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AUTHOR Tuttle, Francis T.
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ABSTRACT

The goals of the project were to strengthen the curriculum management capabilities of the Oklahoma Curriculum and Instructional Materials Center (CIMC); to expand its efforts toward curriculum management in career education through coordination of efforts in development, dissemination, and diffusion; and to maximize resources for curriculum management through coordination of efforts in development, disemination, and diffusion. The CIMC conducted several activities to meet these objectives: together with the Research Coordinating Unit, 34 instructional units of curriculum materials were field-tested to determine if the objective-based instructional unit was an effective learning technique; it coordinated efforts with industry in curriculum development to carry out its career education activities; and the Ten-State Curriculum Network was formed as part of the National Network for Curriculum Coordination which focused on new developments in curriculum technology. Over two-thirds of the document contains favorable third-party evaluation of the project and related appendixes. The project's considered to be strong points were field-testing and revision of curriculum materials and workshop planning. The evaluation was conducted through team meetings; meetings with key CIMC and State personnel, instructional staff involved in piloting career education materials, and the project's advisory committee; and a project audit. (Author/EC)

FINAL REPORT

Project No.: V257024

Grant No.: OEG-0-72-4682 (361)

The Oklahoma State Department of Vocational and Technical Education Curriculum Laboratory Grant

Research Project in Vocational Education
Conducted Under
Part I of Public Law 90-576

Francis T. Tuttle
Oklahoma State Department of Vocational and Technical Education
1515 West Sixth Avenue
Stillwater, Oklahoma 74074

June 30, 1975

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SUMMARY OF THE REPORT

a. Time Period Covered by the Report: July 1, 1972 to June 30, 1975

b. Goals and Objectives of the Project: The goals of the project were: (1) To strengthen the curriculum management capabilities of the Curriculum and Instructional Materials Center; (2) to expand curriculum management efforts of the Curriculum and Instructional Materials Center in Career Education through coordination of activity in development, dissemination and diffusion; (3) to maximize resources for curriculum management through coordination of efforts in development, dissemination, and diffusion.

c. Procedures followed to achieve the objectives: The Center's staff concentrated their efforts on: (1) implementing the Management by Objectives concept for administering the responsibilities and functions of the center; (2) collecting and evaluating curriculum material presently on the shelf; (3) developing curriculum for skill training and for Career Education; (4) validating and disseminating materials through appropriate channels; (5) in-service and preservice training of personnel to use material to promote diffusion; (6) coordinating the development of curriculum to prevent duplication; and (7) dissemination of materials and diffusion of the philosophy and use of educational technology in curriculum materials for the 10 State Curriculum Network of the National Network for Curriculum Coordination in vocational and technical education.

Additional personnel was employed to increase the capabilities of the Oklahoma CIMC to develop curriculum for Career Awareness, Career Exploration, Guidance and Counseling and Vocational Education and to provide in-service and preservice training for teachers and state staff in the use of curriculum materials.

d. Results and Accomplishments: The major results and accomplishments were:

(1) Adoption of the "Management by Objectives" system to increase efficiency of CIMC management.

(2) Employment of additional staff. Increases in staff were:

Assistant Coordinator--1
Librarian--from 1/2 time to full time
Editors--from 1 to 2
Artists--from 1 1/2 to 3
Secretarial--from 2 to 6, four of which were not paid with grant money.

(3) Increased development of curriculum materials for vocational education.

(4) Validation of career education materials in Oklahoma schools.

(5) Development of curriculum materials for career education.

(6) Dissemination of career education materials.

(7) Diffusion of the career education concept through three state-wide workshops.

(8) Implemention of the regional network concept for curriculum and instructional materials coordination and management.

(9) Development of a curriculum evaluation model.

Career education curriculum guides were developed in the following areas: Career Awareness, Career Exploration, and Guidance and Counseling. The materials were field tested by seven school systems in Oklahoma and revised by the curriculum specialists. Diffusion of the career education concept was accomplished through career education articles, speeches and workshops in-state and out-of-state, and preservice presentations in university classes.

Manuals for sixteen vocational education programs were developed; three manuals were revised.

e. Evaluation: A third-party evaluation was conducted by a team of four members from the areas of industrial education, computer science education, vocational education, and vocational business and office education. The team members collected data primarily through structured interviews with various teaching and counseling personnel throughout the state who had assisted in the field-testing of career education materials and had utilized the services of the center, for determining the validity of the project.

f. Conclusions and Recommendations: The total project received support from classroom teachers, teacher educators, administrators, and state department personnel in assessing needs, development of instructional materials, and the field testing of career education materials. All states in the 10 State Curriculum Network reported increased activity in Curriculum. Examples of such activities are: (1) establishment of curriculum laboratories where there had been none; (2) exchange of instructional materials among the states; and (3) representation of all states on numerous curriculum committees.

Additional positive comments and recommendations are located in the third-party evaluation report.

BODY OF THE REPORT

a. Statement of the Problem

The major purpose of education is to prepare young people to live satisfying and productive lives. However, many young people are leaving school without entry levels job skills, the behavioral characteristics, and the basic general knowledge necessary to live and participate successfully in society.

In typical schools throughout the country young people have charged that curriculums are dull and irrelevant and that their education is not equipping them for a rewarding and productive adulthood. Some parents and teachers also question the value of educational experiences in preparing students to live useful and satisfying lives. Employers are finding that young people are poorly trained in the occupational skills and are lacking the behavioral characteristics necessary to perform competently in the world of work.

These problems underscore the need for reorganizing the total curriculum and finding means for developing and testing promising, innovative instructional materials to prepare the student to enter the job market with a salable skill and/or to continue his/her education.

To meet this need the Oklahoma State Department of Vocational and Technical Education proposed to: 1) strengthen the present curriculum management capabilities of the Oklahoma Curriculum and Instructional Materials Center to further research the social and theoretical foundations for development and implementation of curricula, and 2) blend the present curricula in vocational educational education, general education, and college preparatory education into one curriculum.

b. Goals and Objectives

The project goals were:

1. To strengthen the curriculum management capabilities of the Oklahoma Curriculum and Instructional Materials Center.

2. To expand the efforts of the Oklahoma Curriculum and Instructional Materials Center toward curriculum management in career education through coordination of efforts in development, dissemination and diffusion.

3. To maximize resources for curriculum management through coordination of efforts in development, dissemination and diffusion.

Objectives used to accomplish the project goals were:

1. To improve the curriculum management capabilities of the Oklahoma Curriculum and Instructional Materials Center.

2. To coordinate career education efforts within the state including collecting, developing, evaluating, validating, disseminating and diffusion of curriculum materials for curriculum management in career education and establishing channels of communication for transmitting results of the aforementioned activities.

3. To coordinate more effectively the development of curriculum activities in order to prevent duplication, provide information and materials through dissemination to each participating state of the Ten State Curriculum Network and diffuse the philosophy of educational technology in the use of curriculum materials.

c. Description of the general project design and procedures

Procedures for accomplishing objective #1:

The "Management by Objectives" approach for administering the responsibilities and functions of the Center was instituted to increase the efficiency of operation. Operating under the Management by Objectives system involved:

1. Planning the desired accomplishments and setting terminal dates for their achievement.

2. Executing the plan within the time lines.

3. Reviewing and evaluating results.

Increased efficiency of operation allowed a small amount of time for supervising the use of curriculum materials.

Personnel

An assistant coordinator was employed to expand the capabilities of the Oklahoma CIMC. His major responsibilities were to coordinate and increase development of curriculum materials for skill preparation and to coordinate in-service and preservice training in the use of curriculum materials. This training provided for more individualized instruction for teachers and increased the opportunity for evaluating curriculum for revision. Intensive in-service training through workshops for district supervisors in the vocational and technical areas of training afforded more and better supervision for teachers in the use of material.

The Curriculum and Instructional Materials Center cooperated with other state agencies such as the Research Coordinating Unit. Two projects resulted from this joint effort: 1) validating curriculum materials, and 2) developing a system for task analysis of incumbent workers in business and industry. A description of these projects follows.

Validation of Curriculum Material Through Field Testing

The Curriculum and Instructional Materials Center in cooperation with the Research Coordinating Unit validated selected units of curriculum materials through field testing. A model was developed by research assistants employed by the RCU and field testing was supervised by CIMC staff.

The purpose of the validation project was to develop a model curriculum evaluation system and to test its efficiency on instructional materials developed at the Oklahoma Curriculum and Instructional Materials Center. The major question the evaluation attempted to answer was: is the objective-based instructional unit an effective learning technique?

Thirty-four instructional units from twelve instructional manuals were evaluated. Pretest and post-test data were collected from 397 high school students. For purposes of the evaluation, three criteria were arbitrarily adopted to define an effective unit: (1) 80% of the students would attain 80% mastery on a criterion referenced post-test, (2) the lowest post-test score is greater than 59%, or (3) the post-test mean is at least 85% and the standard deviation is less to 10.0. Research is needed to determine criteria levels which would discriminate between masters and non-masters, however, the selected criteria seemed reasonable for purposes of testing the model.

Results

Results of the testing related to the criteria are reported in Table I. Fifteen of the thirty-four units (44%) tested satisfied at least one criterion for an effective unit. Additional analyses with regard to the model and its weaknesses are reported more fully in the final report of the project.

