.61
Project Materials		1,000.00		2,000	$ 3,000.00
D. Travel					
Mileage	30,000 mi	$ 1,928.10		2,000	$ 3,928.10
Per Deim		$ 300.00			$ 300.00
E. Communications					
F. Services					
Third Party Evaluator 5% of Total		$ 4,000.00			$ 4,000.00
Duplication & Media		$ 1,375.00		2,000	$ 3,375.00
Test Evaluation & Statistical Analysis		$ 3,000.00			$ 3,000.00

	% of Time	Federal	State	Local	Total
G. Final Report Cost		$ 500.00			$ 500.00
H. Other Direct Cost					
I. Subtotal Direct Cost		$78,071.76		$8,085.00	$86,156.76
II. Indirect Cost					
Office Space $100 per month	13 mo.			$1,300.00	$ 1,300.00
Office Furniture & Equipment				$1,005.00	$ 1,005.00
Telephone $80 per month				$1,040.00	$ 1,040.00
Use of WACOP & RCU Media			2,000		$ 2,000.00
WACOP Consultant Time	10%		1,000		$ 1,000.00
Pilot Teacher Workshop Consultant WACOP staff			1,500		$ 1,500.00
			$4,500	$3,345.00	$ 7,845.00
GRAND TOTAL		$78,071.76	$4,500	$11,430.00	$94,001.76

MILEAGE SCHEDULE

The following to be itemized on a daily basis: CERA PROJECT

Meter Readings		Between What Points		Miles	Purpose of	Date
Start	Ending	From	To	Traveled	Trip	
			Totals			

Signature of Traveler _____

Date _____

STATEMENT

TO: Career Education In Rural Arizona CERA
Buckeye Union High School
902 Eason Avenue
Buckeye, Arizona 85326

FOR SERVICES RENDERED AS FOLLOWS:

DATE OR DATES OF SERVICES: _____

AMOUNT DUE: _____

PAYABLE TO: Name _____

Address _____

_____

Phone _____

Signed _____
(Person to receive Payment)

Date _____

APPROVED FOR PAYMENT _____
Project Director CERA

VENDOR

PURCHASE ORDER

ACTIVITY ACCOUNT

THIS NUMBER MUST APPEAR ON ALL INVOICES, PACKAGES, ETC.

BUCKEYE UNION HIGH SCHOOL

PHONE 386-4423 902 EASON AVENUE
BUCKEYE, ARIZONA 85326

4950

INV #	DATE
P/N	

SOLD TO

SHIP TO

QUANTITY	PLEASE SUPPLY ITEMS LISTED BELOW		PRICE	

HOW SHIP

PLEASE SEND 3 COPIES OF YOUR INVOICE

PURCHASING AGENT

CONTRACT

This contract made between the Governing Board of Career Education in Rural Arizona (CERA) and _____ _____ shall begin on _____, and shall terminate on June 30, 1974. This contract shall be binding on both parties and shall not be violated without due notice and just cause.

For services rendered the above named person shall be paid _____.

It is understood by all parties that this is a federally financed project and will terminate on June 30, 1974. No commitment may be made beyond that date. The above named person shall perform duties as directed by the Governing Board and or the Project Director.

_____

Signed by Employee Date

Governing Board

_____

_____

_____

_____

_____

_____

APPENDIX B

INSTRUCTIONAL MANUAL FOR PILOT TEST TEACHERS

INSTRUCTIONAL MANUAL

PILOT TEST TEACHERS

CAREER EDUCATION IN RURAL ARIZONA

For Pilot Testing of Career Education

Instructional Units K - 12

During Second Semester of

School Year 1973-74

INTRODUCTION

Thank you for being a part of this project. We realize that you may have questions and the purpose of this manual is to answer as many of those questions as possible.

Basically, we are trying to evaluate the impact of Career Education in our school districts. If we find that overall the results are positive, we will recommend to the Superintendents that we continue a structured program similar to this effort. Secondly, we are attempting to determine if the material already in existence and produced outside this district can be used in a rural setting such as ours. Again, recommendations will be made in the light of your evaluation.

At no time will we attempt to judge the competence of teaching involved in this project. We are concerned with the materials and the outcome of exposure to this material. Judgment will be based on these criterion and not teaching techniques or skill.

Good Luck as we begin the instruction phase of the project. Do not hesitate to call on us any time you need help.

PILOT TEACHER WORKSHOP

A workshop shall be held for the purpose of giving the Pilot Test Teachers the information, materials, and help they may need when teaching the Instructional Units.

The workshop shall cover the following items:

1. Broad overview of project.
2. Study and Instruction on Matrix.
3. Overview of Evaluation System.
4. Instruction on pre & post testing.
5. Outline of what the teachers responsibility will be in reporting results of packet evaluation.
6. Instruction on Control Groups.
7. Schedule of when to teach unit.
8. Forms that will be necessary, contracts, teaching log.
9. What teachers can expect in way of observation and by who.
10. Help in obtaining or producing materials needed in teaching units.
11. What feed back teachers and students will receive.
12. Work on test questions.

ORGANIZATIONAL CHART

SEE APPENDIX A

ABSTRACT

This project is unique to the degree that it is combining six different educational agencies into one. The six educational agencies are:

Arlington Elementary School #47
Buckeye Elementary School #33
Buckeye Union High School #201
Liberty Elementary School #25
Palo Verde Elementary School #49
Ruth Fisher Elementary School #90

The project will strive for a program that articulates Career Education from kindergarten throught the 12th grade in a rural farming area that covers some 1,500 to 2,000 square miles.

It is felt that up to now most, if not all, Career Education materials have been produced for and evaluated in urban areas. There is a commitment in the districts for this project and to the Career Education concept. This commitment is demonstrated by the fact that 67% of all teachers have taken a three-hour graduate course in Career Education, its implication and method of implementation. It is felt that they are ready to proceed, but need the financial aid of this project to make further progress possible. There is a need to research all existing materials and decide by field testing and evaluation if the materials will work in a rural setting. If the materials are found to be lacking, editing or creation of new units must be done.

This project provides the money and incentive to accomplish the field testing of approximately 400 hours of Career Education instructional units. The strongest point of this project is the fact that as many resources as possible will be put to use in the classroom with teachers and students in an attempt to utilize existing materials and field test them in a rural setting. This application will provide realistic orientation and exploratory experiences for students in the participating schools.

The general goal of this project is to utilize as much as possible the reservoir of Career Education instructional units currently available. These units will be modified and adapted to a rural setting.

THE SPECIFIC OBJECTIVES TO BE ACCOMPLISHED IN MEETING THIS GOAL ARE AS FOLLOWS:

1. To develop a workable model and manual for evaluating Career Education curriculum units in a rural setting.

2. To define a rural Career Education program utilizing the Arizona Career Education Matrix as a starting point.

3. To conduct a field test and evaluation of Career Education instructional units capable of delivering approximately 400 hours of instruction. This will be distributed as follows:

GRADE LEVEL	HOURS
K-3	100 hours
4-6	100 hours
7-9	100 hours
10-12	100 hours

Note: This is a suggested schedule and may require adjustment after screening of available units.

4. To conduct an overall evaluation of the field test. The evaluation will include the following:

   (a) A summation of the unique problems or voids that prevent existing Career Education instructional units from delivering Career Education in a rural setting.

   (b) As assessment of additional support services needed to deliver Career Education in a rural setting.

CERA PROJECT FLOW CHART

SEE APPENDIX A

G O A L S

It is important that you remember that the Matrix sets the goals and objectives for each area. The area you are working in is reproduced in the follwing pages. The pre and post test questions have been prepared to test these items. Therefore, you are attempting through the use of the unit you are teaching to change the behavior of students in these areas.

GOAL STATEMENTS

K - 3

APPRECIATIONS & ATTITUDES

Teachers: Towner; Green; Estrada; Jesse; Glover; Eckleberry

The student will recognize the responsibilities to himself and others when accepting a task or job.

The student will recognize that individual task performance is a part of effective group membership.
The student will become aware of the importance of completing a task.
The student will appreciate the value of completing certain tasks.

The student will recognize individual differences and become tolerant in his interpersonal relationships.

The student will respect the feelings of others.
The student will become tolerant of differences in others.

SELF AWARENESS

K - 3

Teachers: Narramore; Risinger; Blankenship; Witherspoon

The student will understand, accept and respect his own uniqueness as a result of learning, growth, and maturation.

The student will become aware of his feelings.
The student will recognize his feelings.
The student will learn to express his feelings in a socially acceptable manner.

SELF AWARENESS

cont.

The student will have the opportunity to practice establishing tentative, personally relevant goals.

The student will relate his needs to goals in a classroom setting.
The student will identify the concept of long-range goals.

The student will learn about himself in relation to his culture through understanding and experiencing roles.

The student will recognize varying roles of family members.
The student will recognize differences between his behavior at home and school.

GOAL STATEMENTS

4 - 6

APPRECIATIONS & ATTITUDES

Teachers: Garrison; Glover

The student will recognize the responsibilities to himself and others when accepting a task or job.

The student will appreciate the value and importance of a task to himself and others.
The student will recognize that a task well done is rewarded by self-satisfaction and recognition.

The student will recognize individual differences and become tolerant in his interpersonal relationships.

The student will recognize the skills, abilities, rights, and repson-sibilities of others.
The student will recognize that to be tolerant does not require that he agree with the beliefs of other people.

SELF-AWARENESS

4 - 6

Teachers: Garcia; Amabisca; Clingman

The student will recognize the relationship of interest, aptitudes, and achievements to the realization of his career goals.

The student will analyze his strengths and weaknesses, likes and dislikes, and achievements in terms of causation.
The student will become aware of the relationship between the interests, aptitudes, achievements, and occupations.

SELF-AWARENESS

cont.

The student will understand, accept, and respect his own uniqueness as a result of learning, growth and maturation.

The student will identify ways in which he is emotionally like and different from his peers.
The student will become aware of some of his important values and the sources of these values.

The student will learn to establish, although tentative, personally relevant goals.

The student will recognize that setting priorities is an important part of setting and reaching goals.
The student will recognize various consequences of goal-directed activities and undirect activities in a classroom setting.

The student will learn about himself in relation to his culture by experiencing various roles.

The student will use the term "role" when referring to his position in a group or an organization.