The fact that only 44% of the units satisfied the criteria for effectiveness does not imply that objective-based instruction is ineffective. This finding only raised the question as to why some units were effective while others were not. Three alternative hypotheses were considered: (1) objective-based instructional design is an unreliable education method, (2) individual differences in aptitudes of classes account for differences in effectiveness, or (3) individual differences in teacher ability accounts for the differences.

To test hypothesis 2, i.e., differences between classes, a test for differences between mean gain scores was computed between classes taught the same unit by the same teacher. Of the seven units where two classes were taught by the same teacher, three tests were significant. This finding implies that, at least in some cases, large differences did exist between classes.

Post-test means by classes were inspected for each unit. It was noted that mean differences between classes on the same unit were often larger than 10% with some differences over 20%. Because the effects of teacher differences and class differences are combined, such differences seem to support both hypotheses 2 and 3.

Hypothesis 1, i.e., that objective based instruction in unreliable, was also supported by observation. Correlations between pretest and post-test in any unit do not seem to be stable or consistent; further, the standard deviations of post-test scores were extremely high.

Conclusions

Fifteen of the thirty-four units satisfied at least one of the criteria for an effective unit. An additional six units were at least marginally effective. In addition, almost all of the units produced sizable learning gains. Thus, it is recommended that none of the instructional units be abandoned.

A formative evaluation of the post-test indicated that some units had a number of difficult questions in the sense that students answered them incorrectly. These difficult questions frequently required the student to solve a problem. A major step in revising the ineffective units should be to provide additional instruction in the difficult areas.

It is the investigator's contention that much of the problem with the instructional units lies not in poor design, but rather, appears to stem from improper use of the instructional units by the teachers. The teachers seem to be using the instructional manuals just as they would a textbook and norm-referenced test. If the teachers could be pursuaded to use the mastery model with the instructional manuals, the problems would hopefully disappear. This means that a student who does not achieve the mastery level the first time he takes the unit test should be given remedial work in his area of weakness. Only when he reaches mastery should he proceed with the next unit. The mastery model means more work for the teacher, however, the work load could be reduced by designing remedial lessons into each unit. Objective based units with criterion tests are ideally suited for this type of program.

TABLE I

SUMMARY STATISTICS FOR ALL UNITS

Manual & Unit	N	Mean	S.D.	Students at 80% Level	Low Score	High Score
Agriculture I						
** Livestock Industry	38	87.4	10.8	82%	60	100
Livestock Feeding	38	78.7	22.9	74%	47	100
** Plant & Soil Science	15	88.9	14.7	80%	42	100
Agriculture III						
* Market Grades	26	83.3	15.7	76%	38	100
Marketing Livestock	26	75.9	19.7	54%	24	100
Agriculture IV						
Sources of Credit	38	76.7	16.7	50%	32	100
Legal Land Description	38	79.2	11.8	58%	47	100
** Farm Utility Building	38	88.1	9.2	79%	70	100
Auto Mechanics						
** Brake Systems	28	84.8	9.7	68%	60	100
Ignition Systems	28	78.2	17.2	47%	39	100
** Fuel Systems	28	92.2	10.2	90%	56	100
Business and Office						
** Telephone Communica.	51	90.9	7.4	92%	74	100
** Letter Writing	51	91.0	9.1	83%	64	100
* Reference Materials	51	88.2	11.2	78%	50	100
Child Development						
** Care of Mother	37	87.1	10.7	83%	53	100
* Parent Responsibility	37	84.7	13.1	67%	39	100
* Infancy	35	80.1	20.7	77%	43	100
Distributive Education III						
** Marketing	16	86.8	9.7	81%	67	100
Research Procedures	16	73.2	13.0	38%	49	91
** Capital Resources	16	98.7	2.9	100%	89	100
** Financial Statements	16	87.6	5.2	94%	77	96
Home Economics I						
Personal Income	86	81.9	17.1	60%	39	100
Managing Income	86	75.8	18.9	54%	36	100
Machine Shop						
Safety	10	73.9	20.0	50%	27	97
** Engine Lathe	10	88.7	12.8	90%	57	100
Nursing						
** Vital Signs	17	84.3	11.0	70%	67	98
** Patient's Environment	17	96.3	5.4	100%	80	100
** Patient's Cleanliness	17	98.5	5.6	100%	87	100
Residential Carpentry						
* Roofing Materials	31	77.1	8.1	39%	56	90
Exterior Wall Covering	31	66.9	19.2	26%	24	97
Roof Framing	31	65.2	19.3	29%	20	98
Welding						
* Oxyacetylene Cutting	19	85.5	14.2	74%	47	100
Braze Welding	19	80.7	16.1	63%	11	100
Metal Arc Welding	19	75.4	12.6	52%	33	100

** This unit met at least one of the criteria for an effective unit.
* This unit approached the criteria and may be considered marginally effective.

Several pieces of information infer that teachers are not using the mastery model: (1) there were extremely low scores in twenty of the thirty-four units which indicates that some students were not achieving mastery, (2) twelve of the thirty-four units have large standard deviations indicating student grades are strung out over a very wide range, and (3) personal communications with several of the teachers indicated their lack of familiarity with concepts of the mastery model.

Recommendations

1. Testing of the evaluation model should be repeated with much more stringent controls over differences, such as teacher differences and class differences, which might relate to the effectiveness criteria. The criteria should also be researched to discover the point which discriminates between mastery and non-mastery.

2. There are many indications in the data that the criterion referenced unit tests might not be reliable instruments. It is recommended that in-service training for the Center staff with regard to statistical properties of test construction should be accomplished. The key problem in conducting any evaluation is to develop or obtain a reliable and valid measuring instrument.

3. It is strongly recommended that the evaluation model become a standard part of the curriculum design process. Although there are bugs in the model, there is no reason why it cannot be used in its present form. The data from the present evaluation could be used to revise all of the units which were tested.

4. It needs to be emphasized that the instructional material in each of the units evaluated appeared to be pedagogically sound. Improvement in the units could be made by adding remedial sections to each unit, providing a diagnostic interpretation for the unit tests, and providing more detailed information sheets.

The second project, developing a system for task analysis of workers in business and industry is in progress at this time.

Industry

The Oklahoma Curriculum and Instructional Materials Center had direct involvement with industry in curriculum development. The Associated General Contractors of America and the Oklahoma Curriculum and Instructional Materials Center have developed instructional manuals for commercial carpentry and cement masonry. Don Diehl, Construction Superintendent with Ringland, Johnson-Crowley Company, Des Moines, Iowa, representing the Associated General Contractors, served as a member of the State Department of Vocational and Technical Education staff to write commercial carpentry curriculum. Commercial carpentry is a course of study designed to train carpenters who will make their careers in industrial and commercial construction.

Laborn "Bud" Hendrix, Concrete Superintendent with the George Bahre Construction Company in Indianapolis, Indiana, served as a member of the State Department of Vocational and Technical Education staff for eight months. He wrote the cement masonry curriculum which is a course of study for use in secondary and post secondary level programs and is designed to train apprentices and to upgrade skills in cement masonry.

Procedures for Accomplishing Objective #2

An assistant coordinator, three curriculum specialists, and a media resource specialist (1/2 time) were employed to carry out the activities of the career education component for the center.

The training of the staff consisted of, "Behavioral Objectives," and "Writing A Unit of Instruction," (Units of instruction developed by the center staff for in-service training), the Vimcet Series of filmstrips and tapes on curriculum by Popham and Baker, and "Designing Effective Instruction," a 30-hour programmed workshop published by General Programmed Teaching, a division of Commerce Clearing House, Inc. The 30-hour workshop was directed and instructed by the center's coordinator and two assistant coordinators.

Staff

The assistant coordinator was qualified both by experience and training in curriculum development and administration. Her major responsibilities included: (1) assisting the coordinator in coordinating the activities of the Curriculum and Instructional Materials Center, and representing the coordinator when necessary; (2) coordinating the in-service and preservice training as needed by the center and training of new personnel; and (3) coordinating the development of Career Education Curriculum for the Oklahoma Center.

Curriculum Specialists

The three curriculum specialists for career awareness, career exploration, and counseling and guidance were qualified both by formal training and experience. The career awareness specialist held a master's degree in elementary education and had six years of teaching experience. The career exploration specialist held a bachelor's degree in industrial arts and had three years of teaching experience. The guidance specialist held a master's degree in guidance and counseling and had five years of classroom teaching and counseling experience. The specialists' major responsibilities included: collecting, developing, diffusing, disseminating and revising career education curriculum material. Diffusing the career education concept in Oklahoma schools was an added responsibility. The specialists also served as career education consultants as needed.

A Career Education Advisory Committee was organized to provide input for directions in curriculum development. The committee established priorities for curriculum development and helped establish channels of communication for dissemination of materials and career information. Quarterly meetings of the committee and career education staff were held to explore avenues of cooperation with business, industry, labor, the Employment Security Commission, the Manpower Division (located in the Vo-Tech complex), and other education agencies, such as Oklahoma State Regents of Higher Education, State Board of Vocational and Technical Education, Oklahoma Curriculum Improvement Commission, State Department of Education, Guidance and Counseling Service, Adult Basic Education, and The Oklahoma Education Association (see section e. Evaluation of the Project for advisory committee members). In addition to the Career Education Advisory Committee, each curriculum specialist organized an advisory group for her/his particular area. Elementary teachers, principals, and teacher educators served on the career awareness committee; industrial arts teachers (junior high or middle school) and teacher educators served on the career exploration committee, and counselors and counselor educators served on the counselor's committee.