EDUCATIONAL AWARENESS

4 - 6

Teachers: Wood; Goodwin; Lutten
Yule; Jimenez; Hineman

The student will recognize the significance of language, computational and reasoning development, and the mastery of content knowledge as a means of achieving career goals.

The student will realize how and why reading, writing, number skills, and science are used in some jobs.
The student will relate skills learned in the classroom to those used by workers.

The student will recognize that different career directions require varying types of educational preparation.

The student will develop an understanding of how communications, mathematics, science, and social studies skills are used in selected occupations.
The student will understand the relationship between in-school experiences and career directions.

The student will recognize that educational experiences are a part of his career development.

The student will recognize that participation in school classes and activities may relate to his use of time throughout life.
The student will understand relationships between educational experiences and career selection and development.

The student will recognize that learning is continuous, occurring in and outside of school.

The student will become aware of the connection between in-school and out-of-school learning experiences.
The student will become aware that desire and capability to learn influence his learning.

GOAL STATEMENTS

7 - 8

CAREER AWARENESS

Teachers: Smith; Estrada; Henry; Greenburg; Hightower; Murer; Sanderson; Baker

The student will recognize that his career includes progressions through developmental stages of educational and occupational experiences.

The student will recognize those things that influence job change and advancement.
The student will define the expected performance requirements of specific careers.

The student will understand the variety of occupations which make up the world of work.

The student will explore some occupations which make up the world of work.
The student will identify several careers and recognize the specialized jobs related to each.

The student will understand the way in which occupations relate to needs and functions of society.

The student will become aware of careers as they relate to the needs and functions of the community.
The student will become aware of career characteristics within geographical locations and their relevance to job mobility.

The student will determine the worker qualifications needed to perform the basic tasks of various occupations.

The student will identify the relationship of personal interests to success in specific occupational areas.
The student will recognize the relationship between personal aptitudes and success in specific occupational areas.

ECONOMIC AWARENESS

7 - 8

Teachers: Cone; Goodson; Dahm

The student will understand the relationship between personal economics, life-style, and occupational roles.

The student will understand that money earned may determine his life-style.
The student will understand life-style needs and their relationship to career rewards.

The student will understand the range or social and economic benefits associated with various occupations.

The student will consider occupational roles which are compatible with his currently expressed needs and wants.
The student will recognize that people-oriented and independent work are aspects of certain occupational choice, and he will explore his attitudes and behavior related to both.

ECONOMIC AWARENESS

Cont.

The student will understand the relationship of his present and anticipated occupational status to economic trends found in his community, state, and nation.

The student will develop knowledge of the relatioships of economic trends in his community, state, and nation.
The student will become aware of economic forecasting instruments.

DECISION MAKING

7 - 8

Teacher: Clemence

The student will understand that decision making includes responsible action in identifying alternatives, selecting the alternative most consistent with his goals, and taking steps to implement a course of action.

The student will demonstrate an ability to use decision-making and problem-solving skills in gaining self-awareness and relating it to career explorations.
The student will recognize that he is responsible for the outcomes of his decisions.
The student will demostrate skill in responsible decision-making behavior.

The student will become proficient in using resource information to make career decisions.

The student will increase occupational and self-knowledge through the use of outside resources and experiences in the community.
The student will have experiences whereby he can observe people at work.

GOAL STATEMENTS

9 - 12

DECISION MAKING

Teachers: Clark; King; Gasperak

The student will understand that decision making includes responsible action in identifying alternatives, selecting the alternative most consistent with his goals, and taking steps to implement a course of action.

The student will understand that a given set of facts can support different decisions.
The student will project what the immediate intermediate, and long-term effects of decisions will be on himself, his family, and society.

The student will identify and state personal goals as part of making career decisions.

The student will explore his career goals and the subsequent decisions that are required by such goals.
The student will make a tentative plan for developing his long-range career possibilities and what is required to achieve them.

The student will become proficient in using resource information to make career decisions.

The student will understand how school and work experiences meet the needs of occupational preparation.
The student will continue to acquire information in the continuing evaluation and development of his educational plan.

BEGINNING COMPETENCY

9 - 12

Teachers: Rovey; Gonzalez

The student will develop the skills necessary for employment in the career of his choice.

The student will demonstrate increased knowledge of his selected career and the necessary entry-level skills for it.
The student will align his entry-level skills with his career desires.

The student will develop the skills necessary for employment in the career of his choice.

The student will demonstrate increased knowledge of his selected career and the necessary entry-level skills for it.
The student will develop observations skills used to collect data needed to solve problems.

The student will become familiar with the use of basic tools, equipment, and materials associated with business, commercial, and industrial activities.

The student will identify the competency or expertise needed to use tools, equipment, and materials in business and industry.

The student will develop an understanding of the interpersonal relationships resulting from the interaction of people in various occupational roles.

The student will demonstrate those interpersonal relationship skills likely to be expected of him while looking for a job.

EMPLOYABILITY SKILLS

9 - 12

Teachers: Newberry; Chapman; Brittenham

The student will develop work habits and attitudes necessary to enter an occupation in the career area of his choice.

The student will meet the requirements necessary for job entry.
The student will complete a simulated or real job-seeking task.
The student will complete an assigned task related to employability, i.e., completing an application form of interview.

The student will recognize the implications of working, with and without supervision, independently and with others.

The student will understand the advantages, disadvantages and responsibilities of his career choices.
The student will identify the requirements of supervision.

The student will relate information about himself in selecting, learning, or performing duties.

The student will present an accurate description of education, training, experience, and information about himself to potential employers through a variety of ways such as interviews, tests, and applications.
The student will identify several potential careers which he is capable of pursuing.

PILOT TEST TEACHERS

The teachers who shall actually teach the units in Career Education shall be chosen by the Testing Evaluation Task Force, School Superintendents and the Project Director.

The procedure shall be that the TETF members shall make recommendations to the Project Director who shall in turn make recommendations to the Superintendents at a CERA Governing Board Meeting. Upon approval by the Governing Board each teacher selected shall be contacted by letter from the project director, informing them of their selection, and scheduling an orientation meeting.

DUTIES OF PILOT TEST TEACHERS

1. Attend Workshops
2. Attend Meeting as necessary
3. Help in selection of Instructional Units.
4. Make preparation for and teach Instructional Units in their classroom.
5. Pre & Post test students
6. Make Evaluation of Units.

PILOT TEST TEACHERS

NAME	THEME AREA	GRADE LEVEL	SCHOOL
Narramore, Frances	Self Awareness	K	Palo Verde
Garrison, Sarah	App. & Attitudes	4	Palo Verde
Wood, Gerald	Educa. Awareness	6	Palo Verde
Smith, Richard	Career Awareness	8	Palo Verde
Towner, Sheri	App. & Attitudes	K	B.E.S.
Risinger, Lena Ruth	Self Awareness	1	B.E.S.
Green, Shirlia	App. & Attitudes	2	B.E.S.
Estrada, Jessie	App. & Attitudes	3	B.E.S.
Goodwin, Virgie	Educa. Awareness	4	B.E.S.
Lutten, Helen	Educa. Awareness	5	B.E.S.
Garcia, Ernest	Self Awareness	5	B.E.S.
Amabisca, Muriel	Self Awareness	6	B.E.S.
Baker, Lucille	Career Awareness	7	B.E.S.
Estrada, Henry	Career Awareness	7	B.E.S.
Greenburg, Robert	Career Awareness	8	B.E.S.
Cone, Trent	Econ. Awareness	8	B.E.S.
Yule, Dolpha	Educa. Awareness	5	Arlington
Clingman, Loy	Self Awareness	6	Arlington
Hightower, Willie	Career Awareness	7	Arlington
Glover, Miriam	App. & Attitudes	3-4	Ruth Fisher
Jimenez, Ruben	Educa. Awareness	5-6	Ruth Fisher
Murer, Vern	Career Awareness	7-8	Ruth Fisher
Eckleberry, Anna	App. & Attitudes	1	Liberty
Blankenship, Kathy	Self Awareness	2	Liberty
Witherspoon, Sue	Self Awareness	3	Liberty
Hineman, Sally	Educa. Awareness	5	Liberty
Sanderson, Richard	Career Awareness	7	Liberty
Goodson, Charles	Econ. Awareness	7	Liberty
Dahm, Charles	Econ. Awareness	8	Liberty
Clemence, Ollie	Decision Making	8	Liberty
Rovey, Pat	Beginning Comp.	9-12	B.U.H.S.
Clark, Roy	Decision Making	9-12	B.U.H.S.
Newberry, Hank	Employ, Skills	9-12	B.U.H.S.
King, Mary	Decision Making	9-12	B.U.H.S.
Chapman, Audre	Employ Skills	9-12	B.U.H.S.
Gonzalez, Pearl	Beginning Comp.	9-12	B.U.H.S.
Brittenham, Faye	Employ, Skills	9-12	B.U.H.S.
Gasperak, Joan	Decision Making	9-12	B.U.H.S.

INSTRUCTIONAL UNITS

There shall be 400 hours of classroom instruciton using Instructional Units selected to meet the objectives in the Matrix. These 400 hours shall be distributed among all schools at all grade levels and shall cover the Matrix as completely as the limited number of hours shall allow.

Instructional Units shall not be prepared within this project but shall be obtained from existing units available from other sources. The criteria shall be:

1. Units must be in existence.
2. Units must be available to this project for use.
3. Units must fit the project Matrix.
4. Units must be evaluated.
   (See Evaluation Section)

All sources known to the project personnel shall be researched and Instructional Units screened and selected. The following outline could be employed.

1. Project Personnel locate sources, complete preliminary screening, make initial contact, gather material, and schedule meetings with appropriate people.

2. Where possible Task Force Members will visit resource centers.

3. Where practical project personnel will research and bring representative Instructional Units to the Task Force Members in project area.

4. Final selection shall be made on basis of Evaluation of Units by Task Force Members and Pilot Test Teachers who shall give input to the project staff. The project staff shall make the final selection of Instructional Units.

Each Instructional Unit shall be evaluated by the use of a pre and post test, by teacher evaluation, and by the project staff in its total evaluation procedure.

UNITS SELECTED

Name of Teachers	Number	Name of Units
Narramore, Frances	B135	
Garrison, Sarah	B104	Doing Your Thing
Wood, Gerald	B103	Look to Learning
Smith, Richard	B105	What's My Line
Towner, Sheri	B131	Just Me
Risinger, Lena Ruth	B131	Just Me
Green, Shirlia	B129	Getting Less Up Tight
Estrada, Jessie	B106	What Do Workers Do
Goodwin, Virgie	B104	Doing Your Thing
Lutton, Helen	B101	Giving & Following Directions
Garcia, Ernest	B107	The Future Me
Amabisca, Muriel	B113	Growing With Responsibilities
Baker, Lucille		
Estrada, Henry	B105	What's My Line
Greenburg, Robert	B130	Orientation to the World of Work
Cone, Trent	B108	Skill Schemes
	B126	Finance in Banking
		Managing Personal Finance
Yule, Dolpha	B104	Doing Your Thing
Clingman, Loy	B113	Growing With Responsibilities
Hightower, Willie	B105	What's My Line
Glover, Miriam	B124	Basic Values & Attitudes
Jimenez, Ruben	B101	Giving & Following Directions
Murer, Vern	B130	Orientation to the World of Work
Eckleberry, Anna	B131	Just Me
Blankenship, Kathy	B131	Just Me
Witherspoon, Sue	B131	Just Me
	B128	Being A Better Listener
Hineman, Sally	B107	The Future Me
Sanderson, Richard	B134	Agriculture Unit
	B133	Foods & Food Related Careers
	B102	Careers Calling
Goodson, Charles	B108	Skill Schemes
Dahm, Charles		World of Construction
Clemence, Ollie	B132	Career Exploration Through Math
Rovey, Pat		
Clark, Roy	B138	Career Exploration in the Physical Science
Newberry, Hank	B139	Suggested Curriculum for Masons
King, Mary	B137	Careers and You
Chapman, Audre		
Gonzalez, Pearl	B141	English 10
Brittenham, Faye	B140	Telephone Courtesy
Gasperak, Joan	B141	English 10

EVALUATION FLOW CHART

SEE APPENDIX A

TIME TABLES

Pre Test Date	Beginning of Instruction	Post Test	School
January 14, 1974	January 14, 1974	February 18, 1974	Ruth Fisher
January 14, 1974	January 21, 1974	February 28, 1974	Arlington
January 14, 1974	January 21, 1974	March 1, 1974	Liberty
February 19, 1974	February 20, 1974	As Teachers Finish	Buckeye Elem
January 4, 1974	January 7, 1974	February, 1974	Palo Verde
March 4, 1974	March 5, 1974	May 15, 1974	Buckeye Union High School

EVALUATION INSTRUMENTATION

Student behavioral changes will be assessed by the use of three instruments.

I. T.D.I. - Teacher Devised Instrument
The first and probably most important assessment instrument. All teachers have been asked to submit their ideas of the best possible test questions covering their area of responsibility in the CERA Matrix. For an example - Kindergarten teachers will be concerned with one of two areas. Kindergarten teachers will teach from an instructional unit designed to emphasize "appreciations and attitudes" or "self awareness". If for example you are teaching "appreciations and attitudes" your "best possible test questions" must be related to the goals (bold print) and sub-goals (light print) that are contained in the appreciations and attitudes section. All test items will be reviewed and revised by teachers and CERA staff until those items meet the approval of the evaluation staff and the evaluation consultant. A final test instrument will be printed and distributed to pilot test teachers and control teachers for administration. Pilot test teachers and control teachers will administer the TDI's immediately prior to career instructions. Pilot test teachers and control teachers are asked to score the instruments and then notify your task force representative so that the scored instruments may be collected.

II. P.E.I. - Packet Evaluation Instrument
Most packets have an evaluation section describing how behavioral changes may be assessed. Each pilot test teacher asked to follow the evaluation procedure in the packet immediately following cover instruction. Report student performance on the form that will be provided.

III. C.I.P. - Career Inventory Profile, for grades 7 -12
The C.I.P. will be given the following career instructions. Every teacher, grades 7-12, will be asked to administer the C.I.P. Administration is simple and requires no more than 5 to 10 minutes of teacher preparation time. The test itself requires 1.5 to 3.0 hours, depending on the reading rate of the students and the testing schedule you select. All scoring will be administered, collected and mailed for scoring. A teacher workshop will be conducted by the author of the test for those teachers who wish to expand their knowledge regarding the use of the C.I.P.

CONTROL GROUPS

TEACHER INSTRUCTIONAL GROUP		TEACHER CONTROL GROUP	
Name	**Grade**	**Name**	**Grade**
Towner	K	Nicholas	K
Risinger	1	Davis	1
Green	2	Stone	2
Estrada	3	Schettino	3
Goodwin	4	Griffin	4
Lutton	5	Campbell	5
Garcia	5	Davis	5
Anabisca	6	Terkelsen	6
Baker	7	Baker	7
Estrada	7	Estrada	7
Greenburg	8	Greenburg	8
Cone	8	Cone	8
Yule	5	Hickman	4 & 5
Clingman	6	Wentz	6 & 7
Hightower	7	Wentz	6 & 7
Glover	3 & 4		
Jimenez	5 & 6		
Murer	7 & 8		
Eckleberry	1	Pompel	1
Blankership	2	Phillips	2
Witherspoon	3	Stephens	3
Hineman	5	Allen	5
Sanderson	7	Kenney	7
Goodson	7	Kenny	7
Dahm	8	Aker	8
Clemence	8	Aker	8

The high school will use control groups taught by the same teacher in different classes.

APPENDIX C
Financial Report

END OF PROJECT FINANCIAL REPORT

CAREER EDUCATION IN RURAL ARIZONA

June 1, 1973 to June 30, 1974

	Funded Level	Actual Expenditures	Fund Available Re-allocation
Direct Cost			
A. Personnel Costs	65,300.00	62,241.53	3,058.47
B. Employee Benefits	4,137.00	3,318.57*	818.43
C. Supplies & Materials	1,750.00	1,492.02	257.98
D. Travel	2,300.00	636.50	1,663.50
E. Communications	None	None	None
F. Services	8,375.00	6,378.89*	1,996.11
G. Final Report Cost	500.00	500.00*	None
H. Other Direct Cost	None	None	None
I. Subtotal Direct Cost	82,362.00	74,567.51	7,794.49
I Indirect Cost	None	None	None
II Total Costs	82,362.00	74,567.51	7,794.49

Encumbered

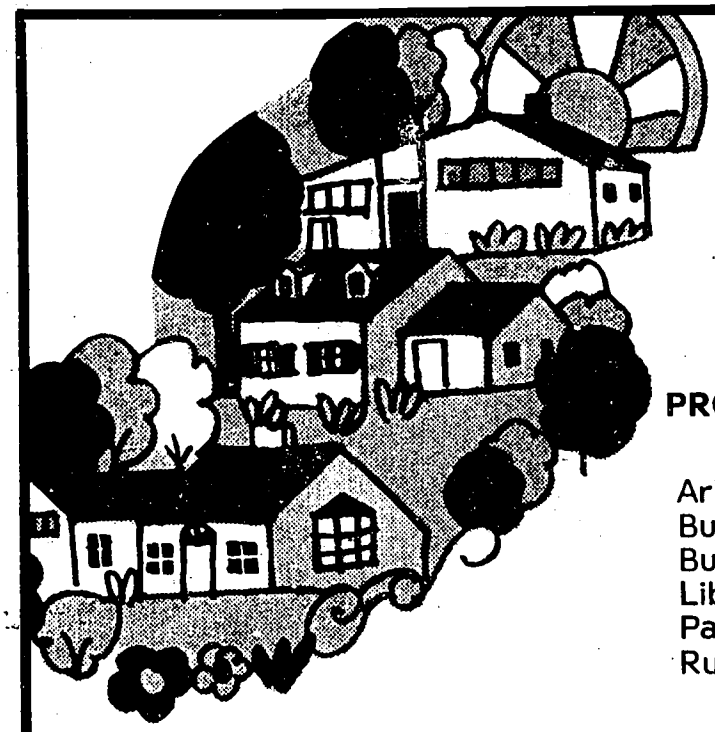
State Compensation Fund	100.00
Buckeye Valley News	500.00
ASU Campus Computing Service	500.00
Career Choice	60.00
	1,160.00

Signed Everett E. Myers Jr.
Project Director

Date June 30, 1974

APPENDIX D

Matrix



Career Education In Rural Ari

PROJECT TIME LINE - JUNE 1, 1973 - JUNE 3(

FUNDED BY U.S. OFFICE OF EDUCATION IN CO(

WITH ARIZONA STATE DEPARTMENT OF ED

PROJECT SCHOOLS:

Arlington Elementary School
Buckeye Elementary School
Buckeye Union High School
Liberty Elementary School
Palo Verde Elementary School
Ruth Fisher Elementary School

GOVERNING
(Superintende

Mr. John Le
Mr. Don Wa
Mr. Cheste
Mr. T.L. Ca
Mr. Louis J
Mr. Ed San

GOAL STATEMENT AND OBJECTIVE

GOAL: Exploit to as great an extent as possible the reservoir of career education instructional units available through educational information centers such as the Career Education Clearinghouse of the Arizona State Department of Education in order to modify and adapt these to a rural setting; making available throughout the project district K-12, a broad career orientation and realistic exploratory experience for students.

1. Develop a workable model and Pilot Test Manual in order to test and evaluate career education curriculum units in a rural setting.