Diffusion of the career education curriculum was accomplished through in-service workshops and preservice training for teachers at the university level. In-service and preservice training was devoted to appropriate teaching techniques of the material.

Dissemination was accomplished through workshops and regionalization.

Validation was accomplished through the advisory committee for the career education staff, advisory committee for each curriculum specialist, and the field-testing of the material by nine elementary schools, six junior high schools, six secondary counselors, and four counselor education workshops (see Section e. Evaluation of the Project).

Procedures for Accomplishing Objective #3

Ten State Curriculum Network

The Ten State Curriculum Network was formed as a part of the National Network for Curriculum Coordination. The participating states were: Arkansas, Colorado, Kansas, Missouri, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota and Texas. The following procedures and policies were adopted:

1. Each participating state will have one contact person to work with the Oklahoma Curriculum and Instructional Materials Center.

2. The Oklahoma Curriculum and Instructional Materials Center will publish a quarterly newsletter (the third month in each quarter) which will include the following items:

   a. Listing of curriculum projects under development, in each participating state including information such as title of project and description of material as to grade level and content. Each state will report on its curriculum projects and other news to the Oklahoma Center by the end of the second month of each quarter.

   b. Listing of activities and accomplishments of the other regional laboratories along with information selected by Vocational Instructional Materials sections of American Vocational Association.

3. All curriculum and instructional material developed by the Oklahoma Curriculum and Instructional Materials Center as well as from each of the participating states will be developed in accordance with the standardized format. The format shall consist of the following components:

   a. Behavioral objectives.

   b. Suggested activities for both instructor and student.

   c. Information (content) necessary for reaching each objective.

   d. Assignment sheets for application of problem solving approaches.

   e. Job Sheets for motor-performance skills.

   f. Evaluation (tests) for measuring the objectives.

4. The Oklahoma Curriculum and Instructional Materials Center will send one copy of each publication produced by the Center to each representative of the participating states.

5. The Oklahoma Curriculum and Instructional Materials Center will provide materials developed by the Center at special rates for quantity purchases to participating states.

   a. Teachers manual - Fifty or more in any combination. Original order each year will receive forty percent discount.

   b. For guaranteed delivery student material orders must be made one year prior to our August 1 printing date. Approximate cost will be $3 per set. Other orders will be filled subject to the availability of materials.

6. Additional services to be provided by the Oklahoma Curriculum and Instructional Materials Center are to:

   a. Collect and disseminate priorities as submitted to participating states.

   b. Provide consulting services to participating states at each state's expense.

   c. Notify contact personnel in each participating state prior to curriculum committee meetings inviting them to send representatives for the evaluation of materials under development.

   d. Disseminate the evaluation of curriculum materials to each participating state by using an evaluation sheet to be developed and validated by the Oklahoma Center.

   e. Establish a method of negotiating contracts for printing and dissemination of instructional materials developed by representatives of participating states.

The participating states were encouraged to assess their vocational-technical curriculum development needs and report to the Ten State Curriculum Network.

New developments in curriculum technology (design, validation, testing, infusion, methods) were a prime focus of the Ten State Curriculum Network. As new developments were perfected they were disseminated through the Network to curriculum specialists who in turn applied them in their developmental work program. Each Center has an advisory group which is composed of the representatives from their affiliated states. Each state representative was appointed by his state director of vocational and technical education.

Augmentation to OEG-0-72-4682(361)

Augmentation #1 was a grant for the purpose of preparation and dissemenation of camera ready copy of curriculum materials developed by state and national organizations. Materials were not identified and sent to the CIMC for processing, hence nothing was done with this project.

Augmentation #2 was to develop a supplement for updating the seven (7) listings of available State Instructional Materials compiled by the Bureau of Adult, Vocational and Technical Education and updated by the Texas Education Agency in January, 1971. The accomplishments of this augmentation will be found in "Final Report Modification Project #OEG-0-72-4682(357) Collecting, Compiling, Annotating, and Disseminating Supplemental List of State Available Curriculum Materials."

Augmentation #3 was an increase of $40,000 for curriculum management activities. The accomplishments of this project are included above in the body of this report.

d. Results and accomplishments

Goal #1--To strengthen the curriculum management capabilities of the Oklahoma Curriculum and Instructional Materials Center.

1. Adoption of the Management by Objectives style of management has increased the efficiency of the Curriculum and Instructional Materials Center.

2. Twenty manuals were developed or revised for vocational programs. Following is a list:

DRAFTING
GENERAL CONSTRUCTION TRADES CLUSTER (revised)
VOCATIONAL RELATED ENGLISH
VOCATIONAL RELATED SOCIAL STUDIES
VOCATIONAL RELATED MATH
BASIC CORE CURRICULUM GUIDE FOR VOCATIONAL AGRICULTURE IV
DISTRIBUTIVE EDUCATION I--A COURSE OF STUDY
HOME ECONOMICS II--BASIC CORE
RESIDENTIAL CARPENTRY--A COURSE OF STUDY
GENERAL MECHANICS CLUSTER (revised)
BASIC CORE CURRICULUM GUIDE FOR VOCATIONAL AGRICULTURE I (revised)
FORESTRY
FASHION MERCHANDISING
NURSING I--COURSE OF STUDY
CHILD DEVELOPMENT--IN-DEPTH CURRICULUM
OCCUPATIONAL CHILD DEVELOPMENT--A COURSE OF STUDY
BASIC WELDING--A COURSE OF STUDY
AUTO BODY
COMMERCIAL CARPENTRY--A COURSE OF STUDY
CVET SCIENCE

Approximately 150 curriculum committee meetings were held to validate the manuals.

3. The Oklahoma Curriculum and Instructional Materials Center (serving the Ten State Curriculum Network) disseminated curriculum materials as follows:

Ten State Curriculum Network States - 967 schools
39 other states - 585 schools
Three foreign countries - 29 schools

4. 75 in-service workshops on the use of curriculum materials were held. The following units were developed for use in the workshops: "Behavioral Objectives for the Teaching-Learning Process," "Writing a Unit of Instruction" and "Supplementing a Unit of Instruction."

5. Additional staff were employed to expand the capabilities of the Center:

   Assistant Coordinator - 1
   Librarian - from 1/2 time to full time
   Editors - from 1 to 2
   Artists - from 1 1/2 to 3
   Secretarial - from 2 to 6, four of which were not paid with grant money.

6. Thirty-four instructional units from twelve manuals were evaluated.

Goal #2--To expand the efforts of the Oklahoma Curriculum and Instructional Materials Center toward curriculum management in career education through coordination of efforts in development, dissemination and diffusion.

1. Approximately 1000 pieces of career education materials were evaluated and placed in the library.

2. Lists of new materials were mailed monthly to Oklahoma schools involved in or planning to become involved in career education.

3. Curriculum materials developed and field tested were:

   (a) I Can Be Me From A to Z (K-6)
   (b) Elementary Dictionary of Occupational Titles
   (c) Career Exploration Construction Cluster - (Grades 7/8)
   (d) Career Exploration Transportation Gluster - (Grades 7/8)
   (e) Career Exploration Communications and Media - (Grades 7/8)
   (f) Academic related manuals for grades 7/8 in Math, Social Studies, English and Science.
   (g) Career Education - A Counselor's Guide

   The concentrated effort in curriculum development, diffusion and validation has resulted in the implementation of career education programs in approximately 50 schools in Oklahoma

Goal #3--To maximize resources for curriculum management through coordination of efforts in development, dissemination and diffusion.

1. Formation of the Ten State Curriculum Network. Member states of the 10SCN formulated operating policies and procedures. Each state designated a person to serve as liaison between his state and the network. The network accomplished the following:

   (a) A standard format for curriculum development was adopted.

   (b) All curriculum materials developed by the Oklahoma Center were disseminated to representatives of each state; New Mexico, Arkansas, and Colorado have adopted some Oklahoma materials for state-wide use.

   (c) A "Suggested Glossary of Curriculum Terms" was developed by the states and disseminated to the members in the Ten State Curriculum Network.

(d) The profiles which list curriculum projects under development, planned for development and identified needs were developed and published. The information helped prevent duplication of effort in curriculum development.

(e) Several states in the Network devoted more time to curriculum dissemination and diffusion activities because of the Curriculum Network. One example is that South Dakota conducted several workshops on the use of curriculum materials.

(f) The Oklahoma Curriculum Center worked with the Associated General Contractors and the Associated Builders and Contractors on curriculum material development. Both of the organizations held curriculum planning meetings at the Oklahoma Center. These two organizations represented over 20,000 contractors in the United States.

(g) The Mid-America Vocational Curriculum Consortium was formed by those states wishing to have input into curriculum development, but lacked facilities in their state for curriculum development and dissemination.

e. Evaluation of the project

REPORT OF EVALUATION TEAM

THE STATE VOCATIONAL TECHNICAL EDUCATION
CURRICULUM LABORATORY GRANT
OEG-0-72-4682 (361)

Submitted to the:

CURRICULUM AND INSTRUCTIONAL MATERIALS DIVISION
STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
1515 West Sixth Avenue
Stillwater, Oklahoma

PREFACE

This is a report of the activities of the Third Party Evaluation Team for the USOE funded Project No. OEG-0-72-4682 (361), Curriculum Development in Vocational and Technical Education. The report covers the activities of the Evaluation Team from February 11, 1975 through May 30, 1975.