2. Since this project is li
the State Matrix has b
evaluation process and
represents.

3. Reading, writing, ari
opinion, Career Educati
not have received as mu
this matrix will addres

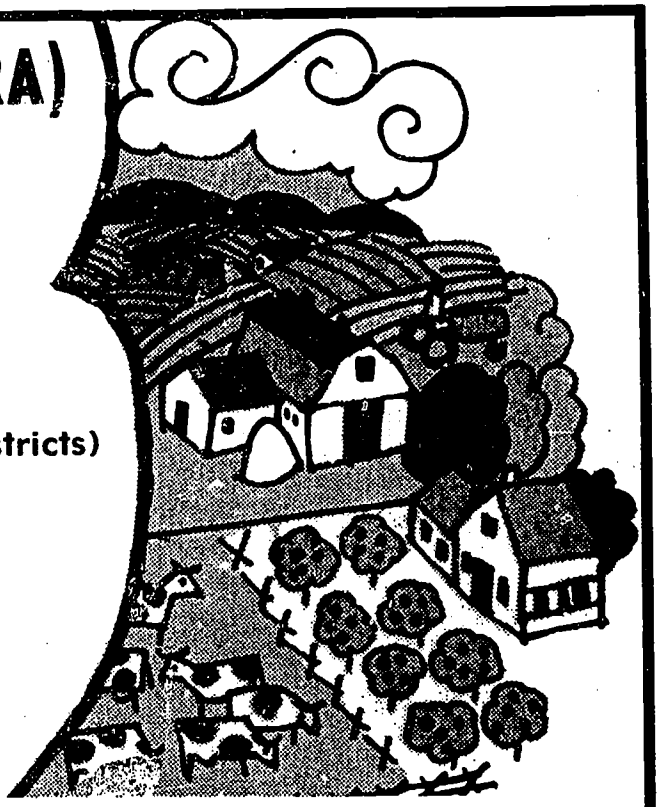
MATRIX

CAREER EDUCATION IN RURAL AR

Existing Career Education Instructional Units that fit the Goal Statements and seem to have the potential to deliver su
be researched and obtained for use in this project.
Each Instructional Unit will be pilot tested and evaluated. Two hundred hours of pilot testing will be accomplished. Pr
be established to determine the impact of the Instructional Units.
In addition an evaluation will be undertaken as to the effectiveness of the total project K-12. Evaluation shall inclu
plimentation if implimentation is determined to be desirable.
A model shall be developed for use in other districts of comparable size and location.

1.0 GOAL STATEMENTS K - 3 APPRECIATIONS & ATTITUDES	3.0 GOAL STATEMENTS 4 - 6 APPRECIATIONS & ATTITUDES	6.0 GOAL STA 7 - CAREER AV
The student will recognize the responsibilities to himself and others when accepting a task or job. The student will recognize that individual task performance is a part of effective group membership. The student will become aware of the importance of completing a task. The student will appreciate the value of completing certain tasks. **The student will recognize individual differences and become tolerant in his interpersonal relationships.** The student will respect the feelings of others. student will become tolerant of differences in thers.	**The student will recognize the responsibilities to himself and others when accepting a task or job.** The student will appreciate the value and importance of a task to himself and others. The student will recognize that a task well done is rewarded by self-satisfaction and recognition. **The student will recognize individual differences and become tolerant in his interpersonal relationships.** The student will recognize the skills, abilities, rights, and responsibilities of others. The student will recognize that to be tolerant does not require that he agree with the beliefs of other people.	**The student will recognize progressions through de educational and occupatio** The student will recogniz fluence job change and The student will define th requirements of specifi **The student will underst cupations found in the wo** The student will explore make up the world of The student will identif recognize the specialize **The student will understa cupations relate to needs** The student will become a relate to the needs an
2.0 SELF AWARENESS 75		

Education In Rural Arizona (CERA)



)JECT TIME LINE - JUNE 1, 1973 - JUNE 30, 1974

)Y U.S. OFFICE OF EDUCATION IN COOPERATION

.RIZONA STATE DEPARTMENT OF EDUCATION

IOOLS:

nentary School
ientary School
n High School
ntary School
lementary School
Elementary School

GOVERNING BOARD:
(Superintendents of school districts)

Mr. John Leffue
Mr. Don Wagner
Mr. Chester McNabb
Mr. T.L. Cambron
Mr. Louis Joslin
Mr. Ed Sanders

GOAL STATEMENT AND OBJECTIVE

r of career education in-
nters such as the Career
ucation in order to modify
the project district K-12, a
students.

test and evaluate career

2. Since this project is limited to one year and classroom instruction not to exceed 200 hours the State Matrix has been shortened in an effort to maximumize the accuracy of the evaluation process and to meet the needs and thinking of this project and the districts it represents.

3. Reading, writing, arithmetic and Career Education are inseparable. Therefore, in our opinion, Career Education includes all education. However, there are some areas that may not have received as much attention as they would seem to merit and it is to these areas that this matrix will address itself.

MATRIX

CATION IN RURAL ARIZONA (CERA)

Statements and seem to have the potential to deliver successful experiences and desired outcomes in this community will

hundred hours of pilot testing will be accomplished. Pre- and Post - Testing will be accomplished and control groups will
ls.
reness of the total project K-12. Evaluation shall include problems, suggested solutions, and recommendations for im-
e.
ible size and location.

L STATEMENTS 4 - 6 TIONS & ATTITUDES	GOAL STATEMENTS 6.0 7 - 8 CAREER AWARENESS	GOAL STATEMENTS 9.0 9 - 12 DECISION MAKING
cognize the responsibilities to ben accepting a task or job. ppreciate the value and im- c to himself and others. ognize that a task well done is -satisfaction and recognition. cognize individual differences rant in his interpersonal ecognize the skills, abilities, isibilities of others. ognize that to be tolerant does agree with the beliefs of other	**The student will recognize that his career includes progressions through developmental stages of educational and occupational experiences.** The student will recognize those things that influence job change and advancement. The student will define the expected performance requirements of specific careers. **The student will understand the variety of occupations found in the world of work.** The student will explore some occupations which make up the world of work. The student will identify several careers and recognize the specialized jobs related to each. **The student will understand the way in which occupations relate to needs and functions of society.** The student will become aware of careers as they relate to the needs and functions of the com-	**The student will understand that decision making includes responsible action in identifying alternatives, selecting the alternative most consistent with his goals, and taking steps to implement a course of action.** The student will understand that a given set of facts can support different decisions. The student will project what the immediate, intermediate, and long-term effects of decisions will be on himself, his family, and society. **The student will identify and state personal goals as part of making career decisions.** The student will explore his career goals and the subsequent decisions that are required by such goals. The student will make a tentative plan for developing his long-range career possibilities

relationships.
The student will respect the feelings of others.
The student will become tolerant of differences in others.

2.0 SELF AWARENESS 75

The student will understand, accept and respect his own uniqueness as a result of learning, growth, and maturation.
The student will become aware of his feelings.
The student will recognize his feelings.
The student will learn to express his feelings in a socially acceptable manner.
The student will have the opportunity to practice establishing tentative, personally relevant goals.
The student will relate his needs to goals in a classroom setting.
The student will identify the concept of long-range goals.
The student will learn about himself in relation to his culture through understanding and experiencing roles.
The student will recognize varying roles of family members.
The student will recognize differences between his behavior at home and school.

PROJECT PERSONNEL

DIRECTOR: EVERETT E. MYERS, JR.
COORDINATOR: DON ROOKS
SECRETARY: IDA CARMICHAEL

902 Eason Avenue
Buckeye, Arizona 85326
Phone: 386-4423

TESTING EVALUATION TASK FORCE

Les Meredith - Arlington Elementary
Donna Brown - Buckeye Elementary
Jack Sweeney - Buckeye Union High School
Ollie Clemence - Liberty Elementary
Joe A. Palumbo - Palo Verde Elementary
Ruben Jiminez - Ruth Fisher Elementary

NEEDS GOALS TASK FORCE

William Hightower - Arlington Elementary
John Leffue - Arlington Elementary
Dolpha Yule - Arlington Elementary
Carol Campbell - Buckeye Elementary
Barbara Henderson - Buckeye Elementary
Majorie Schettino - Buckeye Elementary
Eileen Reilly - Buckeye Elementary
Henry Estrada - Buckeye Elementary
James Grosbach - Buckeye Union High School
Bob Roberts - Buckeye Union High School
Pat Rovey - Buckeye Union High School
Glen Smith - Buckeye Union High School
Sue Witherspoon - Liberty Elementary
Anna Eckleberry - Liberty Elementary
Sally Hineman - Liberty Elementary
Charles A. Dahm - Liberty Elementary
Frances Narramore - Palo Verde Elementary
Richard Smith - Palo Verde Elementary
Alice Forsythe - Palo Verde Elementary
Miriam Glover - Ruth Fisher Elementary

The student will recognize that to be tolerant does not require that he agree with the beliefs of other people.

4.0 SELF-AWARENESS

The student will recognize the relationship of interest, aptitudes, and achievements to the realization of his career goals.
The student will analyze his strengths and weaknesses, likes and dislikes, and achievements in terms of causation.
The student will become aware of the relationship between the interests, aptitudes, achievements, and occupations.
The student will understand, accept, and respect his own uniqueness as a result of learning, growth and maturation.
The student will identify ways in which he is emotionally like and different from his peers.
The student will become aware of some of his important values and the sources of these values.
The student will learn to establish, although tentative, personally relevant goals.
The student will recognize that setting priorities is an important part of setting and reaching goals.
The student will recognize various consequences of goal-directed activities and undirected activities in a classroom setting.
The student will learn about himself in relation to his culture by experiencing various roles.
The student will use the term "role" when referring to his position in a group or an organization.

5.0 EDUCATIONAL AWARENESS

The student will recognize the significance of language, computational and reasoning development, and the mastery of content knowledge as a means of achieving career goals.
The student will realize how and why reading, writing, number skills, and science are used in some jobs.
The student will relate skills learned in the classroom to those used by workers.
The student will recognize that different career directions require varying types of educational preparation.
The student will develop an understanding of how communications, mathematics, science, and social studies skills are used in selected occupations.
The student will understand the relationship between in-school experiences and career directions.
The student will recognize that educational experiences are a part of his career development.
The student will recognize that participation in school classes and activities may relate to his use of time throughout life.
The student will understand relationships between educational experiences and career selection and development.
The student will recognize that learning is continuous, occurring in and outside of school.
The student will become aware of the connection between in-school and out-of-school learning experiences.
The student will become aware that desire and capability to learn influence his learning.

The student will identify
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The student will identif
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success in specific occu

7.0 ECONOMIC A

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their relationship to ca
The student will understan
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The student will consider
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needs and wants.
The student will recognize
independent work are
cupational choice, and
titudes and behavior re
The student will understar
present and anticipated
economic trends found in h
nation.
The student will deve
relationships of econo
munity, state, and nati
The student will becon
forecasting instrument

8.0 DECISION

The student will understa
includes responsible acti
natives, selecting the alt
with his goals, and takir
course of action.
The student will demon
decision-making and
gaining self-awareness
explorations.
The student will recognize
the outcomes of his de
The student will demons
decisionmaking behavi
The student will beco
resource information to
The student will increas
knowledge through the
and experiences in the
The student will have ex
observe people at wor

:ognize that to be tolerant does e agree with the beliefs of other

F-AWARENESS

ecognize the relationship of in- and achievements to the areer goals.
analyze his strengths and likes and dislikes, and terms of causation.
come aware of the relationship rests, aptitudes, achievements,

lerstand, accept, and respect his a result of learning, growth and

identify ways in which he is and different from his peers.
come aware of some of his im- nd the sources of these values.
arn to establish, although ten- elevant goals.
:ognize that setting priorities is t of setting and reaching goals.
:ognize various consequences of ivities and undirected activities etting.
rn about himself in relation to riencing various roles.
the term "role" when referring group or an organization.

IONAL AWARENESS

recognize the significance of tional and reasoning develop- tery of content knowledge as a career goals.
ealize how and why reading, skills, and science are used in

relate skills learned in the se used by workers.
ecognize that different career varying types of educational

velop an understanding of how , mathematics, science, and kills are used in selected oc-

nderstand the relationship bet- experiences and career direc-

recognize that educational ex- rt of his career development.
ecognize that participation in d activities may relate to his use ut life.
derstand relationships between riences and career selection and

ecognize that learning is con- in and outside of school.
come aware of the connection ol and out-of-school learning

ecome aware that desire and rn influence his learning.

The student will identify several careers and recognize the specialized jobs related to each.
The student will understand the way in which occupations relate to needs and functions of society.
The student will become aware of careers as they relate to the needs and functions of the community.
The student will become aware of career characteristics within geographical locations and their relevance to job mobility.
The student will determine the worker qualifications needed to perform the basic tasks of various occupations.
The student will identify the relationship of personal interests to success in specific occupational areas. The student will recognize the relationship between personal aptitudes and success in specific occupational areas.

7.0 ECONOMIC AWARENESS

The student will understand the relationship between personal economics, life-style, and occupational roles.
The student will understand that money earned may determine his life-style.
The student will understand life-style needs and their relationship to career rewards.
The student will understand the range or social and economic benefits associated with various occupations.
The student will consider occupational roles which are compatible with his currently expressed needs and wants.
The student will recognize that people-oriented and independent work are aspects of certain occupational choice, and he will explore his attitudes and behavior related to both.
The student will understand the relationship of his present and anticipated occupational status to economic trends found in his community, state, and nation.
The student will develop knowledge of the relationships of economic trends in his community, state, and nation.
The student will become aware of economic forecasting instruments.

8.0 DECISION MAKING

The student will understand that decision making includes responsible action in identifying alternatives, selecting the alternative most consistent with his goals, and taking steps to implement a course of action.
The student will demonstrate an ability to use decision-making and problem-solving skills in gaining self-awareness and relating it to career explorations.
The student will recognize that he is responsible for the outcomes of his decisions.
The student will demonstrate skill in responsible decisionmaking behavior.
The student will become proficient in using resource information to make career decisions.
The student will increase occupational and self-knowledge through the use of outside resources and experiences in the community.
The student will have experiences whereby he can observe people at work.

part of making career decisions.
The student will explore his career goals and the subsequent decisions that are required by such goals.
The student will make a tentative plan for developing his long-range career possibilities and what is required to achieve them.
The student will become proficient in using resource information to make career decisions.
The student will understand how school and work experiences meet the needs of occupational preparation.
The student will continue to acquire information in the continuing evaluation and development of his educational plan.

10.0 BEGINNING COMPETENCY

The student will develop the skills necessary for employment in the career of his choice.
The student will demonstrate increased knowledge of his selected career and the necessary entry-level skills for it.
The student will align his entry-level skills with his career desires.
The student will develop observation skills used to collect data needed to solve problems.
The student will become familiar with the use of basic tools, equipment, and materials associated with business, commercial, and industrial activities.
The student will identify the competency or expertise needed to use tools, equipment, and materials in business and industry.
The student will become aware of the need to understand safety as related to business and industry.
The student will develop an understanding of the interpersonal relationships resulting from the interaction of people in various occupational roles.
The student will demonstrate those interpersonal relations skills likely to be expected of him while looking for a job.

11.0 EMPLOYABILITY SKILLS

The student will develop work habits and attitudes necessary to enter an occupation in the career area of his choice.
The student will meet the requirements necessary for job entry.
The student will complete a simulated or real job-seeking task.
The student will complete an assigned task related to employability, i.e., completing an application form or interview.
The student will recognize the implications of working, with and without supervision, independently and with others.
The student will understand the advantages, disadvantages and responsibilities of his career choices.
The student will identify the requirements of supervision.
The student will relate information about himself in selecting, learning, or performing duties.
The student will present an accurate description of education, training, experience, and information about himself to potential employers through a variety of ways such as interviews, tests, and applications.
The student will identify several potential careers which he is capable of pursuing.

APPENDIX E

CAREER EDUCATION IN RURAL ARIZONA

FINAL EXTERNAL EVALUATION

Submitted by

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June 27, 1974

EXTERNAL EVALUATION REPORT
ON
CAREER EDUCATION IN RURAL ARIZONA

INTRODUCTION

This report is an external evaluation report of Career Education in Rural Arizona (CERA). This is the final of three reports which have reviewed the administration, implementation and evaluation of the CERA project. The objectives of this evaluation are as follows:

1. To provide evidence of effectiveness of project administration with supporting documentation.

2. Provide evidence of the attainment of the four stated objective outcomes with supporting documentation.

3. Compare the project procedures, techniques and products with Arizona State Department standards and guidelines.

4. Determine the quality and transportability of the products and findings.

5. Determine the adequacy, validity and reliability of data obtained by the products as to the results of the pilot testing.

These objectives will be reviewed separately to determine the degree to which the project personnel attained these objectives.

EVALUATION OBJECTIVE 1: Administrative Effectiveness

The external evaluator has met four times with the administrative personnel of CERA and reviewed with them their methods, plans, activities, etc. In addition, the external evaluator has met several times with the internal evaluator who has been employed by the project staff and reviewed all the materials produced by the project members along with the minutes of meetings which have been held. Personnel at each project site have been interviewed, also. Based on these meetings, interviews and review of materials, the following observations are worthy of mention:

1. Each quarterly report has been submitted on time by the project personnel to the Arizona State Department of Education. In addition to being on schedule, the reports seemed to include pertinent events and documents which provided some evidence of the effectiveness of the project operation to date. These reports included lists of major activities and accomplishments. The material included in these quarterly reports will not be repeated in order to keep this report brief. The first quarterly report included a resume of Dr. Stanley R. Wurster who has been employed as the interal evaluator. Dr. Wurster seems to be well qualified in terms of training and experience and seems to be well suited for this particular task. The relationship between the adminstration and the interal evaluator seemed to be suitable from both points of view. The quarterly reports also include newspaper articles which reviewed the CERA project.

2. The calendar of events for the project proposal was kept current for the most part. There were some minor delays which were unavoidable and had little or no affect on the operation of the project. One major delay was in analyzing the student change of behavior scores. This effort was part of the evaluation to show the impact on students. This task was of major proportions and should be considered as service "above and beyond the call of duty," since it was only partially outlined in the proposal. The added effort was put forth in order to determine the usefulness of the developed instruments as well as to analyze the data obtained for evaluation of this project. The final data analysis for this effort was not obtained at the writing of this report so a review of the same will not be included in this report. As mentioned, however, this should not cause concern since there were additional efforts beyond the proposal requirements. The CERA staff should be highly commended for undertaking these difficult and nonrequired tasks in order to enhance the findings of the project. Details of this effort will be provided under evaluation objective number 4.

3. The selection of instructional units was frustrated somewhat because of the governing board's decision to double the number of units to be field tested. The increase from 200 to 400 units made extra demands in the selection process. All of the units were selected in time for the project to move efficiently and effectively. This temporary delay did not hamper the time schedule of the project. There was some concern as to the quality and desirability of a sufficient number of units to pilot test. The units available through WACOP and the RCU were felt to be sufficient to offer a good selection for the required 400 units. The project director suggested that project personnel use units that have been written by local personnel, which was done in some cases. The teachers interviewed after they had selected their units seemed pleased with their selection in all cases. There were some problems with some units in that all of the materials were not available which forced the making of new material or eliminating the material. Each of these alternatives were used in a few cases.

4. The external evaluator met with all of the participating projects one or more times. At each site an interview was held with the principal to discuss his impressions of the project efforts to date. Interviews were also held with committee members and teachers. At one of the sites a meeting was held with all participating teachers. The purpose of these meetings was 1) to obtain any pertinent information as to the administration of the project at this point in time, and 2) to become acquainted and let them know the function of the external evaluation and the availability of this service to allow them to communicate their concerns for the project. Based on the interviews, the following comments would be appropriate.

   a. There seemed to be a very positive relationship between the project personnel interviewed.
   b. The school personnel were well aware of the purposes and activities of the CERA Project. One confusion, however, was that a few local teachers in the project felt the top priority was to change the student behavior rather than to test the units in a rural setting. Implication of this confusion will be discussed later.
   c. There seems to be enthusiasm and involvement with most of the personnel.
   d. The participating personnel seem to be very competent and conscientious in carrying out responsibilities.

Appendixes A through D are interview guides which were used to interview teachers, task force members and staff members. Comment "b" resulted from one of these guides:

On task force question was whether or not they felt their input was given proper consideration by project staff members. Everyone interviewed answered in the affirmative on this issue.

The teachers were asked if they felt there was adequate and efficient supervision from the project staff and once again each one replied in the affirmative. No one interviewed had missed any of the meetings scheduled by the project. There was not one criticism of the administration during any of the interviews. On the contrary, each person interviewed mentioned the effectiveness of the administration. Certainly one of the strengths of this project has been the effectiveness of the administration and the manner in which the project activities have been carried out.
In addition to the effectiveness there is considerable evidence that the administration has carried a positive and cooperative attitude which seems to have brought a new era of unity throughout the districts. An example of this attitude is a statement made by one of the task force members who mentioned that project personnel visited their school anytime there was a request to do so and materials were provided to the school immediately upon request. This comment is representative of other comments made about the cooperation and consideration extended by the project staff members.