The Evaluation Team was composed of four teacher educators from three Oklahoma institutions of higher education: Dr. Lucille W. Patton and Dr. Joe Kinzer, Department of Vocational-Technical Teacher Education, School of Education, Central State University, Edmond, Oklahoma; Dr. Billie Holcomb, Department of Business Education, College of Education, The University of Oklahoma, Norman, Oklahoma; and Dr. Don Mitchell, Department of Industrial Education, Southwestern Oklahoma State University, Weatherford, Oklahoma.

Activities consisted of meeting of evaluation team members, meetings with key personnel in the Curriculum and Instructional Materials Division, State Department of Vocational and Technical Education, visits with elementary and middle school teachers and counselors involved in piloting career education materials, and members of the advisory committee for the project. In-house evaluation and financial records of the project were audited by the evaluation team.

The evaluation team wishes to acknowledge the cooperation and support received throughout the project. The team is especially grateful to Mr. Ron Meek, Dr. Irene Clements, Mrs. Jeanetta Shipp, and Mr. Norman Piltz for their availability and cooperation.

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OEG-0-72-4682 (361)

INTRODUCTION

The Third Party Evaluation of the State Vocational Technical Education Curriculum Laboratory Grant was conducted by a team of four members from the School of Education, Central State University, Edmond, Oklahoma; from the Department of Industrial Education, Southwestern Oklahoma State University; and from the College of Education, The University of Oklahoma. In order to provide the expertise necessary for the comprehensive evaluation, team members were selected from the areas of Industrial Education, Computer Science Education, Vocational Education and Vocational Business and Office Education. The efforts of the team were coordinated by Dr. Lucille W. Patton, Chairman of the Department of Vocational and Technical Teacher Education, Central State University. Team members included Dr. Billie Holcomb, Dr. Joe Kinzer, and Dr. Don Mitchell. Evaluators were not only selected for their background in career education curricular development but also for administrative, statistical, fiscal, and research capabilities. The opportunity to work with professional staff in the Curriculum and Instructional Materials Division of the State Department of Vocational and Technical Education, Stillwater, Oklahoma, was the primary factor in encouraging the pursuit of the Third Party Evaluation contract by the Department of Vocational-Technical Teacher Education, Central State University, Edmond, Oklahoma.

The members of the Third Party Evaluation team proposed the evaluation to check the effectiveness of the purposes of the original proposal for a curriculum laboratory grant for the State Department of Vocational and Technical Education, which was funded by the U. S. Office of Education in its original form and augmented throughout the duration of the project. The primary purposes of the proposed project were:

1. To strengthen the curriculum management capabilities of the Curriculum Materials Center; and,
2. To expand the efforts of the Oklahoma Curriculum and Instructional Center towards curriculum management in Career Education.

The objectives which were proposed as a means of accomplishing the above purposes were:

1. To improve the curriculum management capabilities of the Oklahoma Curriculum and Instructional Materials Center; and,
2. To coordinate Career Education efforts within the state including collecting, developing, evaluating, validating, disseminating, and diffusing curricular materials for curricular management in Career Education and establishing channels of communication for transmitting results of the aforementioned activities.
3. To coordinate more effectively the development of curriculum activities in order to prevent duplication, provide information and materials through

dissemination to each state of the 10-state network and diffuse the philosophy and educational technology in the use of curricular materials.

The duration of the evaluation of the curriculum laboratory activities was from February 11, 1975 through May 31, 1975. The original plans of the evaluation team were formulated at the February meeting and the final report compiled on May 23, 1975. In the intervening period of time from February 11th through May 31st the four members of the evaluation team met as a group to plan procedures and strategies. They spent two half days in the Curriculum Materials Division of the State Department of Vocational and Technical Education for the purpose of going through the original proposal with all of its augmentations, of being advised of pilot centers for the Career Education curricular materials, and of being updated on personnel who had been hired by the State Curriculum Materials Division for the implementation of the USOE Project. The evaluation team members selected various teaching and counseling personnel throughout the State who had assisted in the field testing of the Career Education materials for the purpose of determining the validity of the project results which were available to the members of the team in the Stillwater office.

TABLE I

TIME LINE
THIRD PARTY EVALUATION
CURRICULUM DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION

Organization of Evaluation Team:	February 11, 1975
Meeting of all Team Members with Curriculum Division Career Education Staff:	March 5, 1975
Meeting of two team members with Director of Curriculum Division and Finance Division staff regarding expenditure of funds:	April 8, 1975
Visitation with teachers and counselors involved in field testing Career Education Curricular Materials:	March 10-May 22, 1975
Writing Conference	May 23, 1975

Specifically, the curricular efforts which were being evaluated involved:

1. Career Education-A Counselor's Guide
2. Career Awareness K-6
3. Dictionary of Occupational Titles for the Elementary Grades
4. Career Education - English
5. Career Education - Math
6. Career Education - Social Studies
7. Career Education - Science
8. Career Education - Construction Cluster
9. Career Exploration, Transportation Cluster
10. Career Exploration, Communications & Media Cluster

PROCEDURES

The spot-visitations included four industrial arts teachers, one elementary teacher, one elementary counselor, two middle school teachers, two middle school counselors, and three advisory committee members. Schools visited ranged from urban middle schools with over 1,000 students to small rural schools with less than 300 students. The spot visitations included a structured interview involving five questions. These questions were as follows:

1. Were you involved in field testing any career education curriculum materials, and if so, in what area? If you were not involved in field testing, how did you become aware of the curricular materials?
2. What orientation to the use of the curricular materials did you receive?
3. Do you feel that the children who have gone through the use of the curricular materials are more, less, or just as knowledgable of the instructional area as those who went through the conventional school program?
4. What do you feel that the impact of the use of this material will be on your on-going program?
5. Are you observing any differences in the kinds of career decisions your students are making, if not, do you anticipate any differences?

**6. Has the utilization of the Career Awareness Segment of the Career Education Curriculum resulted in any significant change in teaching techniques in your school?

(* This question was applicable to only 7th and 8th grade teachers.)
(**This question was applicable to only K-6 teachers.)

Eleven Oklahoma educators served as the Advisory Committee to the staff of the Curriculum and Instructional Materials Division of the State Department of Vocational and Technical Education for the purpose of assisting with the completion of USOE funded Project OEG-0-72-4682 (361). The members of the advisory committee are listed in Appendix B to this report.

Three members of the advisory committee were interviewed, using the following structured interview form:

1. What do you see as the future of the Career Education concept in the public schools of Oklahoma?
2. To whom do you give credit for the present state of implementation of the Career Education concept in Oklahoma?
3. In your opinion, has top educational leadership in Oklahoma provided support for implementation of the Career Education concept?
4. How do you view the usability and effectiveness of the career education materials which have been developed by the Curriculum Materials Division of the State Department of Vocational and Technical Education?

5. Do we have a director of career education at the State Department of Education? If not, do you foresee any plans for the appointment of such an individual?

The staff in the Curriculum and Materials Division made available to the members of the evaluation team copies of the original proposal; all augmentations to the proposal, copies of reports to and correspondence with the U.S. Office of Education, in-house evaluation of various aspects of the project, and financial data and reports.

All members of the Third Party Evaluation Team have had opportunities to observe activities of the Curriculum and Materials Division since the initial funding of the project July 1, 1972.

FINDINGS OF THE EVALUATION COMMITTEE

RESULT OF INTERVIEW:

Classroom Teachers & Counselors: The consensus of the classroom teachers and counselors regarding the interviews was as follows:

QUESTION 1: Were you involved in field testing any career education curriculum materials, if so, in what area? If you were not involved in field testing, how did you become aware of the curricular materials?

Responses: Six (6) Teachers & Counselors - Involved in Field Testing

Four (4) Teachers & Counselors - Not Involved in Field Testing

Of those six involved in field testing, three field tested the Career Exploration Clusters of Construction and Transportation, two tested the Career Awareness K-6, and one, the Elementary Dictionary of Occupational Titles. The four interviewees not involved in field testing discovered the materials by the following methods: (a) attendance at the Career Education Workshop at Central State University; and, (b) conferences with State Department of Vocational and Technical Education Curriculum and Instructional Materials Center personnel; or, (c) through a teaching methods course on the campus of Southwestern State University.

QUESTION 2: What orientation to the use of the curricular materials did you receive?

Of the ten teachers and counselors who received orientation to the use of the curricular materials, eight of those attended the

workshop at Central State University in the summer of 1973. Two received no previous orientation, other than from the methods course offered at Southwestern State University.

QUESTION 3: Do you feel that the children who have gone through the use of the curricular materials are more, less, or just as knowledgable of the instructional area as those who went through the conventional school program?

The responses were overwhelmingly that the students were more knowledgable as a result of the Career Education materials as opposed to those going through the conventional school program. Of the ten teachers and counselors interviewed, eight felt that the students were more knowledgable and two answered that they were not sure in that they were not in the classroom prior to the use of the material, thus, they had no basis for reacting to this particular question.

QUESTION 4: What do you feel that the impact of the use of this material will be on your on-going program?

The responses to this particular question had quite a range. In general, the responses to Question 4 were positive in nature, and all felt that the materials had been and would continue to be of definite value to on-going programs. Specific comments included positive reactions toward: (1) more student interest in classroom activities; (2) a more practical relationship between school activities and community activities; (3) a realization of the materials as a valuable guidance tool; and, (4) a more progressive attitude toward interdisciplinary instruction.

QUESTION 5: Are you observing any differences in the kinds of career decisions your students are making, if not, do you anticipate any differences?

Of the ten persons interviewed, eight responded to Question 5 which was for seventh and eighth grades only. Although all respondees were positive in their feeling that their materials would have an effect on future decisions, most stated that more valid observations could be made after another year had elasped. It was noted that there seemed to be more awareness on the part of students in selecting programs at the area schools.

QUESTION 6: Has the utilization of the Career Awareness Segment of the Career Education Curriculum resulted in any significant change in teaching techniques in your school?

The majority of the classroom teachers and counselors were teaching in grade levels above K-6. Those reacting, however, were of the opinion that the continued utilization of the Career Awareness Segment within the curriculum could definitely improve teaching techniques in the classroom. This would come about or result from the teacher becoming more aware and knowledgable about Career Education Concepts.

Advisory Committee Members: Responses to the members of the Advisory Committee to their structured interview were:

QUESTION 1: What do you see as a future of the Career Education concept in the public schools of Oklahoma?

The following responses were made: In general, that it will be quite effective, especially when used as a part of the total curriculum, but not specifically as a subject within itself.

QUESTION 2: To whom do you give credit for the present state of implementation of the Career Education Concept in Oklahoma?

Responses indicated that they felt the implementation has been a cooperative effort on the part of the State Department of Education and the State Department of Vocational and Technical Education along with various institutions of higher education in Oklahoma. Also, the involvement of several public schools, Oklahoma City and Sand Springs, to name two.

QUESTION 3: In your opinion, has top educational leadership in Oklahoma provided support for the implementation of the Career Education Concept?

The responses, in general, indicated yes. No one really opposed. Some were very actively involved and pushed for the implementation in Career Education. Those not actively involved in this project were not opposed to the Career Education Concept but did not get involved.

QUESTION 4: How do you view the usability and effectiveness of the Career Education materials which have been developed by the Curriculum Materials Division of the State Department of Vocational and Technical Education?

A stronger positive response was indicated here than with any of the other questions. Primarily, that these materials would be a tremendous help to the teacher, it would improve and enrich course offerings, and one of the major strong points would be that a systematic system of organization or systematic method of organization had been prepared to assist the teacher in classroom instruction.

QUESTION 5: Do we have a director of Career Education at the State Department of Education, if not, do you foresee any plans for the appointment of such an individual?

The responses were "No, not at this time." One individual believed we would not see such an appointment in the near future, qualifying his answer with the fact that it was not economically feasible at this time.

ACTIVITIES OF THE CURRICULUM AND INSTRUCTIONAL MATERIALS DIVISION

Following is a list of activities, conducted by the Curriculum and Instructional Materials Division of the State Department of Vocational and Technical Education, as a result of the funding received through Contract No. OEG-0-72-4682. These activities were observed by members of the evaluation team and were validated through reports to USOE.

Major activities in implementing the original proposal and the three augmentations involved:

1. Adoption of MBO Concept for professional and support staff.
2. Designation and employment of additional staff.
3. Identification and implementation of an advisory committee.
4. Attendance by Career Education Curricular staff at various state, regional, and national meetings.
5. Presentations by Career Education Curricular staff at various state, regional, and national meetings.
6. Visitations of Career Education Curricular staff at sites of Model Career Education programs throughout the nation.
7. Collection of Career Education Curricular materials from other states and commercial sources.

8. Development of the following curricular materials for career education:

   A. Career Education-A Counselor's Guide

   B. Career Awareness K-6

   C. Dictionary of Occupational Titles for the Elementary Grades.

   D. Career Education - English

   E. Career Education - Math

   F. Career Education - Social Studies

   G. Career Education - Science

   H. Career Education - Construction Cluster

   I. Career Exploration - Transportation

   J. Career Exploration - Communications & Media Cluster

9. Orientation of selected public school personnel through Career Education workshops.

10. Field testing of career education materials.

11. Revision and dissemination of field tested career education materials.

12. Funding of two workshops for industrial arts teachers at Northeastern Oklahoma State University and Southwestern Oklahoma State University for the summer of 1975. Workshops designed to be available for all industrial arts teachers in the state, emphasizing the use of career education curricular materials.

13. Compilation of seven bibliographies of vocational education materials for dissemination of 65,000 copies nationwide. (See Appendix D)

14. Development of a curriculum evaluation model and field testing of twelve different vocational instructional manuals.

15. Implemented the Regionalization Concept of Curriculum and Instructional Materials -- Coordination, Dissemination, Development and Difusion including:

    A. The appointment of Curriculum Coordinators in each of the ten states involved in regional curriculum efforts.

    B. Adoption of standardized curriculum format.

    C. In-service workshops in using instructional materials conducted in five states by staff of the Oklahoma Curriculum Laboratory.

    D. Initiation of a Regional Curriculum Newsletter to keep personnel in all ten states informed.

    E. Development of Curriculum Profiles (Curricular materials under development, planned for development, and curricular needs).

    F. Compilation, publication, and dissemination to all vocational teachers in ten states of listing of all curricular materials available.

COST TRANSPORTABILITY

Table II lists total amounts approved by U.S.O.E. for the original proposal and the three augmentations with time periods indicated for each funding.

TABLE II

TOTAL USOE APPROPRIATION
OEG-0-72-4682

	DATES	AMOUNTS
Original Proposal	7-1-72/12-31-73	$197,880.00
Augmentation # 1	1-1-74/ 6-28-74	10,000.00
Augmentation # 2	1-1-74/ 6-29-74	25,000.00
*Augmentation # 3	6-30-74/12-31-74	40,000.00
	TOTAL USOE FUNDS	$272,880.00

*Extended to 6-30-75 at no additional cost to USOE

Table III shows total expenditures for the first thirty months of the project and lists the balance of funding which has been extended to June 30, 1975, at no additional cost to the U.S. Office of Education.

TABLE III

TOTAL EXPENDITURES
JULY 1, 1972-DECEMBER 31, 1974

	AMOUNTS EXPENDED
Salaries & Benefits	$ 140,869.86
Travel	18,307.19
Miscellaneous	42,510.69
Dissemination	36,961.93
TOTAL	$ 238,649.67
BALANCE	$ 34,230.33

Of the total expenditures for the first thirty months of the project, more than half (57%) was expended for personnel. It was not difficult to determine the impact of additional personnel on the production and services of the Curriculum and Instructional Materials Center. Teachers and counselors interviewed spoke in a complimentary manner about assistance from Center staff in developing, disseminating, orienting, and following-up the Career Education Materials.

The $42,510.69 listed as expended for miscellaneous included equipment rental, office rental, supplies and materials, communications, duplicating and printing, and contractual service. Expensive equipment (IBM Composer, MT/ST Typewriters, etc.) were rented for the purpose of facilitating curriculum development.

Table IV indicates a projection of expenditures for the last six months of the project which was reflected as the balance in Table III. Participant expenses for the two industrial arts curriculum conferences are projected to absorb the major portion of the amount budgeted for dissemination.

TABLE VI

PLANNED EXPENDITURES
JANUARY 1, 1975-JUNE 30, 1975

	AMOUNTS
Salaries & Benefits	$22,400.00
Travel	1,200.00
Miscellaneous	1,600.00
Dissemination	7,530.33
Evaluation	1,500.00
TOTAL	$34,230.33

Table V is a compilation of the budget items in the original proposal and the three augmentations. Various requests to USOE for budget changes were reviewed by the Third Party Evaluation Team and the revised budget is included as Appendix F to this report.

TABLE V

ORIGINAL BUDGETED AMOUNTS

	Personnel Salaries and Benefits	Travel	Miscel-lanous	Dissem-ination	TOTAL
Original Proposal	$126,984.62	$11,384.00	$27,060.01	$32,451.37	$197,880.00
Augmentation # 1	-0-	-0-	-0-	10,000.00	10,000.00
Augmentation # 2	5,580.96	300,00	18,419.04*	700.00	25,000.00
Augmentation # 3	11,972.00	5,000.00	2,800.00	20,228.00	40,000.00
TOTAL	$144,537.58	$16,684.00	$48,279.05	$63,379.37	$272,880.00

*Including $17,549.04 Printing

CONCLUSIONS

It is very evident to the members of the Third Party Evaluation team that the main thrust of implementation of career education instructional materials in Oklahoma has been due to the efforts of the staff of the State Department of Vocational and Technical Education Curriculum and Instructional Materials Center. The most commendable aspect of the total project has been the involvement of classroom teachers, teacher educators, administrators, and state department personnel in assessing needs, development of instructional materials, field testing of career education materials, and in evaluation. These committees were designed to be composed of mostly classroom teachers.

It is very easy in visiting the Curriculum Materials Center to recognize the impact of the USOE funds in expanding the capabilities of the center: expansion of physical facilities, expansion of services, addition of staff.

The director of the Curriculum Materials Center is to be commended for his careful selection of professional staff for the purposes of meeting the objectives of the curriculum laboratory grant. Staff seemed to have been selected for the various kinds of expertise needed to compile the necessary career education instructional materials.

The evaluators found that internal auditing had been conducted throughout the duration of the project, the strongest point being the field testing and revision of curricular materials. The planning of workshops designed for the use of career education curricular materials is particularly commendable.

The regionalization effort which has come about as an augmentation to the original grant is revitalizing curriculum development in the states involved as well as encouraging sharing of suitable materials and common format.

There seems to be no centralized authority at the State Department of Education level for the coordination of all activities regarding Career Education in the State of Oklahoma.

It was difficult for the evaluators to separate the varied activities of the Curriculum Materials Center in order to determine exactly which ones were meeting the objectives for which the grant was designed. It is, however, the conclusion of the evaluators that the three objectives stated in the original proposal and augmentations have been successfully met.

Though there has been considerable effort expended with teachers and counselors piloting the Career Education materials, there is a lack of effective advertising targeted toward all teachers. This is evidenced by Appendix E, which lists total sales and complimentary copies of Career Education materials.

Counselors and teachers contacted attested to the general excellence of the Career Education materials but expressed concern for continual updating of the materials.

RECOMMENDATIONS

1. It is recommended that information designed to provoke interest on the part of all classroom teachers, counselors, teacher educators, and administrators toward the availability of career education instructional materials be initiated.

2. It is recommended that teachers, counselors, and other instructional personnel using career education materials developed or supported by the Curriculum and Instructional Materials Center be kept continually aware of any changes, additions, and deletions of these materials.

3. It is recommended that future efforts of this nature involve a significant group of educational administrators.

4. It is recommended that availability of instructional materials for potential users be promoted through the Oklahoma State Department of Education.

APPENDIX A

CONTRACT FOR EVALUATION
Oklahoma State Department
of
Vocational and Technical Education

SOURCE: USOE Grant No. OEG-0-72-4682

TITLE: Third Party Evaluation of the State Vocational-Technical Education Curriculum Laboratory Grant (OEG-0-72-4682)

APPLICANT ORGANIZATION: Central State University, Edmond, Oklahoma

PROJECT DIRECTOR: Dr. Lucille W. Patton, Chairman
Department of Vocational-Technical Teacher Education
School of Education, Central State University

SUBMITTED BY:

J. Dale Mullins, Dean, School of Eduoation
Central State University
Edmond, Oklahoma 73034

Garland A. Godfrey, President
Central State University
Edmond, Oklahoma 73034

Lucille W. Patton, Project Director
(405) 341-2980, Ext. 2741

Federal Funds Requested: $1,500.00

Duration: March 1, 1975 - June 1, 1975

APPENDIX A
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PROPOSAL OF THIRD PARTY EVALUATION OF STATE VOCATIONAL TECHNICAL EDUCATION CURRICULUM LABORATORY GRANT (OEG-0-72-4682)

Scope of Work

A. Evaluation shall be based on objectives of original proposal and all augmentations.

B. Guidelines contained in Grant Terms and Conditions, Department of Health, Education, and Welfare (OE Form 5241, 1/72) shall be used in the Third Party Evaluation.

C. All reports submitted to USOE shall be made available to Third Party Evaluation team.

D. All curriculum materials developed under this grant shall be made available to the Third Party Evaluation team.

Objectives of Third Party Evaluation

A. To conduct an audit of internal evaluations of the Curriculum Laboratory Grant (OEG-0-72-4682).

B. To conduct spot check visits to school systems utilizing curricular material developed through Grant (OEG-0-72-4682) to validate internal evaluations.

C. To conduct an audit of project funds to determine compliance with USOE guidelines.

D. To report on an interim basis the progress of the evaluation team by April 1, 1975.

E. To submit the final report of the evaluation team by May 15, 1975.

Procedures

In order to accomplish the above stated objectives, the evaluation team will coordinate the following activities:

A. Organization of evaluation team to include: Dr. Billie Holcomb, Teacher Educator, Vocational Business & Office Education; Dr. Don Mitchell, Teacher Educator, Industrial Arts Education; Dr. Joe Kinzer, Computer Science Education; Dr. Lucille W. Patton, Chairman.

B. Review carefully proposal augmentations and grants, progress reports, quarterly reports, and annual reports of the project.

C. Meet with the Director of the Curriculum Materials Center and key members of his staff for the purpose of reviewing internal evaluations, gathering curricular guides, and auditing financial records.

D. Conduct spot visitations to schools utilizing curricular materials to determine effectiveness.

E. Schedule an off-campus writing conference for the purpose of coordinating evaluative data.

F. Compile evaluation report.

BUDGET

THIRD PARTY EVALUATION, OKLAHOMA STATE DEPARTMENT GRANT
(OEG-0-72-4682)

Personnel

Secretary (Parttime for Report Writing)	$300.00
Personnel Expense, Secretary (FICA 5.85%)	18.00
	$318.00

Other

Travel	600.00
Facilities Expense, Writing Conference	100.00
Supplies and Duplication	482.00
TOTAL	$1,500.00

APPENDIX B

ADVISORY COMMITTEE
CAREER EDUCATION PROJECT

Mrs. Sally Augustine, Specialist
Early Childhood Education
State Department of Education
Oklahoma City, Oklahoma

Mr. Eugene "Red" Dollar
Teacher-Trainer MDTA
State Department of Vocational
and Technical Education
Stillwater, Oklahoma

Mr. Herman Grizzle, Director
Career Education
Tulsa County Schools
Tulsa, Oklahoma

Mrs. June Gruber
Assistant Superintendent of
Public Instructions
State Department of Education
Oklahoma City, Oklahoma

Dr. Dick Mitchell
Department of Guidance & Counseling
Central State University
Edmond, Oklahoma

Mr. Guy Robberson,
Superintendent
Lindsey Public Schools
Lindsey, Oklahoma

Mrs. Jo Anne Ruark
Research, Planning & Evaluation
State Department of Vocational
and Technical Education
Stillwater, Oklahoma

Mr. Blan Sandlin
Guidance & Counseling
State Department of Education
Oklahoma City, Oklahoma

Mr. Oren M. Terrill,
Superintendent
Pawhuska Public Schools
Pawhuska, Oklahoma

Mrs. Cleo White
President
Classroom Teachers Association
Oklahoma City, Oklahoma

Dr. C. P. Wright
Administrator of Curriculum
State Department of Education
Oklahoma City, Oklahoma

APPENDIX C

CAREER EDUCATION WORKSHOP PARTICIPANTS
Summer 1973

BLACKWELL
74531

NAME	SUBJECT AREA
Craig, Anita	1st Grade
McClung, Dorothy	2nd Grade
Stephenson, Ofa	3rd Grade
Thomas, James	Industrial Arts
Learned, Wesley	Math
Bruno, Connie	Counselor

STILLWATER
74074

NAME	SUBJECT AREA
Dries, Florence	Special Education

BARTLESVILLE
74003

NAME	SUBJECT AREA
Hartpence, June	3rd Grade
Scott, Pam	2nd Grade
Smith, James R.	Junior High
Vanderford, Dale	Asst. Principal
Purvis, Ann	Junior High
Crouch, Goldia	
Dunlap, Teresa	

APPENDIX C
-2-

MILLWOOD

NAME	SUBJECT AREA
Purget, Ralph	6th Grade
Walls, Lynn Mr.	Intermediate
Edwards, Elva	Primary
Butts, Mary	Primary
Brison, Cecile	Primary
Ulmer, Vickie	Primary

MULHALL-ORLANDO

NAME	SUBJECT AREA
Resneder, Dorothy	5th Grade
Paul, Caryl	Math
Stoehr, Pat	Counselor
Hoffner, Albert G.	Industrial Arts
Benson, Gene	Counselor

NORMAN

NAME	SUBJECT AREA
Pierce, Larry	Industrial Arts
Boudreau, Joe	Industrial Arts
Herren, R.L.	Industrial Arts
Bevill, Lynn	3rd Grade
Riley, Sharon	4th Grade
Hudson, Ruthee	Counselor

APPENDIX C
-3-

OKLAHOMA CITY

NAME	SUBJECT AREA
Biller, Joe	Counselor
Taliaferro, Kelly	Math
Wheeler, Pam	Junior High
Cunningham, Judy	Counselor

SAND SPRINGS

NAME	SUBJECT AREA
Grizzle, Herman	Director
Clark, Wayne	Junior High
Threadgill, Calvin	Counselor
Williams, Joan	Science
Kinzer, Patsy	English

MOORE

NAME	SUBJECT AREA
Bennett, Charlotte	Counselor

PUTNAM CITY

NAME	SUBJECT AREA
Enochs, Carla	Counselor

GREASY

NAME	SUBJECT AREA
Phillips, Anita Sue	4th Grade

APPENDIX C
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CONSULTANTS

NAME	SUBJECT AREAS
Spann, Margaret	Career Education Related Materials
Kirby, Janelle	Career Education Counselor

APPENDIX D

BIBLIOGRAPHIES - VOCATIONAL EDUCATION

The number printed for each of the seven bibliographies was as follows:

TITLES	NUMBER OF COPIES
State Instructional Materials for Agriculture	9,000
State Instructional Materials for Distributive Education	6,300
State Instructional Materials for Health Occupations Education	11,900
State Instructional Materials for Home Economics	11,800
State Instructional Materials for Office Occupations	11,200
State Instructional Materials for Technical Education	4,475
State Instructional Materials for Trade and Industrial Occupations	11,825
TOTAL	65,000

APPENDIX D
-2-

Attachment G

Contact Person	Agr.	D.E.	Health Occ.	Home Ed.	Bus. & Off.	Tech.	T&I
Mr. Grady Knight Vocational Planning & Evaluation Coordinator State Education Building Little Rock, Arkansas 72201	225	50	25	300	75	15	125
Dr. W. A. Rumbaugh, Assistant Director Division of Vocational Education Kansas State Department of Education 120 East 10th Street Topeka, Kansas 66612	225	100	75	220	100	50	50
Dr. L. Dean McClellan Director Kearney Center for Voc. & Tech. Education Kearney State College Kearney, Nebraska 58847	147	45	193	38	136	35	90
Dr. Don Eshelby RCU Director State Board for Vocational Education 900 East Boulevard Bismarck, North Dakota 58501	100	40	35	175	150	40	40
Mr. L. A. Iverson State Supervisor Division of Vocational & Technical Education 222 West Pleasant Drive Pierre, South Dakota 47501	83	38	144	35	74	49	45
Dr. Richard Edsall Supervisor of Program Operations State Board for Community Colleges & Occupational Education 207 State Services Building Denver, Colorado 80203	110	90	100	180	300	100	300

APPENDIX D
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Attachment G

Contact Person	Agr.	D.E.	Health Occ.	Home Ec.	Bus. & Off.	Tech.	T&I
Mr. Amon Herd, Director Dept. of Practical Arts & Voc.-Tech Education 8 Industrial Education Bldg. Universith of Missouri Columbia, Missouri 65201	265	100	347	62	299	55	120
Mr. George Amsbary Assistant Director New Mexico State Dept. of Ed. Education Building Santa Fe, New Mexico 87501	95	35	40	220	143	40	187
Mr. Ron Meek, Coordinator Curriculum Instructional Materials Center State Dept. of Voc. & Tech. Education 1515 West Sixth Avenue Stillwater, Oklahoma 74074	425	79	159	450	75	156	562
Mr. W. H. Fitz Curriculum Coordinator Texas Education Agency 201 E. 11th Street Austin, Texas 78701	300	300	75	300	300	15	300
Dr. Robert Kerwood Director of Curriculum Division of Vocational Educ. 1535 West Jefferson Phoenix, Arizona 85007	3	75	70	75	60	13	103
Dr. Charles Parker State Dept. of Education 1400 University Club Bldg. 136 E. South Temple St. Salt Lake City, Utah 84111	75	60	75	220	100	100	300
Mr. R. Courtney Riley, Dir. Voc. -Tech. & Adult Educ. Heroes Memorial Bldg. Second & Carson Sts. Carson City, Nevada 89701	20	15	6	2	55	15	40

APPENDIX D
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Attachment G

	Agr.	D.E.	Health Occ.	Home Ec.	Bus. & Off.	Tech.	T&I
Dr. Sam Shigetomi State Director for Vocational Education Hawaii Community Colleges 2327 Dole Street Honolulu, Hawaii 96822	50	100	100	200	300	100	300
Dr. Patrick J. Weagraff Director Voc.-Tech. Education Curriculum Laboratory Vocational Education Section 721 Capitol Building Sacramento, California 95814	250	300	150	400	500	150	450
Mr. Clifford Zenor, Consultant Professional Development Wisconsin Board of Voc.-Tech. Education 4802 Sheboygan Avenue Madison, Wisconsin 53702	35	35	33	33	40	40	40
Mr. Ed Hornback, Coordinator Research & Curriculum Indiana Dept. of Public Instruction 1012 State Office Building 120 West Market Indianapolis, Indiana 46204	400	235	185	525	475	245	412
Ms. Mary Brown Vocational Education & Career Dev. Service Box 928 Dept. of Education State of Michigan Lansing, Michigan 48902	50	50	50	50	50	50	50
Mr. Jerome Schmehl Program Planning & Development Section Div. of Voc.-Tech. Education Capitol Square, 550 Cedar St. St. Paul, Minnesota 55101	36	165	74	70	250	35	35

APPENDIX D
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Attachment G

Contact Person	Agr.	D.E.	Health Occ.	Home Ed.	Bus.& Off.	Tech.	T&I
Dr. Kenneth Wold Chief of Support Service Career Education Division Grimes State Office Bldg. Des Moines, Iowa 50319	370	128	150	340	188	25	125
Mr. William E. Reynolds Director Illinois Curriculum Management Center Board of Voc. Ed. & Rehabilitation 1035 Outer Park Drive Springfield, Illinois 62706	600	400	700	900	900	400	900
Dr. John E. Deloney Project Director Career Education State Dept. of Education Room 804 Montgomery, Alabama 36111	50	50	25	50	50	50	50
Dr. K. M. Eaddy, Administrator Research-Evaluation Room 258, Knott Building Tallahassee, Florida 32304	400	400	600	900	900	350	900
Mr. Paul Scott, Director Research Coordinating Unit State Dept. of Education 302 State Office Building Atlanta, Georgia 30224	334	134	60	343	209	52	560
Dr. W. C. Mayfield, Director Vocational Curriculum Development & Research Center P. O. Box 657 Natchitoches, Louisiana 71457	15	15	10	15	15	10	15
Dr. James E. Wall Associate Dean (R&D) & Director, R/CU Mississippi State University Drawer JW Mississippi State, Miss. 39762	300	75	40	450	130	90	300

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Attachment G

Contact Person	Agr.	D.E.	Health Occ.	Home Ec.	Bus.& Off.	Tech.	T&I
Dr. Robert A. Mullen Associate Director Division of Occupational Education North Carolina Dept. of Public Education Raleigh, North Carolina 27602	488	233	617	96	219	72	368
Dr. Art Jensen, Director Industrial Materials Center In Vocational Education 109 Freeman Hall Clemson University Columbia, South Carolina 29631	240	110	85	650	450	200	500
Mr. Tom L. Hindes, Consultant Instructional Materials Lab. The Ohio State University 1885 Neil Avenue, Room 112 Columbus, Ohio 43210	200	200	60	200	600	60	300
Ms. Mabel Yates, Director Research & Curriculum State Department of Education 205 Cordell Hull Building Nashville, Tennessee 37219	285	150	200	600	185	50	650
Dr. Fred W. Harrington Coordinator Curriculum Development Bureau of Vocational, Technical & Adult Education Capital Complex B-230 1900 Washington St. East Charleston, West Virginia 25305	150	89	86	209	190	78	133
Mrs. Ouida V. Maedel Supervising Director Vocational Education Curriculum 415 Twelfth Street, N.W. Suite 1103 Washington, D.C. 20004	5	30	20	50	50	30	30

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Attachment G

Contact Person	Agr.	D.E.	Health Occ.	Home Ec.	Bus.& Off.	Tech.	T&I
Dr. Donald E. Elson Div. of Vocational Education Virginia Polytechnic Institute 316 Lane Hall Blacksburg, Virginia 24061	300	400	100	700	600	100	500
Dr. Herbert Bruce, Director Curriculum Development Center University of Kentucky Taylor Educ. Bldg. Room 152 Lexington, Kentucky 40506	330	125	160	565	425	50	650
Mr. Angelo Tedesco Curriculum & Media Developer of Voc. Education Connecticut State Dept. of Educ. Box 2219 Hartford, Connecticut 06119	44	69	103	54	150	39	86
Mr. Doyle Owens, State Super. Career Services Div. of Voc. Education P. O. Box 697 Dover, Delaware 19901	100	100	100	100	100	100	100
Dr. Charles W. Ryan, Dir. RCU Bureau of Voc. Education Dept. of Educ. & Cultural Services Augusta, Maine 04330	39	43	108	34	164	36	50
Mr. William Michel, Jr. Supervisor, D.E. State Dept. of Education Friendship International Airport P. O. Box 8717 Baltimore, Maryland 21240	27	27	27	27	27	-0-	27
Mr. Norman Oppenheim Project CEDIS 117 Perry Street Lowell, Massachusetts 01852	100	100	100	100	100	100	100

APPENDIX D
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Attachment G

Contact Person	Agr.	D.E.	Health Occ.	Home Ec.	Bus.& Off.	Tech.	T&I
Mrs. Lila C. Murphy Deputy Division Chief State Dept. of Education 105 Loudon Road Concord, New Hampshire 03301	50	50	50	200	200	100	300
Mr. Greg Bountempo, Director County Career Educ. Coor. New Jersey Dept. of Education 225 West State Street Trenton, New Jersey 08625	100	100	100	100	100	100	100
Mr. G. Earl Hay, Supervisor Vocational Curriculum Bureau of Secondary Curr. Development State Education Department Albany, New York 12224	100	100	100	100	100	100	100
Mrs. Erma Keyes Vocational Educ. Information Network Millersville State College Gonser Library Millersville, PA 17551	150	150	100	250	350	150	200
Mr. Faustino Hernandez Curriculum Specialist Vocational Curriculum Center Department of Education P. O. Box 759 Hato Rey, Puerto Rico 00919	6	6	6	6	6	-0-	-0-
Mr. William Nixon, Coordinator Career Education Department of Education 25 Hayes Street Providence, Rhode Island 02908	23	33	59	38	77	37	41
Mr. Julian Carter Asst. State Director Vocational-Technical Education State Department of Education Montpelier, Vermont 05602	6	4	3	6	6	3	6

APPENDIX D
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Attachment G

Contact Person	Agr.	D.E.	Health Occ.	Home Ec.	Bus.& Off.	Tech.	T&I
Mr. James L. Blue Vocational Curriculum Management Center Washington State Coor. Council for Occupational Education 216 Old Capitol Building Olympia, Washington 98504	450	170	200	356	275	200	200
Mr. Vernell Jacksom Program Chief Business Office Education Pouch F-Alaska Office Bldg. Juneau, Alaska 99801	24	38	65	33	78	39	45
Mr. Kenneth Hansen Supervisor of Planning State Department of Education 506 North Fifth Boise, Idaho 83720	90	49	162	45	91	37	56
Mr. Mike Bullock, Asst. Dir. Vocational & Occupational Skills State Dept. of Public Instruction State Capitol Building Helena, Montana 59601	70	40	30	250	250	35	200
Mr. James Hargis, Specialist Curriculum Development State Dept. of Education 942 Lancaster Drive, N.E. Salem, Oregon 97310	122	62	130	47	99	45	71
Dr. James Zancanella Department Head Dept. of Vocational Education College of Education University of Wyoming Laramie, Wyoming 82071	68	31	103	32	113	36	39

APPENDIX E

VO-TECH MEMORANDUM

DATE: March 10, 1975

TO: Jeanetta Shipp

FROM: Linda Lenington

SUBJECT: Career Education Sales

AREA	SOLD	COMP.
K-6	98	39
DOT	125	44
Construction Cluster	352	37
Transportation Cluster	100	42
C E English	2	2
Counselor's Guide	164	23

These were mailed to state colleges and the Midwest Coordination Curriculum Network.

LL

CURRICULUM DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION
Grant Number OEG-0-72-4682(361)
REVISED BUDGET

	Initial Funding	Augmentations No. 1	Augmentations No. 2	Augmentations No. 3	Revised Budget
Salaries					
A. Professional					
1. Coordinator	$ -0-	$ -0-	$ 333.00	$ 3,000.00	$ 3,333.00
2. Assistant Coordinator	27,480.00	-0-	-0-	5,000.00	32,480.00
3. Curriculum Specialist(5)	63,276.30	-0-	1,500.00	-0-	64,776.30
4. Librarian	8,655.04	-0-	750.00	-0-	9,405.04
B. Supportive					
1. Secretary(2)	8,640.00	-0-	2,400.00	2,600.00	13,640.00
2. MT/ST Operator	473.68	-0-	-0-	-0-	473.68
3. Fiscal Services for Project 1/5 time for 1 person	3,078.00	-0-	-0-	-0-	3,078.00
4. Consultants	310.00	-0-	-0-	-0-	310.00
5. Workshop Participants					
Career Education					
Elementary Awareness					
20 Participants, 1 day					
Exploration					
20 Participants, 1 day					
Counseling					
20 Participants, 1 day					
Validation & Use of Materials					
40 Participants, 1 day					
Total of 100 Participant days @ $20	2,000.00	-0-	-0-	-0-	2,000.00
Total	$113,913.02	$ -0-	$ 4,983.00	$ 10,600.00	$129,496.02
*Employee Benefits	13,071.60	-0-	597.96	1,372.00	15,041.56
TOTAL PERSONNEL	$126,984.62	$ -0-	$ 5,580.96	$ 11,972.00	$144,537.58

(Approximately 12%)

REVISED BUDGET Cont.

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	Initial Funding	Augmentations No. 1	Augmentations No. 2	Augmentations No. 3	Revised Budget
Travel (Subsistance-$25 per day out-of-state; $15 per day in-state; $.09 per mile or air fare coach class)					
1. Staff	$ 6,000.00	$ -0-	$ 300.00	$ 5,000.00	$ 11,300.00
2. Consultants	1,500.00	-0-	-0-	-0-	1,500.00
3. Workshop Participants	750.00	-0-	-0-	-0-	750.00
Other					
1. Supplies & Materials	5,073.00	-0-	-0-	-0-	5,073.00
2. Office Supplies	1,000.00	-0-	100.00	1,000.00	2,100.00
3. Duplication & Printing	6,000.00	-0-	-0-	-0-	6,000.00
4. Communication	2,400.00	-0-	200.00	1,200.00	3,800.00
5. Contractual Services 20 units of Individual Prescribed Instruction on self-concepts and other guidance units pertaining to Career Education $200 per unit	4,000.00	-0-	-0-	-0-	4,000.00
6. Equipment	387.01	-0-	-0-	-0-	387.01
7. IBM Composer Rental	3,150.00	-0-	210.00	-0-	3,360.00
8. Office Space - Professional/Clerical Staff for project	4,050.00	-0-	360.00	600.00	5,010.00
TOTAL	$161,294.63	$ -0-	$ 6,750.96	$19,772.00	$187,817.59

REVISED BUDGET Cont.

	Initial Funding	Augmentations No. 1	No. 2	No. 3	Revised Budget
Other (Coordination with BAVTE, OE, Curriculum (USOE) Center for Occupational & Adult Education Discretionary Funds)					
A. Travel					
1. Travel for Directors to Oklahoma coordinators' meeting: 1 representative from California, Mississippi, Kentucky & Illinois	$ 1,134.00	$ -0-	$ -0-	$ -0-	$ 1,134.00
2. Travel for directors and state representatives	2,000.00	-0-	-0-	-0-	2,000.00
B. Evaluation	1,000.00	-0-	-0-	-0-	1,000.00
C. Dissemination					
1. Eight(8) regional workshops, 20 parts. each:					
Travel	7,000.00	-0-	-0-	5,000.00	12,000.00
Per Diem	2,500.00	-0-	-0-	-0-	2,500.00
2. Printing by GPO Field Plant	-0-	-0-	17,549.04	-0-	17,549.04
3. Dissemination of materials	22,951.37	10,000.00	700.00	15,228.00	48,879.37
TOTAL OTHER	$ 36,585.37	$10,000.00	$18,249.04	$20,228.00	$ 85,062.41
TOTAL PROJECT BUDGET	$197,880.00	$10,000.00	$25,000.00	$40,000.00	$272,880.00

APPENDIX G

STRUCTURED INTERVIEW
TEACHERS AND COUNSELORS

1. Were you involved in field testing any career education curriculum materials, if so, in what area? If you were not involved in field testing, how did you become aware of the curricular materials?

2. What orientation to the use of the curricular materials did you receive?

3. Do you feel that the children who have gone through the use of the curricular materials are more, less, or just as knowledgable of the instructional area as those who went through the conventional school program?

4. What do you feel that the impact of the use of this material will be on your on-going program?

*5. Are you observing any differences in the kinds of career decisions your students are making, if not, do you anticipate any differences?

**6. Has the utilization of the Career Awareness Segment of the Career Education Curriculum resulted in any significant change in teaching techniques in your school.

*This question was applicable to only 7th and 8th grade teachers.

**This question was applicable to only K-6 teachers.

APPENDIX H

STRUCTURED INTERVIEW
ADVISORY COMMITTEE MEMBERS

1. What do you see as the future of the Career Education concept in the public schools of Oklahoma?

2. To whom do you give credit for the present state of implementation of the Career Education concept in Oklahoma?

3. In your opinion, has top educational leadership in Oklahoma provided support for implementation of the Career Education Concept?

4. How do you view the usability and effectiveness of the Career Education materials which have been developed by the Curriculum Materials Division of the State Department of Vocational and Technical Education?

5. Do we have a director of Career Education at the State Department of Education? If not, do you foresee any plans for the appointment of such an individual?

f. Conclusions, Implications, and Recommendations for the Future

Federal funding has allowed for the expansion of the capabilities of the Oklahoma Curriculum and Instructional Materials Center as evidenced by increased personnel and increased output. Innovative practices such as Management by Objectives has been encouraged.

According to field testing results, materials for career education are usable and meet the needs for education activities; however, they represent only a small portion of materials needed to implement career education. The State Department of Vocational and Technical Education has limited contact with potential users of these materials, and therefore were limited in dissemination and diffusion.

Regionalization of Curriculum activities through the Ten State Curriculum Network has been successful. The limitation has been the inability of the member states to finance a person whose sole responsibility is curriculum management for his/her state. The Ten State Curriculum Network uses the MBO system of management to coordinate its activities.

Recommendations for the future are:

(1) The Oklahoma Curriculum and Instructional Materials maintain the expanded capabilities by retaining personnel and continue to operate under the MBO system.

(2) Continued use of the curriculum advisory committees from education, higher education, and business and industry.

(3) Continued development of curriculum in cooperation with businesses such as Associated General Contractors.

(4) Further validation of curriculum manuals.

(5) Funding of career education and curriculum development from sources other than vocational education monies.

(6) Continued funding of curriculum management centers.

(7) Provision of matching funds for states to finance a person to coordinate curriculum both intra and interstate and to serve as liaison for curriculum management centers.