There were several problems observed during the visitations. One problem was that some teachers were unable to obtain materials which were a component part of the instructional unit. This,of course, presented a problem because the teachers were then forced to do without the special materials or to develop their own. Upon investigation, it was found that this was not due to administration inefficiency, it was just that these materials were not available from the sources from which they were obtained. Perhaps a preliminary check to ensure the availability of all required materials could have prevented this problem. This could have been included in the table of events after the selection of each of the units for the teachers. At any rate, some of the teachers were unable to obtain all materials and as a result in some situations, some materials were eliminated or some were personally developed by the specific teacher. This will, of course, present a problem in evaluating the effectiveness of that unit. To help reduce the problem, the teachers were encouraged to provide, with their report, all of the materials they developed as well as to specify any materials which were suppose to be used but were unable to be obtained.

Also, it was noticed that some teachers altered the units somewhat rather than following specifically the prescribed steps. (This was due to the confusion in project priorities alluded to earlier.) For instance, some teachers had planned to allow more time than was specified. Some teachers altered the materials, somewhat, and some provided supplementary materials they felt would enhance the particular unit. Any of these situations could, of course, have an effect on the results of the pilot testing. Apparently some of the teachers misunderstood some of the instructions. The administration did provide, however, a workshop for each teacher at which time the very clear instructions concerning the pilot test were provided (the external evaluator attended one of these workshops). A suggestion was made that these teachers be provided with a written copy of the instructions not to change the procedures suggested in the unit, and if there were any changes for any reason they should be noted in their feedback reports. A copy of the teacher directions used by the project is included as Appendix E. These exceptions mentioned, however, were very few in number and should not affect the overall effectiveness of the project.

EVALUATION OBJECTIVE 2: Attainment of the Four Project Outcomes of Objectives

The four objectives of CERA are:

1. To develop a workable model and manual for evaluating career education curriculum units in a rural setting.
2. To define a rural career education program utilizing the career education matrix as a starting point.
3. To conduct a field test and evaluation of career education instructional units.
4. To conduct an overall evaluation of the field test. This evaluation will include the following:

    a. A summation of the unique problems or voids that prevent existing career education instruction units from delivering career education in a rural setting.
    b. An assessment of additional support services needed to deliver career education in a rural setting.

The workable model and manual has been developed and seems to be adequately described in the quarterly reports. In terms of Project Objective 2, a rural matrix was developed and has been distributed by the project. Project Objective No. 3 was also completed on schedule and was well executed. In general the pilot testing was successfully conducted to demonstrate the value of the career education units in a rural setting. Based on interviews and reviews of the project findings, it appeared that the changes required to adapt these materials for a rural setting was minimal. For the most part, it appears that the rural vs. urban needs relative to these career education units are similar. The 4th project objective evaluation of the field testing has been designed and carried out except for the data analysis which should be completed in the near future. The evaluation design was discussed with the visits with the external evaluator. Several suggestions were made concerning the evaluation of the pilot testing. These suggestions will not be included in detail in this report, however, they dealt with the types of analyses which could be made of data collected during the pilot testing. It appears that the project administration has adequately dealt with the evaluation of the project, even to do more than was required.

EVALUATION OBJECTIVE 3: Comparison of procedures, techniques and products with State Office standards and guidelines.

During the initial visitations with the project, it was recommended that the project use State-adopted procedures and techniques for pilot testing. The project personnel did modify the State procedures and techniques so their findings could be made available throughout the State of Arizona. Because the materials and units used for this project have not truly been pilot tested, this project conducted more of a pilot testing than a field testing. This is not a result of the actions of the administration of the project, but something which was forced upon the project because of the stages of development of the materials. It was, therefore, recommended that the project use the State forms which are used to pilot test instructional units. Appendix F is a copy of this form. It appears then that the efforts in the CERA Project were compatible with other efforts throughout the State and were in line with recommendations from the State Office.

EVALUATION OBJECTIVE 4: Determine the quality and transportability of the products and findings.

The external evaluator worked with the test coordinator and project evaluation consultant and steps have been made to help achieve this particular objective. As mentioned earlier in this report, there was some concern of the variance of the procedures in this project with those outlined for some of the units being tested. Steps were taken, however, to help control for this variability to ensure transprobability of findings. The manual which was being developed documents to a degree the kinds of problems and concerns experienced by the project in implementing the units in a rural setting.

Several documents are included in the appendixes to show the kind of feedback the project directors received throughout the pilot testing. Appendix F is a Teacher Log which was completed by each participating teacher. The purpose of the Log was to determine the amount of time used for the unit. If there was a variance from the prescribed time, therefore, it could be determined through this Teacher Log Sheet. The Teacher Log included both the date and the number of minutes taught in that particular unit on that date which will also permit analysis of the total length of time to implement the unit as well as the amount of time per day.

Appendix G is another sample Teacher Log which showed the time and also included a few pertinent comments which would be of value to teachers using that particular unit.

A final sheet which was used to retrieve teachers information on the unit is provided in Appendix H, the Packet Selection Checklist. This information gives ratings of "yes", "undecided", or "no" for such items as whether or not the grade level was appropriate, whether the concept was appropriate for the goal matrix, whether the concept was clear, whether the goal was attainable, whether the directions were clear and complete and so forth. Data from these forms will be summarized in the final report of the project, and in addition, the raw data will be available for reviewers having a desire to read through each of the particular sheets in any given unit. For the units selected from the WACOP Center, WACOP evaluation forms were also completed and will be made available to WACOP.

A major aspect of the evaluation of the pilot testing was to determine the impact the units had directly on student behavior. To determine this impact, a set of instruments were developed for the various grade levels as well as the various content areas. These instruments are included in Appendix I. The development of these instruments was a very difficult task requiring considerable time and included efforts from all participating educators in the CERA project. The project personnel wisely decided against using the results of these instruments without first determing the validity and reliability. The internal evaluator assisted the project in working throught the following process:

1. The reliability coefficients were determined for the experimental students, the control students, and the combined experimental and control. For the combined scores the reliability coefficient ranged from .22 to .81. The average correlation was .55. A correlation table will be included in the final report of the project.

2. An item analysis on each of the items in each of the instruments was conducted. This item analysis provided a discrimination index as well as a level of difficulty. The level of difficulty rating essentially shows the percentage of the students who answered the item correctly, while the discrimination index shows how well that particular item correlated with the total score

of the test. These two measures provide feedback which can be useful in selecting the most useful items for revision of the test. Based on the item analysis, the project personnel plan to select the items from the various subtests which will constitute a revised test. As would be expected, in many cases there were very few "good" items which were desirable to retain. The project personnel will probably only retain those subtests which have three or more selected items. These items will be used to score the tests to measure student change.

3. A final scaling effort which was undertaken by the project personnel was to identify students according to teachers' ratings who improved the most from the Career Education instruction and those who improved the least. Each teacher was asked to select five students who had showed the most progress and five students who showed the least progress. The request for this rating is provided in Appendix J. These ratings can now be used as criteria to correlate with the test scores. If there is a positive relationship between the change scores (post minus pre test) and the teachers' ratings, it will provide evidence of concurrent validity of the data obtained through these tests.

Obviously, this scaling effort on these instruments has been rather extensive. Project personnel should certainly be commended for such an ambitious and technically sound effort. Unfortunately, most projects of this type simply develop an instrument, gather data, and analyze the data. It is obvious from this scaling effort that such a procedure is hazardous because many incorrect assumptions can be made from untested data. The efforts to date will show the personnel exactly what they do have in terms of sounds data and allow them to determine what following steps need to be taken to improve the instruments. The remaining funds and time on the project are somewhat limited and it is somewhat doubtful that complete analysis will be able to be performed by the end of the project time. The external evaluator strongly recommends that additional funds and necessary support be provided to the project in order to complete this analysis which will be extremely valuable for anyone using the units or this process with future activities. These additional efforts might include:

1. Re-scoring the student's test based on the selected items.
2. Correlating the change or different score of the most or least students identified by teacher ratings.
3. Analyzing and interpreting the data obtained from the test scores.
4. Building additional test items or making recommendations for procedures to be followed for the development of the test instrument.
5. Conduct a correlation coefficient on the selected items from the control students' pre and post test scores.

The preceding efforts would certainly seem to be warranted since considerable money and time have been invested in this project. The resulting findings would be very useful for future efforts of this kind, both in showing procedures to follow as well as providing instrurents and guidelines to make future efforts more productive and efficient.

SUMMARY

This external evaluation report has been on the Career Education in Rural Arizona (CERA) Project which is the third of three reports which reviewed the administration, implementation and evaluation of efforts to apply career education units in a rural setting and documenting the findings of such efforts. The following pertinent comments should be mentioned.

1. The administration of the project has been outstanding. There was not a single incident uncovered during the external evaluation wherein faulty administration could be blamed. In fact, the administration of this project should be credited with bringing about a union and cooperation of the neighboring districts which is probably unexcelled to date. (This could be one of the greatest contributions of the project.)

2. The selection of the units seemed to go well except there was some difficulty in identifying a sufficient number of units to be used for the project. In some cases, locally developed units were used.

3. Because of the level of development of the units selected to be used in this project, the activities were more of a pilot test than a field test. This is because the units which were selected had not undergone sufficient pilot testing.

4. During the implementation of the project there was some concern that the involved teachers were more concerned with changing student behavior than determining the effectiveness of the units being used. As a result there was some alteration of the various units which could have clouded the measure of effectiveness of the units, however, documentation is available to determine the degree to which the units were changed.

5. There were some problems in obtaining the necessary materials in the various units. In some cases material had to be specially developed, or in some cases the material simply wasn't used in the implementation of the unit.

6. In general, the alterations required to implement the selected units in a rural setting were minimal. The rural needs didn't seem to vary that much from urban and suburban needs.

7. The project personnel had four objectives, each of which were achieved. The objectives were 1) to develop a workable model and manual for evaluating career education units in a rural setting. 2) to define a rural career education program using the Arizona Career Education Matrix as a starting point. 3) to conduct a field test in evaluation of career education instructional units, and 4) to conduct an overall evaluation of the field test. The external evaluation efforts documented the attainment of these objectives. Special attention was made to the fourth objective which was the evaluation of the field testing. Considerable data was obtained which will be returned to the WACOP project of the RCU in the Arizona State Department of Education Office. An elaborate effort was undertaken to develop some instruments which could be used to measure the impact of student data. This included development of instruments through a large cooperative effort including all educators particiapting in the project conducting reliability and validity studies and revising the instruments to determine items which were found to be reliable and valid. This latter effort may not be completed in total by the end of the project time and it was recommended that funds and support be provided in order to fulfill this most valuable evaluation effort.

Appendix A

INTERVIEWS WITH THE PROJECT DIRECTOR

1. What are the three top priority objectives of the project for 1972-1974?

2. Which grade segments is the project effort directed toward?

   K-3_____ 4-6_____ 7-9_____ 10-12_____

3. How many units will be pilot tested by June, 1974? Which grades?

   a. K-3 b. 4-6 c. 7-9 d. 10-12

4. What are the project's major accomplishments since September?

5. In the next three months, what are the major tasks which the project needs to accomplish?

6. Is the workable model and manual for evaluating career education curriculum units in a rural setting completed? Is a copy available?

7. Has the rural matrix been modified?

8. How many units are being pilot tested? In what grade levels and matrix areas?

9. Did all pilot testing begin on schedule?

10. What unique problems have you encountered in using the career education units in a rural setting? What types of changes have been made?

11. What additional support services are needed to deliver career education in a rural setting?

Appendix B

INTERVIEWS WITH TEST COORDINATOR AND INTERNAL EVALUATOR

1. What are the top priorities of the project?

2. What are your primary functions?

3. What are your main accomplishments since the project began?

4. What baseline data have been gathered? Do you have copies of the instruments?

5. What control data are being gathered? What is the sample?

6. When will the post data be gathered?

7. Are you testing for validity and reliability of your instruments?

8. What are your plans for analyzing the data?

Appendix C

INTERVIEW WITH TASK FORCE MEMBERS

1. What are the top priorities of the CERA Project?

2. What are the primary functions of your task force?

3. Do you feel the task force has had an impact on the project?

4. What are the greatest strengths of the project?

5. What are the greatest needs of the project?

Appendix D

INTERVIEW WITH TEACHERS

1. What units are you pilot testing for which students?

2. How did you select the units?

3. Do you like the units?

4. What data are you providing the project?

5. Do you feel there has been adequate and efficient supervision from the project staff?

6. What problems have you encountered?

7. General comments.

APPENDIX F

Testing Instruments

K3 A & A 1.1_____ 1.2_____ TOTAL_____

_____ E C
(Teacher's Name) (Grade) (Circle One)

_____
(Student's Name)

The following questions can be answered by circling "good" or "bad".

1. Everyone cleans around their desk, except for one person, would that be good or bad?	GOOD	BAD
2. Is it good or bad for people to speak different languages?	GOOD	BAD
3. A party is planned, everyone agrees to bring something good to eat. Everyone brings something except two people. Would that be good or bad?	GOOD	BAD
4. Is it good or bad for some farmers to grow food, some farmers to grow cotton and some farmers to raise cattle?	GOOD	BAD
5. How do you feel when you are working together in a group and someone does not do his or her share of the work?	GOOD	BAD
6. Some people are better at some jobs than others, is that good or bad?	GOOD	BAD

The following questions can be answered by circling the appropriate face.

7. Circle the face you would have if you did a good job.		
8. How would you feel if someone made fun of you because you were different?		
9. How would your friends feel if you did a good job?		
10. How would a friend feel if you laughed at him?		
11. How do you feel when you are working with friends and one of them does not do their work?		
12. Some friends are big, some friends are small, circle the face that shows how you feel about them.		

K3 SA 2.1_____ 2.2_____ 2.3_____ TOTAL_____

(Teacher's Name) (Grade) E C (Circle One)

(Student's Name)

The following questions can be answered by circling "yes" or "no".

1.	Most people have happy feelings, sad feelings, and angry feelings.	yes	no
2.	You need to go to college before you can get a job.	yes	no
3.	All people are able to do the same things.	yes	no
4.	It is OK for people to be angry at times.	yes	no
5.	Tom wants to get an after school job at a service station. He must be able to get along with people in order to be good at his job.	yes	no
6.	All people can learn to play the piano well.	yes	no
7.	People are different in many ways.	yes	no
8.	Since Jane could not jump rope today she will never learn to jump rope.	yes	no
9.	Most farmers and ranchers work outdoors and need to listen to weather reports.	yes	no
10.	A tall person could become a good basketball player easier than a short person.	yes	no
11.	If Jane wants to be a doctor, she would need to find out how people become doctors and plan what she must do to be one.	yes	no
12.	People are alike in many ways.	yes	no
13.	The things that are fun to you will be fun for everybody.	yes	no
14.	People that raise cattle and sheep usually like animals.	yes	no
15.	Rules at home will always be the same as rules at school.	yes	no
16.	I know when I am happy because I feel good.	yes	no

17. All jobs pay the same amount of money for doing the same kind of work.	yes	no
18. In some jobs you must have a drivers license.	yes	no

4 6 AA 3.1_____ 3.2_____ TOTAL_____

_____ E C
(Teacher's Name) (Grade) (Circle One)

_____
(Student's Name)

These questions may be answered by placing an "X" through "T" (true) or "F" (false).

1.	If you don't like to work, you don't have to.	T	F
2.	Everyone is just as smart as everyone else.	T	F
3.	Teamwork is not important to a farmer.	T	F
4.	People have the same likes & dislikes.	T	F
5.	Employers often times give rewards for good work.	T	F
6.	Some people are better able to do some jobs than other people.	T	F
7.	If you always do your best you will usually feel pretty good about yourself.	T	F
8.	You cannot like someone if you disagree with them.	T	F
9.	In order for group work to be a success, everyone must do his part.	T	F
10.	Nice people will believe in the same things that you do.	T	F
11.	A great athlete usually trains hard, has natural ability and is appreciated by others.	T	F
12.	A responsible person may be depended on.	T	F

4 6 EA 5.1_____ 5.2_____ 5.3_____ 5.4_____ TOTAL_____

_____ E C
(Teacher's Name) (Grade) (Circle One)

_____
(Student's Name)

The following questions can be answered by placing an X through the "T" (true) or "F" (false).

1.	Books are written on almost every subject. A person that can read can get a better job than a person that cannot read.	T	F
2.	If you can't get along with your classmates you may have trouble keeping a job.	T	F
3.	Reading, writing & arithmetic is used in most jobs.	T	F
4.	A person that cannot count might be a good bank teller.	T	F
5.	A person that is good at giving oral reports would be a better speaker than a person who does not like to give oral reports.	T	F
6.	Most jobs require a high school education.	T	F
7.	Building good work habits in school will not help in holding a job.	T	F
8.	No one knows how to read when they are born.	T	F
9.	At one time the principal of your school had to learn how to add and subtract.	T	F
10.	The only place a person can learn is in school.	T	F
11.	Some companies and businesses train their employees	T	F
12.	If no one worked, everyone would soon become hungry.	T	F
13.	A lawyer uses math more than the owner of a hardware store.	T	F
14.	A doctor has to go to school longer than a secretary.	T	F
15.	The career a person chooses might depend on the subjects he liked in school.	T	F
16.	The first person in your life to teach you many things was your first grade teacher.	T	F
17.	A nurse would have to know more about science than a telephone operator.	T	F

18. A person must usually learn to do a job before he is hired.	T	F
19. People usually have to follow a work schedule, in school, at home, or on the job.	T	F
20. Hobbies are fun, but you don't learn very much from them.	T	F
21. A doctor would need more writing skill than a newspaper reporter.	T	F
22. A scientist could receive training in a vocational school.	T	F
23. A good attendance record is much more important during school years than it is when you are hired for a job.	T	F
24. It is usually easier for a person to learn school subjects if he likes them.	T	F

7 8 CA 6.1_____ 6.2_____ 6.3_____ 6.4_____ TOTAL_____

(Teacher's Name) (Grade) E C (Circle One)

(Student's Name)

The following questions can be answered by circling "T" for true or "F" for false.

1.	Good welders are working all over the world.	T	F
2.	All jobs are pretty much alike.	T	F
3.	A horse and buggy dirver might have a hard time finding work.	T	F
4.	A store owner will be just as successful if he likes people as he will if he dislikes people.	T	F
5.	A person that hauls hay will need to be healthy and strong.	T	F
6.	Copper mines hire workers, doctors, lawyers, tractor drivers and people who sweep, clean and subtract.	T	F
7.	Food prices affect the number of people who become farmers.	T	F
8.	A mechanic never uses reading, writing or arithmetic.	T	F
9.	Some jobs require physical strength and coordination.	T	F
10.	Government employees work all over the world.	T	F
11.	There are at least 10,000 different jobs.	T	F
12.	All jobs require a college education.	T	F
13.	Personality and disposition will not affect your success of finding a job.	T	F
14.	There are more than 1,000 different jobs in the Buckeye area.	T	F
15.	Government employees are paid by people who give part of their money in taxes.	T	F
16.	Forest Rangers usually enjoy outdoor life, plants and animals.	T	F
17.	Chemistry is used in farming.	T	F
18.	Some jobs are closely related, for example, a biology teacher does a lot of the things that a rancher does.	T	F
19.	Copper mines employ all kinds of people and workers, black, Spanish, white, male and female.	T	F

20.	In some jobs workers must follow a dress code.	T	F
21.	All jobs require on the job training.	T	F
22.	A garbage man performs a valuable service for the community.	T	F
23.	There are some jobs that receive extra pay for extra work.	T	F
24.	Interest in a hobby may lead to a future job.	T	F

7 8 Ec.A. 7.1_____ 7.2_____ 7.3_____ TOTAL_____

_____ E C
(Teacher's Name) (Grade) (Circle One)

_____
(Student's Name)

The following questions may be answered by circling "T" (true) or "F" (false).

1.	The amount of income is usually based on amount and value of work	T	F
2.	Medical doctors usually earn quite a lot of money because doctors are in demand and must go to school for many years.	T	F
3.	A job that is easy to get and requires little preparation usually pays well.	T	F
4.	The amount of money earned will determine how often you can buy a new car.	T	F
5.	Supply and demand determines to a large extent, the number and type of jobs available in the U.S. and other contries.	T	F
6.	Jobs related to nonessential items, such as jewelry and high fashion are just as stable as any other job.	T	F
7.	Television manufacturing is a big business because lots of people want television sets.	T	F
8.	Highly specialized jobs are usually greater in number than more general types of work and skills.	T	F
9.	Newspapers contain lots of information related to employment.	T	F
10.	The higher skilled jobs will tend to generate more fringe benefits.	T	F
11.	Independent working conditions is one of the characteristics of a truck drivers job.	T	F
12.	Due to the energy crisis certain plentiful jobs of yesterday may not be plentiful tomorrow.	T	F
13.	A low income occupation will allow just as much "recreational" income as a high income occupation.	T	F
14.	A person that likes to work with people would probably enjoy working on a farm.	T	F
15.	Few jobs offered today will require retraining at some future date.	T	F

16. If you value expensive clothes, homes and special food you must seek a high income career in order to obtain those items.	T	F
17. The amount of leisure time available to you depends on the amount of income you earn.	T	F
18. The news broadcasts on television is a pretty good source of occupational information.	T	F

7 8 DM 8.1_____ 8.2_____ TOTAL_____

(Teacher's Name) (Grade) E C (Circle One)

(Student's Name)

The following questions may be answered by circling "T" (true) or "F" (false).

1. Most people make decisions every day.	T	F
2. A poor way to gain information about a particular job is to talk with several people that are doing the kind of work you are interested in.	T	F
3. If you decide to attend high school it will not be necessary for you to decide what courses will best prepare you for what you want to do.	T	F
4. An airline pilot probably knows a lot more about how to prepare for future with the airlines than your teacher does.	T	F
5. A good decision is one that helps you to obtain a goal in the manner you wish to obtain that goal.	T	F
6. Your teacher probably knows a lot more about becoming a teacher than someone who is not a teacher and has never been to college.	T	F
7. If you choose to play basketball, getting along with your team mates will be unimportant.	T	F
8. A decision based on accurate information is likely to be a poor decision.	T	F
9. A person in the sixth grade is better able to choose the type of food that is high energy food than a second grader, because the sixth grader knows more about food	T	F
10. A decision based on little information will most likely be a good decision.	T	F
11. Some people have a difficult time making a decision because they do not have enough accurate information	T	F
12. Often times we must decide on a goal before we can determine how we are going to obtain that goal.	T	F

9 12 DM 9.1_____ 9.2_____ 9.3_____TOTAL_____

_____ E C
(Teacher's Name) (Grade) (Circle One)

_____
(Student's Name)

Place an X through the appropriate choice.

1. The concept, "six of one, half dozen of the other", is true to life. Yes No
   Explain._____
   _____

2. Can you state the two most important career goals in your life? Yes No
   State them. 1._____
   2._____

3. The yellow pages in the telephone book contain lists of career information. T F

4. The best decisions are made when people don't stop to consider the consequences. T F

5. People should never change their goals. T F

6. Can you think of three good sources of career information? Yes No
   State them. 1._____
   2._____
   3._____

7. Decisions made today may change your future. Yes No

8. Your present activities (school, hobbies, free time) will affect your future activities. T F
   Explain._____
   _____
   _____

9. Some careers require special training. T F
   Name two. 1._____
   2._____

0. Will the career you choose have an effect on your family? Yes No
   State two effects.
   1._____
   2._____

11. The first step in good decision making is to identify what you are trying to decide. Yes No

12. Significant information about a career can be obtained from people who are working in the area you are interested in. Yes No

13. It is not important to think about what might happen if you decide to follow a plan you have made. T F

14. Successful students and workers set goals for a year or more ahead and also set goals for each day and week. T F

15. The state of Arizona has agencies and free information services related to careers and employment. T F

16. Good decisions are made by following a planned set of steps. T F

17. Could you support yourself starting tomorrow? Yes No
If you had to be totally self-supporting starting tomorrow, what are the first three things you would do?
1._____
2._____
3._____

18. Can you be totally self-supporting one year from now? Yes No
If you had to be self supporting a year from now, what are the first three things you would do?
1._____
2._____
3._____

9 12 BC 10.1_____ 10.2_____ 10.3_____ TOTAL_____

_____ E C
(Teacher's Name) (Grade) (Circle One)

_____
(Student's Name)

Place an X through the appropriate response.

1. What career interests you most?

2. What tools & equipment will be required for your answer to number 1 above?

3. Will your chosen career require you to supervise others? Yes No

4. What are some fo the starting skills required for your job choice?

   1._____

   2._____

5. What kinds of tools will you use in your chosen field? (None is not an answer)

6. Will your job choice require you to understand and tolerate the ideas of others? Yes No
   Explain.

7. Consider your training experience and knowledge at this moment. What are the three best jobs that you are qualified for?

   1._____

   2._____

   3._____

8. What three skills do you have that will be helpful in obtaining a job?

   1._____

   2._____

   3._____

9. Consider yourself at work in the job of your choice, will you be giving directions to others at any time? Yes No
Explain

10. Describe a problem you might have to solve in your work.

Describe what steps you might take in solving that problem.

11. List several reasons that explain a companies' interest in safety.

12. What are five important things you think a company would look for in a person that they were going to hire.

1. _____

2. _____

3. _____

4. _____

5. _____

13. List the five most important courses you need to take in order to prepare yourself for your career choice.

1. _____

2. _____

3. _____

4. _____

5. _____

14. Is it important for you to know how to care for and maintain tools and equipment necessary in your career? Yes No
Explain.

15. Do you feel comfortable following directions and orders from others? Yes No

16. How much training is desirable to acquire the skills necessary for your career choice?
No preparation necessary_____
1-6 Months preparation_____
High School Graduation_____
Technical School Graduation_____
College Graduation_____
Graduate College Graduation_____

17. What safety rules would you need to observe in the career of your choice? (None is not an answer)

18. Do you work independently when you notice work that needs to be done? Yes No

9 12 ES 11.1_____ 11.2_____ 11.3_____ TOTAL_____

_____ E C
(Teacher's Name) (Grade) (Circle One)

_____
(Student's Name)

The following questions may answered by placing a Z through yes or no.

1. Do you enjoy working independently? Yes No

2. Do you turn in work before deadlines? Yes No

3. Are you careful not to waste the time or others, such as distracting them when they wish to work? Yes No

4. Have you completed a real or simulated job seeking task? Yes No
When_____

What kind of job? _____

5. Do you look for things to do when there is free time? Yes No

6. Do you generally dislike people who disagree with you? Yes No

7. Are you confident of your ability to complete application forms? Yes No
Explain why_____

8. Would you give up outside interests to do what needs to be done in your job? Yes No

9. Can you think of two careers that you are capable of pursuing? Yes No
Name them. 1._____

2._____

10. Can you name two important requirements for the job that you are interested in? Yes No
Name them. 1._____

2._____

11. Can you name two advantages to the career of your choice? Yes No
Name them. 1._____

2._____

12. Do you know what a resume is? Yes No
Define a resume._____

_____

13. Are your work habits and work attitudes important in your career? Yes No
State two reasons why.
1._____

2._____

14. Can you state two differences between supervised and unsupervised careers? Yes No
1._____

2._____

15. Do you know the exact year and day that you graduated from elementary school? Yes No
If no, can you find that information? Yes No
How_____

16. Is verbal and non-verbal communication used in interviews? Yes No
What is one example of non-verbal communication?

_____

17. Can you state two disadvantages to the career of your choice? Yes No
State them.
1._____

2._____

18. Do you know what your high school major area of preparation is? Yes No
What_____

APPENDIX G

Evaluation Instruments

Appendix J
EXPERIMENTAL TEACHERS

Confidential, do not expose to students

ur consultants have stated that "teacher subjective evaluation" is ariable data. Therefore, we are asking you to provide the following ata before post testing. Your evaluation will be most helpful in the rea of statistical analysis and will not reflect in any way teacher kill, ability, or other personal quality. Feel free to be honest and ubjective.

Assume that you have 28 students in your class.
Record, by rank order, the names of students that made the most progress or responded most favorably to the career instruction that you provided.

(Top five students only) Example:

1. John Jones (Most Progress)
2. John A. Jones (Second highest progress)
3. Mary Jones (Third highest progress)
4. Bev Jones (Fourth highest progress)
5. Sally Jones (Fifth highest progress)

Record the names of students that made the least progress or responded least favorably to the career instruction that you provided.

(Lowest five students only) Example:

24. Jane Doe (Fifth lowest progress)
25. Sally Doe (Fourth lowest progress)
26. Bob Jones (Third lowest progress)
27. A.E. Smith (Second lowest progress)
28. John Smith (Least Progress)

Please mail this data to Buckeye Union High School using the envelope provided.

P.S. An evaluation of this type can be extremely difficult. Simply do the best job that you can and let it go at that.

Rating 17

Appendix H

PACKET LVALUATION

TITLE OF PACKET English (Charles Jaquette) Using English in World of Work

PACKET IDENTIFICATION 1503
(Call Number, Storage Place)

WAS THE PACKET AVAILABLE FOR PUBLIC USE? (Circle One) YES NO

EVALUATOR Pearl Gonzalez 11th English
(Name) (Grade/Subject Taught)

Having implemented the packet, answer "yes", "undecided", or "no" by placing an "X" in the appropriate columns. Upon completion of the checklist, place the rating score at the tope of the page. The rating score is determined by adding the numerical value of each response. Yes=2 Undecided=1 No=0

	YES	UD	NO
1. Was the grade level appropriate?	X		
2. Is the concept appropriate to the goal matrix?		X	
3. Is the concept clear, the goal obtainable?	X		
4. Are directions clear and complete?	X		
5. Is an evaluation section included?			X
6. May the packet be used without excessive amounts of preparation, expensive equipment, etc.?		X	
7. Is the packet (or some section of it) within the teaching time limit?	X		
8. Does the packet avoid cultural bias?		X	
9. Is the packet appropriate to a rural area?	X		
10. Are the activities appealing or interesting?	X		
11. Does the packet make sense to you, do you like it?	X		
12. Does the packet have an educational value?	X		

(Please determine and record rating score, thank you)

ADDITIONAL COMMENTS: