

DOCUMENT RESUME

ED 075 657

VT 020 018

TITLE Search and Assessment of Commercial Career Education Materials.

INSTITUTION Peat, Marwick, Mitchell and Co., Chicago, Ill.

SPONS AGENCY Office of Education (DHEW), Washington, D.C.; Ohio State Univ., Columbus. Center for Vocational and Technical Education.

PUB DATE 72

NOTE 89p.

EDRS PRICE MF-\$0.65 HC-\$3.29

DESCRIPTORS Abstracting; *Career Education; Educational Objectives; *Evaluation; Indexing; *Instructional Materials; *Media Selection; Resource Materials

IDENTIFIERS CCEM; *Comprehensive Career Education Model

ABSTRACT

This project was designed to secure and screen available education materials appropriate for actualization of Comprehensive Career Education Model-1 (CCEM-1) objectives, and to process, assess, and classify selected potential commercial education materials for incorporation into instructional units and/or supportive educational activities. To achieve the objectives, a 50-member consulting team was assembled from both the educational and business communities, and this team: (1) identified suppliers, (2) secured suppliers participation, (3) identified career educational materials, (4) procured suitable materials, (5) assessed suitable materials, (6) indexed and abstracted the positively assessed material, and (7) delivered the materials and instruments. Of the 580 commercial suppliers contacted, 313 had materials available for procurement and assessment, and 128 of these reported additional materials under development. A total of 2,016 of the 2,344 units received were assessed as applicable to CCEM-1 objectives. Of the assessed materials, 22 percent was applicable to Grades K-6, 27 percent to Grades 7-9, 36 percent to Grades 10-12, and 13 percent to Grades 13-14. These and other findings are discussed, and sample assessment instruments are included. (SB)

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SEARCH AND ASSESSMENT
OF
COMMERCIAL CAREER EDUCATION
MATERIALS

A project to locate, classify, assess, index and abstract available commercially produced career education materials applicable to the actualization of Comprehensive Career Education Model I (CCEM-I) objectives

for

The Center for Vocational and Technical Education
The Ohio State University
Columbus, Ohio

Peat, Marwick, Mitchell & Co.

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Degree of Innovativeness, Procedural, High/Average

CCEM Element - 1 by DNS

CCEM Element - 2 by DNS

CCEM Element - 3 by DNS

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CCEM Element - 7 by DNS

CCEM Element - 8 by DNS

*Appendixes are each presented under separate cover.

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All Documents, Gen. Status E & F	Target Area
All Documents, Gen. Status E & F by Target Area A Only	Content/Discipline
All Documents, Gen. Status E & F by Target Area A Only	Grade Level
All Documents, Gen. Status E & F by Target Area A Only	Type of Material

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Dr. Aaron J. Miller, Director
Comprehensive Career Education Model I
The Center for Vocational and Technical
Education
The Ohio State University
2501 North Starr Road
Columbus, Ohio 43221

Dear Dr. Miller:

With the submission of the attached report, Peat, Marwick, Mitchell & Co. (PMM&Co.) has completed its engagement to identify, procure, classify, assess, index and abstract commercially produced career education materials that meet the requirements of the Comprehensive Career Education Model I (CCEM-I). As required by contract, the following acknowledgment is cited:

The project presented or reported herein was performed pursuant with a grant from the U. S. Office of Education, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U. S. Office of Education, and no official endorsement by the U. S. Office of Education shall be inferred.

This letter presents a project summary, the findings which resulted from the project, our conclusions and recommendations, and an overview of the attached final report.

PROJECT SUMMARY

The engagement was completed in compliance with PMM&Co.'s response (dated June 19, 1972) to your Request for Proposal (RFP) No. CEP-2A. Work was started on July 5, and the draft of the final report, including appendixes, was submitted on November 10, 1972.

The project was an integral part of the efforts of the U. S. Office of Education, The Center for Vocational and Technical Education (CVTE) at The Ohio State University, and six Local Education Agencies (LEA) selected by the USOE. CVTE was assigned as prime grantee to develop, test and install the school-based Comprehensive Career Education Model (CCEM); the LEA's were to work cooperatively in developing appropriate program components for a validated, nationally transportable career education program available to all public schools.

Specific objectives of the engagement were to:

- . Secure and screen all available commercial education materials appropriate for a comprehensive career education program as it relates to specific instructional units
- . Process, assess and classify selected potential commercial educational materials for incorporation into instructional units and/or supportive educational activities
- . Document activities and submit required reports and information.

A total of 50 people were included in the project team. Under the direction of a project director, work was divided into five major functional activities: field survey, assessment, quality control, systems development, and support and administration. In addition, outside legal counsel was engaged, and the overall project was monitored by a five-man team comprised of senior PMM&Co. partners. 26 members of the project team were professional personnel residing in the Columbus, Ohio area. These individuals were recruited and trained in assessment, indexing and/or abstracting functions. Hence, CCEM-I has available in its geographical area a pool of talent for continuing this effort if desired. In total, more than 10,800 manhours were devoted to the project in the four-month period.

PROJECT FINDINGS

The following major findings resulted from this project:

- . Of the 580 commercial suppliers contacted, 313 had materials available for procurement and assessment
- . Of the 580 suppliers, 128 that had materials available reportedly have additional career education materials under development; 35 of the 267 that reported no materials available at this time also have materials under development
- . More than 33,600 pieces of material grouped into 3607 units were identified and approximately 2700 units were requested for assessment
- . Of the 2344 units received, 2016 (more than 12,800 pieces of material) were assessed as applicable to CCEM-I objectives

- . Of assessed material, 22 percent was applicable to grades K-6, 27 percent to 7-9, 36 percent to 10-12, and 13 percent to 13-14
- . Of the material assessed, 54 percent was printed and 32 percent was film; the remainder was classified as manipulative and audio-visual
- . 66 percent of the assessed material cost less than \$100
- . Career education units are available commercially for all grade levels - a low of 250 for use in kindergartens to nearly 1750 for grade 12
- . More than 1000 units were judged appropriate for four instructional strategies:
 - discussion - 1709
 - self-instruction - 1357
 - group or panel discussions - 1237
 - individual or group counseling - 1018
- . Of the 2016 positively assessed units, 649 were determined applicable for individualized, small group or large group instruction. Only two units were deemed applicable to community relations and community agency support programs
- . The appropriateness (high, average, low) of units to the CCEM matrix by grade level and element (self awareness, educational awareness, career awareness, economic awareness, decision-making, beginning competency, employability skills and attitudes and appreciations) is as follows:
 - Most self awareness units are for grades 9-12; 50 percent were judged average
 - Educational awareness units are most applicable to grades 7-12; 15-20 percent were judged high
 - At least 195 career awareness units are available for each grade level; more than 50 percent of those for grades 4, 5 and 6 were judged low
 - At least eight economic awareness units are available for each grade from K-12; nearly 50 percent of the units for grades 5 through 9 were judged low
 - Only 136 units for decision-making were judged applicable, most for grades 11 and 12. Of the 21 deemed appropriate for grades 1 through 6, approximately 50 percent were judged high

- Most determinations of applicability for beginning competency were for grades 10-14; none of those for K-9 were judged high
- Of the nearly 570 units determined appropriate for employability skills, 262 were judged applicable for grades 11 and 12; only 86 in total and 50 for grades 11 and 12 were judged high
- At least 100 units were deemed applicable to the attitudes and appreciations element for each grade level; the percent judged high is significantly lower than for other elements where large numbers of units are applicable

The applicability (high, average, low) of units to thirteen target areas (curriculum, career information, career preparation, guidance, staff development, placement/guidance, evaluation, support systems, community relations, post-secondary 13-14, rural education, management, and other), is as follows:

- Of the nearly 6000 judgments of applicability, more than 3566 were in the career information target area; of these, more than 850 were judged high
- 500 or more units were also judged applicable for curriculum (569), career preparation (614), and guidance (1129); only 41 positive judgments were made for the other nine target areas
- The element most frequently indicated was career awareness, followed by attitudes and appreciations

Overall judgments (high, average, low) of the suitability of positively assessed units to CCEM-I needs for materials are as follows:

- 40 percent of the determinations of occupational focus were judged high
- 74 percent were judged low for innovativeness (substantive)
- Nearly 53 percent were rated low for innovativeness (procedural)
- Approximately 68 percent were deemed low for participant involvement.

CONCLUSIONS AND RECOMMENDATIONS

Project findings indicate that commercial suppliers are making great efforts to provide career education materials. However, as our findings show, the number of units is relatively limited for several elements and target areas for specific grade levels. In addition, judgments (high, average, low) of the applicability and suitability of units to CCEM-I requirements show that quality can be improved. However, considering the relative newness of career education as defined by USOE and detailed by CCEM-I, commercial suppliers should be commended for their efforts to be responsive to the market.

Results of this engagement and its companion project (to identify and assess non-commercial materials; completed in January, 1972) provide CCEM officials with the most complete existing inventory of available career education materials. This inventory should be extremely valuable to users in identifying available products and their sources. This information should also be of great assistance to materials suppliers who are interested in improving their products and filling gaps in units required to meet CCEM-I objectives. To facilitate these potential applications of the existing inventory and to maximize the results of the substantial expenditure for the two projects, USOE and CCEM officials should place top priority on:

- . Disseminating information regarding the availability of career education materials to consumers through the ERIC system
- . Continuing the evaluation process to keep the inventory up-to-date.

Specific recommendations are to:

1. Place the results of the project(s) in the ERIC system.
2. Establish and make available necessary resources for continuing the process of identifying, procuring, assessing, abstracting and indexing career education materials.
3. Place high emphasis on screening materials through careful review of catalogs to determine their probable appropriateness before issuing Material Procurement Requests. This will substantially reduce the resource and time requirements associated with each positively assessed unit.
4. Adopt and implement systems used in this project and make modifications and refinements deemed necessary to keep them efficient and operable at the least required cost.
5. Maintain and expand relationships with suppliers as appropriate. This requires prompt and responsive handling.
6. Do not change the CCEM matrixes or definitions for at least one year. Although refinements might improve the structure, they can be confusing to both consumers and suppliers.
7. Distribute detailed findings of this project to LEA's as soon as possible.

8. Begin a formal plan of action to convey CCEM's concept of career education and provide specific direction in terms of required types of commercially produced materials.

In addition, if appropriate, CCEM officials should make available to other educational agencies the details of the design and implementation of the various systems used in this project. With widespread interest in assessment processes and improved management practices, the possible application of the systems and procedures to other areas should be analyzed.

REPORT OVERVIEW

This report is organized into six chapters:

Chapter I - Project Scope, Method and Organization

Chapter II - Field Survey and Materials Procurement Methods

Chapter III - Materials Assessment Methods

Chapter IV - Commercial Career Education Material Information System

Chapter V - Summary of Survey Results

Chapter VI - Findings and Recommendations

Appendixes to this report are presented separately:

Appendix A - Key Survey Data Print Outs

Appendix B - Field Survey Procedures Guide

Appendix C - Assessment Center Staff Manual

Appendix D - Commercial Career Education Information System (CCEMIS)

Appendix E - Summary of Selected Project Management Data

With completion of this project, CCEM-I has in its possession narrative descriptions and documentation, with accompanying flowcharts, of all systems used in the five major functional activities; output documents from the information retrieval system; abstracts of the 2016 positively assessed materials for entry into the Educational Research Information System - ERIC; and recommendations for CCEM-I to continue the project using its own staff resources. Files transmitted include hard copy correspondence received during this project, identified materials still in process at the completion of this project, computer generated reports, and copies of all source documents (completed call reports and assessment forms).

* * * * *

Peat, Marwick, Mitchell & Co. is pleased to have been associated with this project. We believe that the results and the systems used can be of significant assistance in furthering the application of the career education concept.

We wish to express our appreciation to all CCEM-I personnel who assisted in the project. They are to be commended and encouraged for their efforts to make public school education more meaningful and stimulating.

Very truly yours,

Peat, Marwick, Mitchell & Co.

I - PROJECT SCOPE, METHODS AND ORGANIZATION



CHAPTER I

PROJECT SCOPE, METHODS AND ORGANIZATION

This project was the second major search and assessment effort conducted under the auspices of CCEM-I. The first project, conducted from November, 1971 through January, 1972, was directed at acquiring and assessing non-commercially produced career education materials from such sources as university departments of education, state departments of education, school districts, specially funded curriculum development projects, associations, etc. At the conclusion of the first project, it was determined that a search and assessment of commercially produced materials was required to provide CCEM-I with a complete inventory of currently available career education materials appropriate to the Center's curriculum development efforts.

Thus, the Search and Assessment of Commercial Career Education Materials (SACCEM) Project was a nationwide survey of commercially prepared career education materials applicable to the actualization of the school-based CCEM. The three following project objectives were set forth by contract:

1. Secure and screen all available commercial educational materials appropriate for a comprehensive career education program as it relates to specific instructional units.
2. Process, assess and classify (index/abstract) selected potential commercial educational materials for incorporation into instructional units and/or supportive educational activities.
3. Document activities and submit required reports and information.

At the outset of the project, "available commercial education materials" were defined as follows:

Available commercial education materials encompass instructional, guidance, administrative, informational support, staff development, evaluation and other materials designed to advance an educational program in the pupil school environment (grades K through 14); that are distributed by any organization which is actively engaged in a promotional, marketing and/or training program to secure acceptance of a developed proprietary product.

This operational definition was established to provide positive direction for achieving the immediate project objectives defined by the CCEM-I RFP No. CEP-2A.

PROJECT SCOPE

The project scope is defined in terms of four major project requirements and their related major tasks:

1. Establish a working relationship with commercial organizations that provide materials useful in advancing career education to support routine, ongoing dissemination of information on available materials. Related major tasks include:

- . Identify major commercial organizations involved in supplying desired products to the educational community
- . Document trade associations and other organizations which have organized to promote industry effectiveness and disseminate beneficial data
- . Establish procedures for communicating with identified commercial concerns that provide initial indexing of available materials describing the material content and development status
- . Provide methods to follow up on contracts, commitments and information exchange between the Center and suppliers.

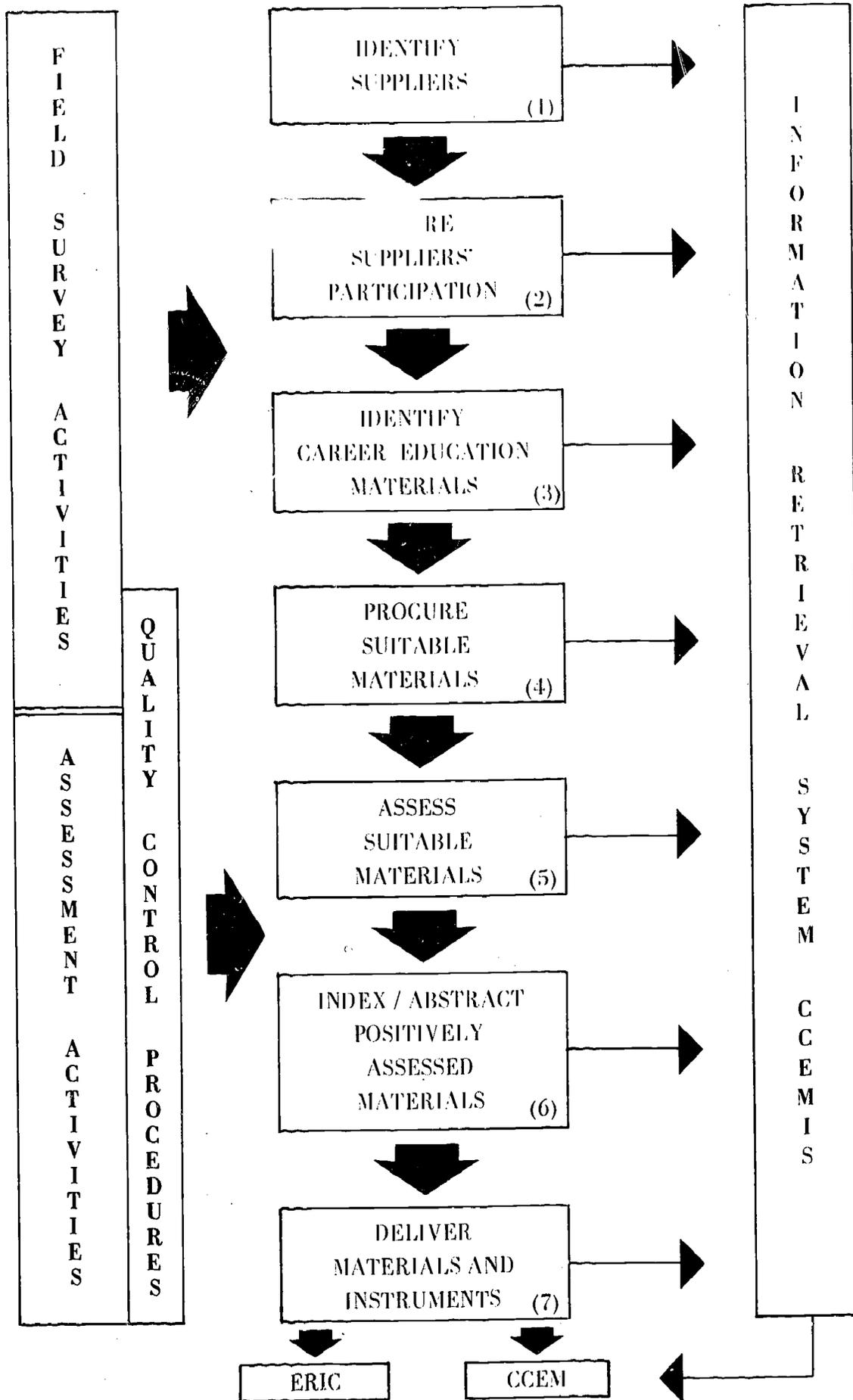
2. Develop procedures for establishing a data base (using computer processing services of a Columbus organization) which indexes and classifies available commercial materials and their sources. Related major tasks include:

- . Develop flexible methods for identifying components of the data base and related coding systems which can be implemented early in the project and applied consistently over an extended period of time. This includes identifying and classifying support activity provided by commercial organizations and material components
- . Design documents which support both survey data collection activities and initiation of computer processing
- . Document basic computer file structures which support storage of information and flexible processing of inquiries
- . Establish computer and related manual systems which meet both immediate and long-term program needs.

3. Obtain materials from commercial suppliers and complete required screening, classification, assessment, abstracting and indexing of materials commensurate with current needs of the CCEM-I program and long-term goals of career education. Related major tasks include:

- . Work with the Center staff members involved in curriculum development to establish short-term, intermediate and long-term program needs
- . Preview existing materials, including responses from previous surveys, bibliographies and other sources to identify products from commercial organizations appropriate to the Center's short-term priorities

CONCEPTUALIZATION OF PROJECT METHOD



- Solicit sample materials that screening indicates will meet program needs; complete assessment and prepare abstract of materials determined to meet established standards
 - Procure additional copies of materials judged appropriate as required to support Center and Local Education Agency (LEA) requirements.
4. Document survey methods and procedures to support the smooth transition from initial project development efforts to routine administration by Center personnel. Related major tasks include:
- Provide Center administration with progress reports on performance and budgetary aspects of the project
 - Document administrative, coding assessment and abstracting activities which must be completed
 - Document overall results of initial project, detail recommendations for continuing efforts and establish administrative guidelines to assist in managing further survey, classification and assessment activities.

As these requirements and related tasks indicate, the project scope was extensive. It included not only a national survey of suppliers of educational materials, but the design and development of a fully documented process to maintain and update an ongoing system for tracking emerging career education materials.

PROJECT METHODS

To meet all project objectives within CCEM-I's 5 month timeframe, a 50-member consulting team was assembled from both the educational and business communities, using national as well as local resources. A project office and assessment center was established in Columbus, Ohio.

The facing page shows the approach used to meet the requirements of a national search and assessment of career education materials. (The major project components are discussed fully in the following three chapters of this report; the system procedures designed and installed to accomplish the subtasks within each component are documented in Appendixes B through D.)

Each of the seven major project components is summarized below:

1. Identify suppliers. Four man-weeks of desk research resulted in the identification of 700 known and potential suppliers of educational materials. Appendix B contains a list of 35 sources used for initial supplier identification.

2. Secure suppliers' participation. Consulting teams based in San Francisco, Chicago and New York initiated supplier contacts by telephone and personal visits to identify present suppliers of career education materials and to secure their project participation. Supplier participation involved:

- . Identification and description of proprietary materials via completion of product profile sheets
- . Agreement to provide complimentary or examination copies for assessment
- . Permission to index and load a 200 word abstract of positively assessed material on the Education Research Information Center's (ERIC) system.

3. Identify career education materials. Completed product profile sheets were screened at the project's operation center in Columbus to identify materials which should be requested from the supplier.

4. Procure suitable materials. Material deemed appropriate to career education objectives on the basis of criteria established by CCEM was procured through material procurement request to the supplier.

5. Assess suitable materials. The Assessment Center staff verified that the material met the publication/release criteria (between 1965 through 1972). They then performed initial classification of the material. Material which passed this screen was assessed by professional educators against criteria established by CCEM staff. All first level assessments were subject to review by senior assessors. Senior assessors also provided final review of global judgments related to the material's suitability to CCEM requirements.

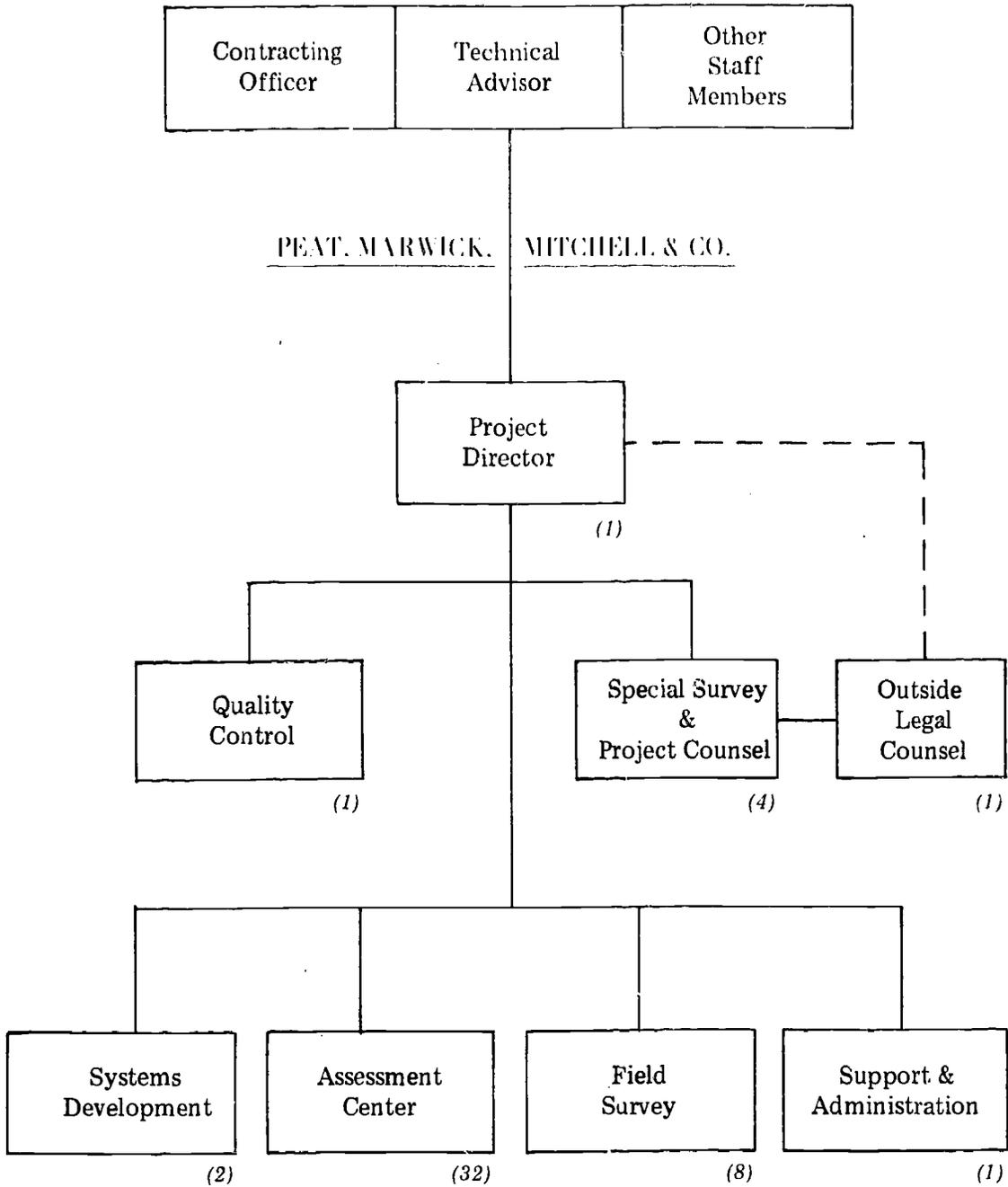
The final step in the material assessment process was a quality control check by the project quality control officer using three different methods on a random stratified sampling basis. Material which successfully met all existing criteria and passed the quality control check was then determined to be "Positively Assessed Material" (PAM) and was routed for indexing and abstracting.

6. Index and abstract. Positively assessed material was indexed (per ERIC) and a maximum 200-word abstract was written using basic ERIC descriptions. Upon completion, PAMs were prepared for delivery to ERIC staff.

7. Deliver materials and instruments. A final check of the required instrumentation was performed on PAMs. Instruments accompanied by complimentary copies were routed to the ERIC staff. Where the supplier had provided examination copies, the instruments only were routed to ERIC, and the examination copies were returned to the supplier. The ERIC staff performed the quality control check on the appropriateness of the index/abstract document.

PROJECT ORGANIZATION

CENTER FOR VOCATIONAL & TECHNICAL EDUCATION



Number in parenthesis indicates the number of professional staff within each function.

Total documentation was maintained throughout this process. Nearly 90 percent of the total documentation was inputted as generated to the computer based information retrieval system designed specifically for this project. Actual computer system maintenance was performed by a local service bureau. A basic system objective was version to client operation.

PROJECT ORGANIZATION

To implement the survey method, the project team efforts were organized into 5 system components:

- . Field Survey Activities
- . Assessment Center Operations
- . Quality Control Procedures
- . Systems Development (Data Retrieval)
- . Support and Administration.

The facing page shows the project staff organization. The Project Director had the assistance and counsel of selected PMM&Co. partners and outside legal counsel. The PMM&Co. partners served in an advisory capacity and provided quality checks on the project by participating in milestone report meetings. The outside legal counsel reviewed copyright considerations in indexing and abstracting assessed materials and provided general legal counsel. The following paragraphs briefly describe the major subtasks of each function:

1. Field Survey with responsibility for:
 - . Identifying commercial suppliers
 - . Identifying career education materials
 - . Conducting the national survey contacts
 - . Performing initial classification and screening of identified materials
 - . Initiating material procurement requests for materials apparently directed at career education.
2. Assessment center with responsibility for:
 - . Performing materials assessment
 - . Indexing and abstracting materials

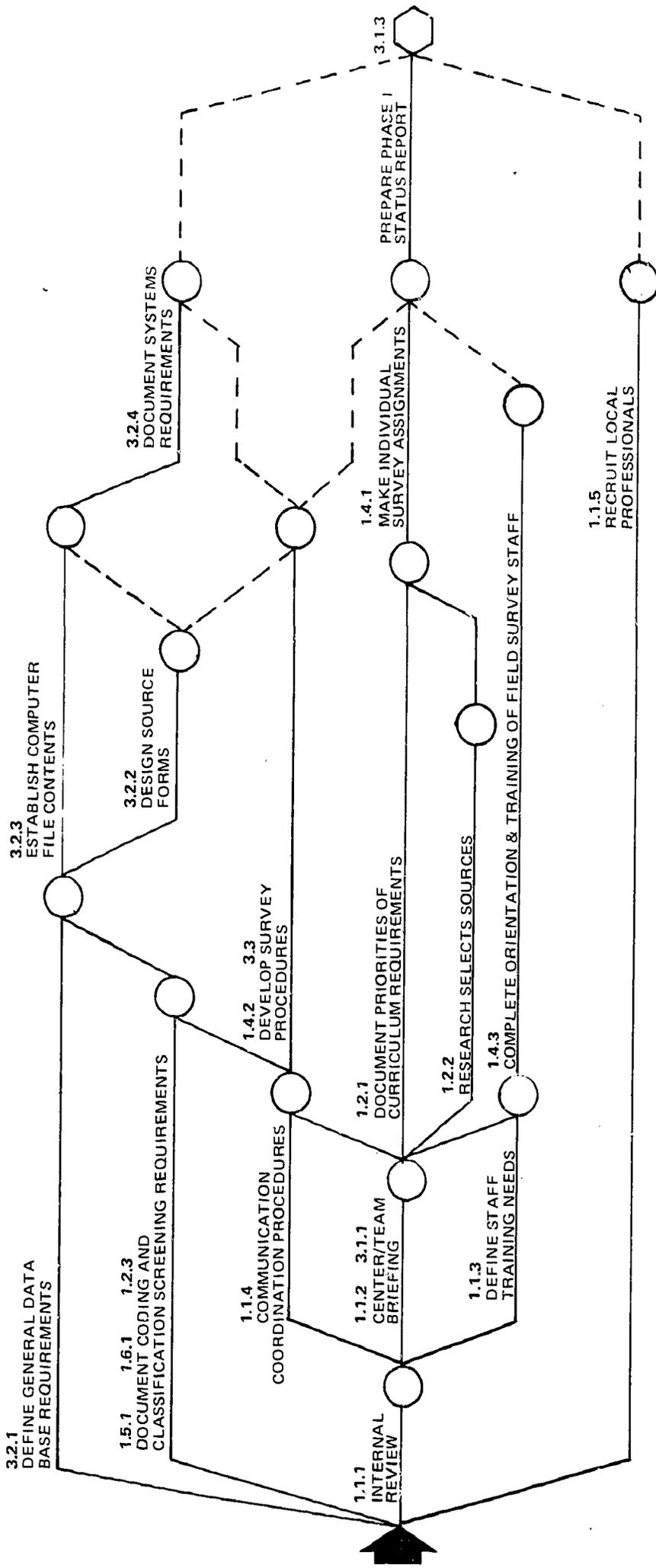
- . Performing final assessment review
- . Maintaining material control procedures for entry and exit of materials
- . Delivering materials to ERIC
- . Verifying data for input to CCEMIS.
- 3. Quality control with responsibility for:
 - . Consulting on assessment procedures design
 - . Initial staff development and training for assessment personnel
 - . Assisting in designing and developing Assessment Manual
 - . Conducting ongoing quality control checks of assessed materials
 - . Specifying quality control remedial tasks.
- 4. Systems developments with responsibility for:
 - . Documenting data base requirements
 - . Initial development and procedure specifications to support project activities
 - . Designing source forms
 - . Designing general system
 - . Selecting outside service bureau
 - . Conducting ongoing review of service bureau performance.
- 5. Support and administration with responsibility for:
 - . Task/expense reporting on a two-week basis
 - . Maintaining all project expenditure records
 - . Assisting in budget forecasting, revision and management

Providing project management data in compliance with terms of contract.

The project components, major tasks and functional activities are indicated on the project schedules shown on the following pages. The project was completed as scheduled, although portions of the schedule were revised within the Phase II timeframe (see Appendix E).

One final measure of the project scope is that more than five man-years (more than 10,000 hours) of effort were applied within the 4-month project life.

PHASE I - SURVEY ACTIVITIES & SELECTED TASKS



4 WEEKS

PHASE I

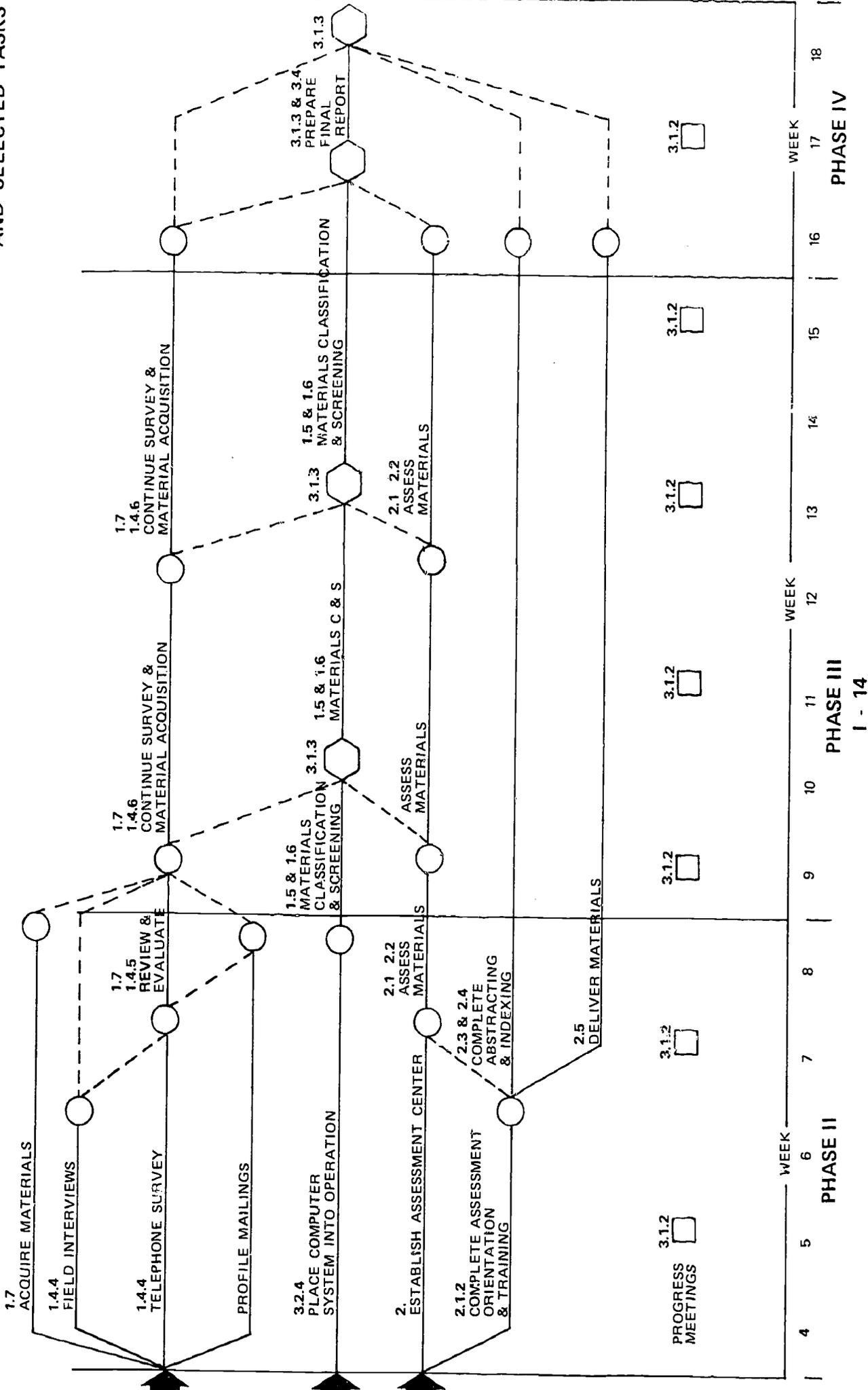
0.0.0 TASK NUMBER

○ TASK

⬡ MILESTONE



PHASE II, III & IV SURVEY ACTIVITIES AND SELECTED TASKS



II - FIELD SURVEY AND MATERIALS PROCUREMENT METHODS



CHAPTER II

FIELD SURVEY AND MATERIALS PROCUREMENT METHODS

This chapter presents our general approach and describes the major field survey tasks. The details on field survey procedures, forms documentation, and resources are contained in Appendix B.

SURVEY APPROACH

The primary objective of the survey was to achieve a large number of appropriate source contacts which would generate completed product profile sheets so that the materials procurement process could begin with a significant flow of materials. We attempted to achieve this goal with minimum procurement of inappropriate materials to maximize the time and efforts expended at the Assessment Center in screening and evaluating materials.

The initial sourcing effort included a thorough search of the following:

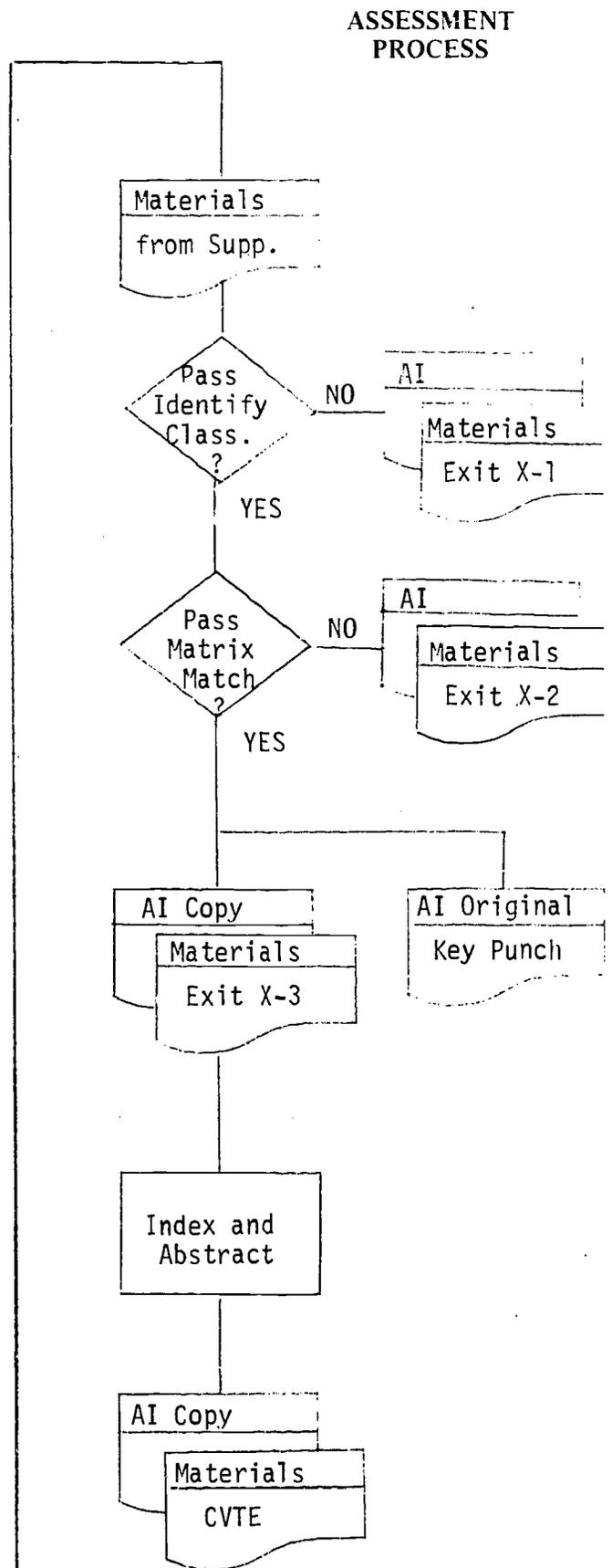
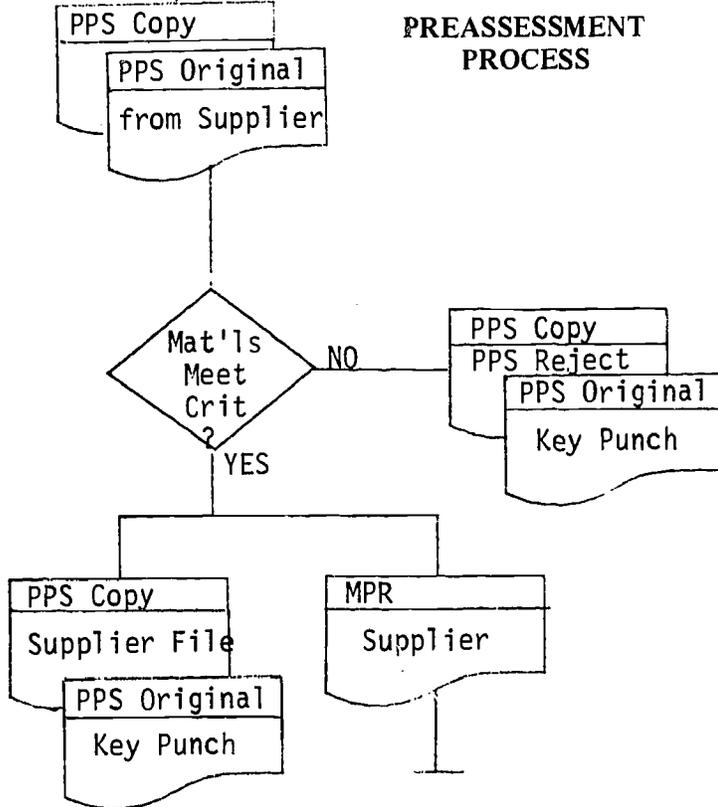
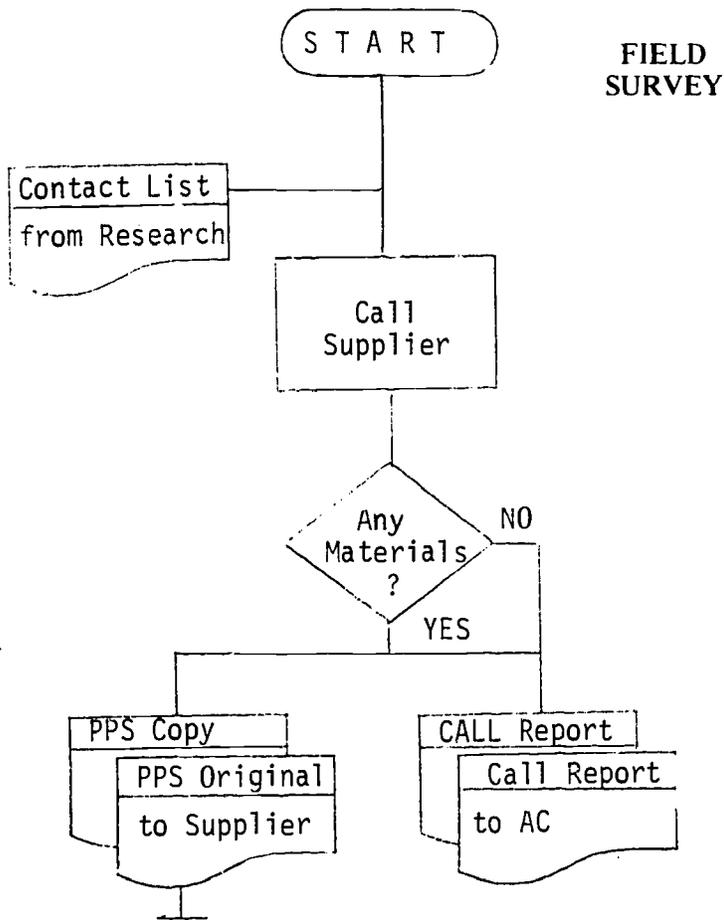
- . Files and other resources of the CVTE
- . Information systems such as ERIC and AIM/ARM
- . Products of recent research in your career education projects
- . Files and data generated during the first CCEM assessment project
- . Files and publications of associations most relevant to the producers of career education materials
- . Commercial indexes and catalogs
- . Recognized experts in the field.

The intended results of the research effort included:

1. The generation of an extensive and comprehensive inventory of commercial firms most likely engaged in the production of career education materials.
2. The identification of businessmen and professional personnel who would be likely sources of relevant data and source information.
3. The identification of career education materials suitable for initial procurement efforts.

The field survey effort, which included telephone, personal and mail contacts with identified sources and/or potential sources, was directed toward achieving these results.

The field survey efforts were centrally directed from Columbus, Ohio but were organized and conducted on a regional basis in New York, Chicago and San Francisco. Teams were assembled in each of these cities to initiate contacts and perform the necessary followup with sources in their regions. The teams were staffed with professionals who had both the training and experience necessary to rapidly gain the cooperation and participation of commercial suppliers.



An initial test of suppliers' cooperation was conducted during the first week of field effort among 25 to 30 sources located in New York and Chicago. The results of the field test verified the survey approach and provided insights for modifying the procedures for use in the full-scale survey efforts.

FIELD SURVEY TASKS

The field survey function was responsible for procuring complimentary copies of examination copies of materials from commercial suppliers. The major tasks involved were:

- . Identifying suppliers
- . Securing suppliers' participation
- . Initiating product profile sheets on identified materials
- . Following up to facilitate material procurement.

The facing page shows the procedures and steps used to procure materials for assessment.

The following pages show the Call Report and Product Profile Sheet used to document the initial steps of the procurement process. These are two of the four basic input documents to the information retrieval system.

Before the full scope implementation of the supplier contact program, a 1-day training session was conducted for each of the three regional teams. The training session included:

- . Project overview
- . Description of the total procurement and assessment process and general search objectives
- . Suggested telephone procedures and criteria for onsite visits to sources
- . Suggested approaches for securing source cooperation
- . Detailed review of field survey documentation requirements including call reports, product profile sheets, material acquisition requests
- . Review of daily phone contact procedures with the Assessment Center.

The initial telephone contact with suppliers was followed with a letter (shown on the following pages) which formally requested the suppliers' participation. Appendix D contains the telephone procedure guide and all form letters used during the survey; a detailed summary of the desk research conducted to identify suppliers; and a listing of the resources used for this purpose.

CALL REPORT REFERENCE NO.

--	--	--	--

PRODUCT PROFILE SHEET

--	--	--	--	--

SOURCE _____
SOURCE CONTACT _____
STATUS ()

PUBL'H YEAR _____ LATEST REVISED YR. _____ COPYRIGHT YR. _____

PUBLISHED OR REVISED 1965 OR LATER _____ OK TO INDEX AND ABSTRACT _____

Title

1st Line _____

2nd Line _____

Author

1st Line _____

2nd Line _____

- Single Item Single Item Cost \$ _____
- Set (Contains more than one piece)
Cost per Set \$ _____ No. of Pieces _____
- Pieces may be purchased separately

Type of Material	Cost/Piece
Printed Material	\$ _____ (1)
Video Tape	\$ _____ (2)
Films	\$ _____ (3)
Manipulative Kit	\$ _____ (4)
Audio Materials	\$ _____ (5)
Other Non-Printed Material	\$ _____ (6)

(Check all appropriate items for Nos. 1 through 5)

1. TYPE MATERIAL

- A Printed Materials
- B Video Tape
- C Film
- D Manipulative Kit
- E Audio Materials
- F Other Non-Printed Materials

2. TARGET AREA

- A Curriculum
- B Career Information
- C Career Preparation
- D Guidance
- E Staff Development
- F Placement
- G Evaluation
- H Support Systems
- I Community Relations
- J Post Secondary 13, 14
- K Rural Education
- L Management
- M Personnel Service

3. CONTENT/DISCIPLINE AREA BREAKDOWN

- A Language Arts
- B Mathematics
- C Sciences
- D Social Sciences
- E Fine Arts
- F Health/Phys. Education
- G Career Education
- H Agri./Natural Resources
- I Office Education
- J Distributive Education
- K Health Occupations
- L Home Economics Education
- M Industrial Education
- N Consumer Education
- O Industrial Arts
- P Vocational Education
- Q Business Education
- R Data Processing
- S Recreation
- T Marketing
- U Technical Education
- V Other _____ (Specify)

4. CAREER EDUCATION POPULATION SERVED

- A Students
- B Instructional Personnel
- C Non-Instruc. Personnel
- D Parents
- E Community
- F Other _____ (Specify)

5. GRADE LEVEL RANGE

K	1	2	3	4	5	6	7	8	9	10	11	12	13	14

PEAT, MARWICK, MITCHELL & CO.
CERTIFIED PUBLIC ACCOUNTANTS
222 SOUTH RIVERSIDE PLAZA
CHICAGO, ILLINOIS 60608

August, 1972

Dear Sir:

Peat, Marwick, Mitchell & Co. (PMM&Co.) has been designated as subcontractor to the Center for Vocational and Technical Education: The Ohio State University by the USOE to conduct a national survey and assessment of selected career education materials commercially available.

In summary, PMM&Co. has been engaged to identify, procure and assess commercially available career education materials against criteria established by the Comprehensive Career Education Model (CCEM) which has been created by USOE and the Center. Over the ninety-day period of the contract, PMM&Co. is to determine the suitability of available career education materials for grades K-14 for the career development of each student which:

- . Restructures the entire educational program around the student's real-life developmental needs
- . Integrates the academic knowledge and skills with occupational training
- . Assumes that each existing student will be prepared for a future career education program and for entry into an occupation
- . Provides for each student a program relevant to his becoming a self-fulfilled productive and contributing citizen
- . Incorporates community resources and non-school educational opportunities.

Materials which meet CCEM and career education needs will be abstracted, indexed and entered into the national information storage, retrieval and dissemination system for vocational-technical education through the Vocational Technical-Education Resource Information Center (VT-ERIC) clearing house.

To complete this task, PMM&Co. has been in telephone contact with companies and industries throughout the country which are serving the career education market. Based on our findings, we have learned that your firm has materials which hopefully will be made available for our processing.

August, 1972

2

Specifically, we request:

- (1) Completion of a product profile sheet for each piece of career education material which you market.
- (2) Agreement to provide copies of materials which we request after review of the product profile sheets.

With authorization of CCEM and USOE officials, we plan to make available at the conclusion of the project a listing of:

- . Companies serving the career education market
- . The number of career education materials identified by grade level and career education element
- . A summary of assessed materials by degree of suitability to CCEM requirements by grade level and career education elements.

Of course, no identification will be made of materials by title or source.

We appreciate the preliminary indication of the willingness of your company to participate in the project. Your cooperation and assistance in having the attached product profile sheets completed and returned to us at the earliest possible date will be welcomed.

If you have questions regarding our request, please contact:

Dr. Voie Coy
41 South High Street
Columbus, Ohio 43215
(614) 221-7258

Thank you for your help.

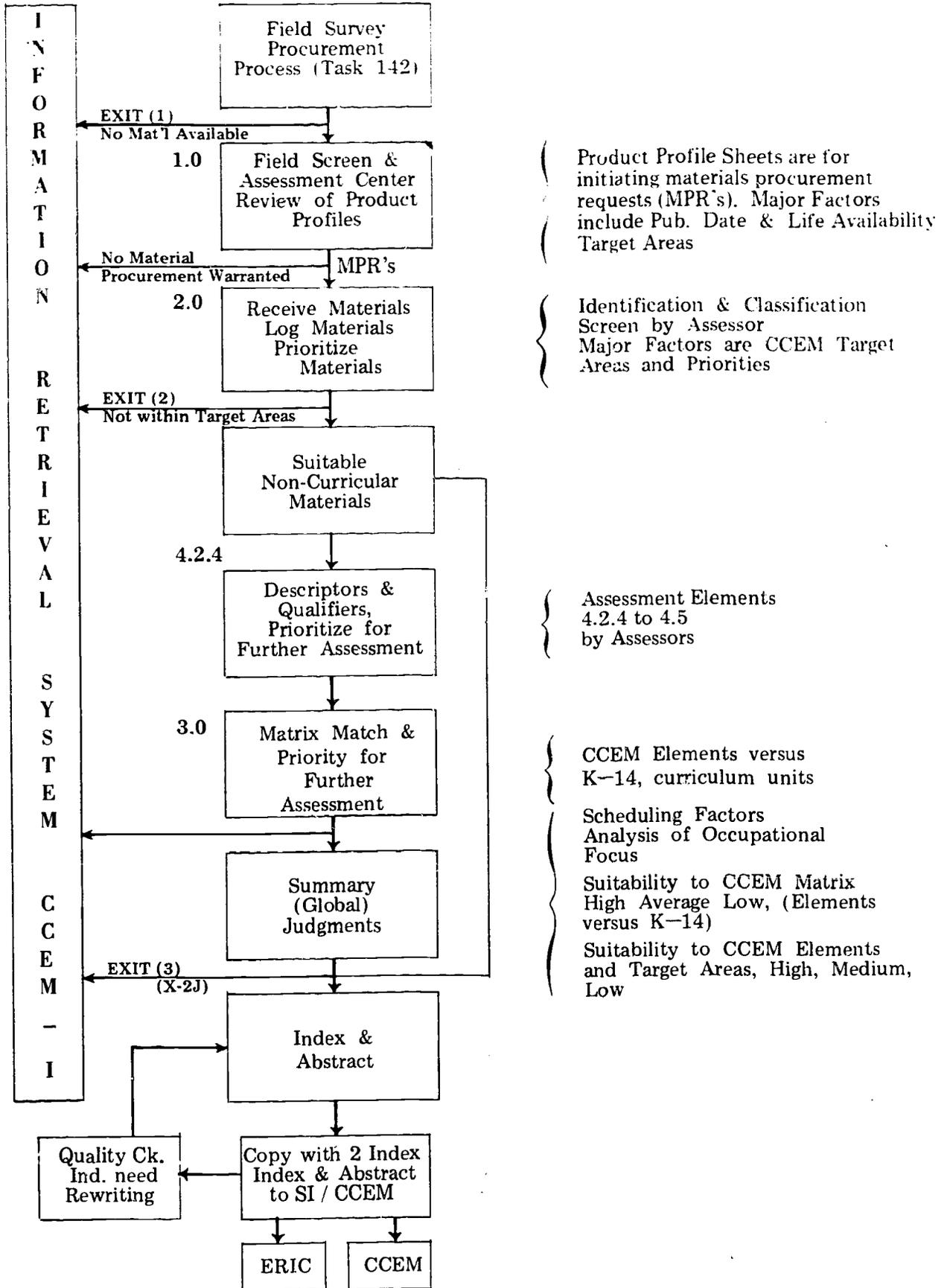
Very truly yours,

PEAT, MARWICK, MITCHELL & CO.

Clyde N. Carter
Principal

III - MATERIALS ASSESSMENT METHOD

ASSESSMENT PROCESS SCHEMATIC





CHAPTER III

MATERIALS ASSESSMENT METHODS

The chapter briefly describes the materials assessment methods used in processing career education materials. Specifically, it presents an overview of the process, the assessment instrument, method of assessing, and quality control procedures. Appendix C presents a full explanation of all aspects of assessment.

THE ASSESSMENT PROCESS

The Assessment Center revolved around two interrelated functions:

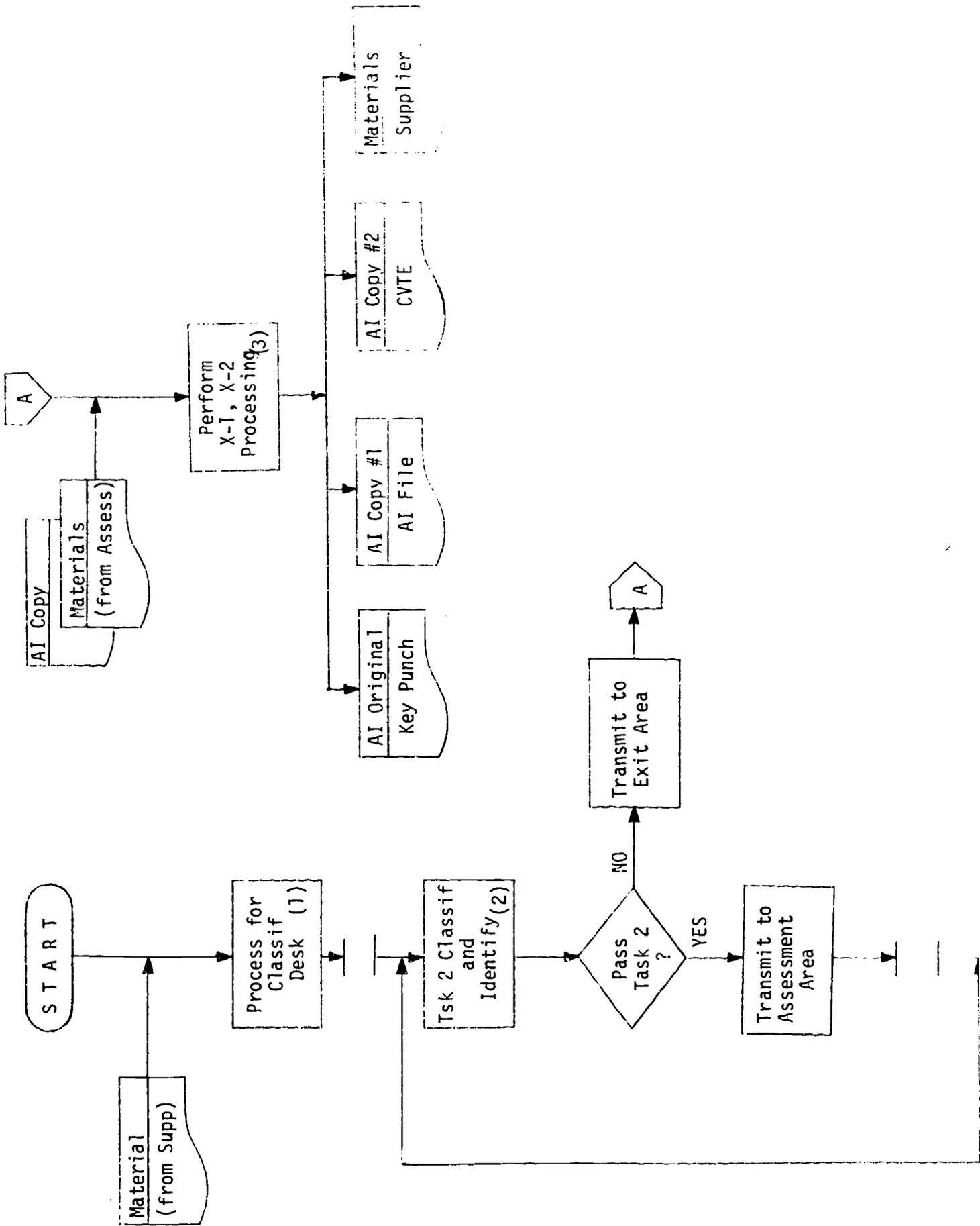
1. The flow of material from entry into the system, through the priority screens and direct assessment, on through exiting and shipment to the client.
2. The records control of all material and entry of data into the information retrieval system.

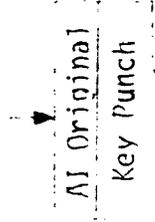
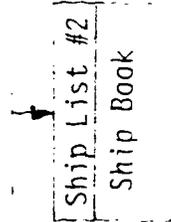
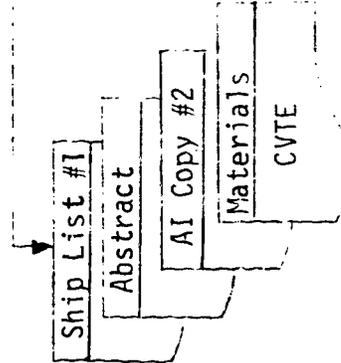
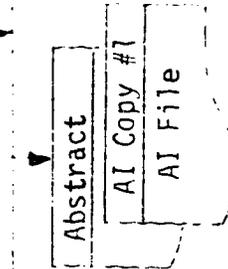
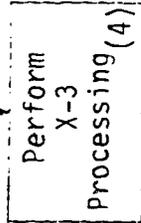
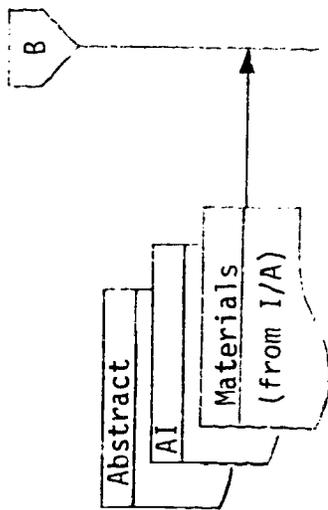
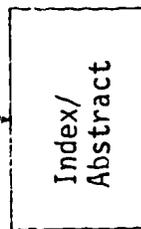
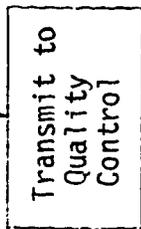
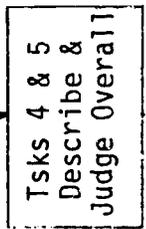
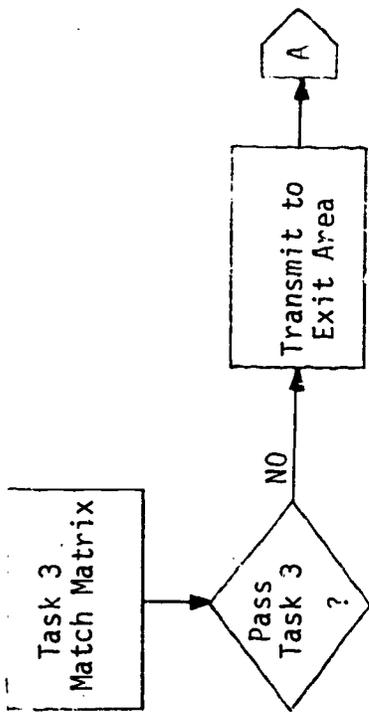
The procedural and sequential flow of Assessment Center activities is shown on the facing page (refer to steps in the process). This schematic does not represent the physical movement of an item. The organization of the Assessment Center as a total process and the actual work and record flow are shown on the following pages. The work-flow for each record or piece of material and the relationships of work stations are also indicated.

The assessment process included the following conducted in logical sequence:

1. The field survey team contacted suppliers and asked for materials which matched the Product Profile Sheet.
2. The completed Product Profile Sheets were reviewed at the Assessment Center to determine if the materials would be procured and if they were of "immediate-access" priority or could be postponed until later in the project.
3. Materials received at the Assessment Center which appeared to meet CCEM priority requirements were entered into the assessment process immediately or held in storage ("Hold") until a later time because of low immediate priority (need determined by the client).
4. Material entered into the assessment system which had been identified and classified according to the CCEM matrix arrived at a "Go/No-Go" point, (i.e., it matched or did not match the matrix requirements):
 - . Items which did not match were exited from further assessment
 - . Items which matched were assessed fully unless they were put in a "Hold" category.
5. Each item was assessed for its overall suitability and applicability to the project requirements.

ASSESSMENT PROCEDURE





- (1) . Open boxes
- . Check contents against any shipping documents
- . Transmit any invoices to accounting
- . Sort materials into Material Control Book (Entry) categories
- . Indicate date in received column of Material Control Sheet
- . Prepare Material Control Card
- . Label materials with Document # and Cost Code (from Mat'l Control Sheet)
- . Box and transmit to Classification Desk

- (3) . Check AI for completeness and materials for presence
- . Record X-1 or X-2 on Materials Control Sheet
- . Xerox 2 copies of the AI and distribute
- . Ship materials back to supplier (include letter)
- . Record shipping date on Materials Control Sheet
- . Record "Supplier" on Materials Control Sheet in "Where Sent" column

- (2) . Verify sort of separate items
- . Prepare PPS's if necessary (materials will be assessed separately)
- . Head up Assessment Instrument
 - Document # (CR #, PPS #)
 - Title
 - Author
 - Publisher
- . Complete first page of Assessment Instrument

- (4) . Check AI for completeness and materials for presence
- . Record X-3 on Materials Control Sheet
- . Xerox 2 copies of the AI and distribute
- . Xerox 1 copy of the Abstract and distribute
- . Prepare Shipping List and Xerox 1 copy for Shipping File
- . Record "CVTE" and date on Materials Control Sheet
- . Prepare materials for shipment to CVTE

AI = Assessment Instrument
I/A = Index/Abstract

Thus, the assessment process consisted of screens or judgment decision points about each item: "Does the item meet the client requirement?" and "Is the item needed by the client now or can it be delivered later?"

THE ASSESSMENT INSTRUMENT

The assessment instrument is shown on the following pages. Its content was determined on the basis of client need and a quality level of educational evaluation. The format of the instrument was dictated by assessment procedural flow requirements, the psychological set of the assessors as they worked through the problem, and the data system requirements. The format was also affected by the need to ensure quality by reducing error possibility (e.g. recopying marks) and by the procedural and physical flow of materials. The design process was a joint effort of CCEM staff and the project consultants.

The assessment instrument was labeled, numbered and attached to the curriculum materials to be assessed. Two official numbers on the instrument made up the Document Number: the Call Report Number and the Product Profile Sheet Number. The Product Profile Sheet number was used to keep track of the materials and assessments instruments while they were in the Assessment Center.

Materials were assessed by assessors functioning in their areas of expertise. Senior assessors made the summary (global) judgments and evaluated the assessors judgments. Other specialists and technicians performed specialized assessment functions which did not occur routinely (e.g., 5 D.O.T. classifications).

INDEXING AND ABSTRACTING

Material which passed all of the screens was judged positively assessed. Positively assessed material was processed for indexing and abstracting as prescribed by ERIC indices and descriptors in preparing abstracts of up to 200 words. Materials and their instrumentation were then routed to the ERIC staff for inclusion in the ERIC system.

Clerical and administrative technicians handled records management, item coding and entry and exit processes for materials.

QUALITY CONTROL

An integral part of the assessment process was the maintenance of uniform standards of consistency and accuracy among assessors and within the performance of an individual assessor. The quality control function was the assigned responsibility of a senior professional designated as the Quality Control Officer. The Quality Control Officer actively participated in:

- . Project design
- . Assessor development and training
- . Design and development of the Assessment Center Staff Manual
- . Maintenance of quality performance during the ongoing assessment process.

**Peat, Marwick, Mitchell & Co./CCEM-I
National Career Education Materials Search
ASSESSMENT INSTRUMENT**

DOCUMENT NO.

--	--	--	--	--	--	--	--	--	--

STATUS _____	RETURN DATE _____
<input type="radio"/> Comp. Copy	
<input type="radio"/> Loan	

Title _____

Author _____

Publisher _____

TASK 211-2.0 Identify and Classify

1. PACKAGING (Check one)

- 1. Single Piece (Item)
- 2. Set of _____ Independent Items
- 3. Set of _____ Related Items
- 4. Series of _____ Similar Items

3. FILM:

- A. Films
- B. Filmstrips
- C. Cassettes
- D. Videotapes
- E. Slides

TYPE MATERIAL (Check appropriate items)

2. PRINTED MATERIALS:

- A. Instructional Guide/Manual
- B. Teaching Guide/Manual
- C. Curriculum Guide
- D. Program Planning Guide
- E. Unit of Study (subject fields)
- F. Instructional Module
- G. Student Workbook
- H. Student Manual
- I. Laboratory/Practice Manual
- J. Textbook/Workbook
- K. Simulation/Environmental Situation
- L. Evaluation Instruments
- M. Administrative Materials
- N. Bibliographies
- O. Directories
- P. Supplementary Reference Materials
- R. Textbook
- S. Other: _____

4. MANIPULATIVE MATERIALS:

- 1. Puzzles
- 2. Laboratory Kits
- 3. Puppets/Dolls/Figures
- 4. Activity Kits
- 5. Tools & Related Items
- 6. Games
- 7. Blocks & Related Items
- 8. Rods/Counters/etc.
- 9. Other: _____

5. AUDIO-VISUAL MATERIALS:

- 1. Records, Discs
- 2. Audio Tapes
- 3. Transparencies
- 4. Models/Mock-ups
- 5. Flat Pictures
- 6. Posters
- 7. Charts & Graphs
- 8. Single Concept Loops
- 9. Other: _____

6. COST FACTORS (Check one)

- 1. Less than \$100
- 2. \$101-\$150
- 3. \$151-\$200
- 4. More than \$200
- 5. Unknown

TASK 211 - 2.0 SIGN OFF:

ASSESSOR: _____

DATE: _____

Continues in System

Exits System because of:

- A. Cost
- B. Textbook
- C. Non-Commercial Material
- D. Incomplete Component
- E. Other: _____

CHECKER: _____ DATE: _____

TASK 211-3.0 Classify by Matrix

8. TARGET AREA

(Check no more than three areas)

- A. Curriculum
- B. Career Information
- C. Career Preparation
- D. Guidance
- E. Staff Development
- F. Placement/Guidance
- G. Evaluation
- H. Support Systems
- I. Community Relations
- J. Post Secondary 13, 14
- K. Rural Education
- L. Management
- M. Other: _____

9. CONTENT/DISCIPLINE AREA

(Check no more than two items)

- A. Language Arts
- B. Mathematics
- C. Sciences
- D. Social Sciences
- E. Fine Arts
- F. Health/Physical Education
- G. Career Education
- H. Agriculture/Natural Resources
- I. Office Education
- J. Distrib. Ed./Marketing
- K. Health Occupations
- L. Home Economics Education
- M. Industrial Education
- N. Consumer Education
- O. Industrial Arts
- P. Vocational Education (general)
- Q. Business Education (general)
- R. Data Processing
- S. Recreation
- U. Technical Education

10. CAREER EDUCATION POPULATION SERVED

(Check appropriate items)

- 1. Students
- 2. Instructional Personnel
- 3. Non-Instructional Personnel
- 4. Parents
- 5. Community at Large
- 6. Other: _____

11. GRADE LEVEL RANGE

(Check appropriate grades)

- K
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- A (10)
- B (11)
- C (12)
- D (13)
- E (14)

OCCUPATIONAL FOCUS

(Check appropriate grade range, and item(s) within that grade range)

- 12. K-3
 - A. Goods (Supplies)
 - B. Services
- 13. 4-6
 - A. Industry
 - B. Commerce
 - C. Social Sciences
 - D. Services
 - E. Arts (Humanities)
- 14. 7-9
- 15. 10-14
 - A. Natural Resources
 - B. Construction (Construction Process)
 - C. Manufacturing
 - U. Transportation
 - V. Communication
 - W. Trade (Marketing)
 - X. Finance (Banking)
 - F. Government (Admin. Body)
 - G. Education
 - Y. Health
 - Z. Welfare
 - I. Personal (Human) Services
 - J. Product Services
 - K. Arts & Humanities (Humanities)
 - L. Recreation & Entertainment (Recreation)
 - M. All of the above

16. DOT OCCUPATIONAL GROUP

(Complete only if grade level is 10-14)

- 1. 2. 3.
- 4. 5.

CCEM MATRIX AND GRADE LEVEL

(Mark no more than three elements and the grades previously identified on p. 2)

ELEMENTS	K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	E
1. Self Awareness	<input type="checkbox"/>															
2. Educational Awareness	<input type="checkbox"/>															
3. Career Awareness	<input type="checkbox"/>															
4. Economic Awareness	<input type="checkbox"/>															
5. Decision Making	<input type="checkbox"/>															
6. Beginning Competency	<input type="checkbox"/>															
7. Employability Skills	<input type="checkbox"/>															
8. Attitudes and Appreciations	<input type="checkbox"/>															

Task 211 - 3.0 SIGN OFF.

Continues in system

18. Exits system because of:

- J. Positively assessed not. curric. mat'ls.
- K. Does not fit Content/Discipline Area
- L. Does not fit CCEM Target Areas Emphasis
- M. Does not fit CCEM Consumer Population
- N. Does not fit Element/Grade Level

CHECKER: _____

DATE: _____

ASSESSOR: _____

DATE : _____

TASK 211-4.0 Describe and Qualify

CCEM MATRIX AND GRADE LEVEL

Return to page 3 and complete CCEM MATRIX AND GRADE LEVEL, indicating judgment as follows:

H = High A = Average L = Low

19. CCEM MATRIX AND TARGET AREAS

(Mark no more than the three target areas previously identified on page 2 and the three elements identified on page 3. Indicate:

H = High A = Average L = Low
in the appropriate box(es).

ELEMENTS

1. Self Awareness
2. Educational Awareness
3. Career Awareness
4. Economic Awareness
5. Decision Making
6. Beginning Competency
7. Employability Skills
8. Attitudes and Appreciations

	A	B	C	D	E	F	G	H	I	J	K	L	M
1. Self Awareness													
2. Educational Awareness													
3. Career Awareness													
4. Economic Awareness													
5. Decision Making													
6. Beginning Competency													
7. Employability Skills													
8. Attitudes and Appreciations													

SPECIAL CONDITIONS FOR USER

(Check all appropriate items)

20. EQUIPMENT & FACILITIES

- (Not Applicable)
- 1. Open space, multiple group instruction
- 2. Special facilities
- 3. Special equipment
- 4. Special transportation
- 5. Other: _____

21. PERSONNEL AND STAFFING

- (Not Applicable)
- A. Team teaching
- B. Differentiated staffing
- C. Low pupil-teacher ratio
- D. Paraprofessional support
- E. Peer student support
- F. Special support personnel
- G. Specially trained instructor
- H. Other: _____

22. SCHEDULING & ORGANIZATION

- (Not Applicable)
- 1. Unique grade organization
- 2. Outside normal day/year
- 3. Modular or flexible schedule
- 4. Community organization based classroom
- 5. Industry based classroom
- 6. Business based classroom
- 7. Other: _____

23. COMMUNITY RESOURCES

- (Not Applicable)
- A. Volunteer support, general or specific
- B. Industry/business instructors
- C. Community agency support
- D. Work experience stations
- E. Other: _____

26. INSTRUCTIONAL STRATEGIES

(Check appropriate items)

- A. Self-instruction
- B. Discussion
- C. Micro-teaching
- D. Programmed instruction
- E. Modeling
- F. Simulation or gaming
- G. Psychodrama
- H. Individualized projects
- I. Role playing
- J. Field observations
- K. Self-evaluation
- L. Group or panel discussions
- M. Demonstrations
- N. Drill and practice
- O. Individual or group counseling
- P. Supervised work experience
- R. Lab simulation/practice
- S. Problem solving
- T. Dramatic activities
- U. Manipulative skill development
- V. Psychomotor Activities
- W. Other: _____

27. TIME NEEDED

Approximate number of clock hours involved: (check one)

- A. 1 - 5
- B. 6 - 10
- C. 11 - 20
- D. 21 - 30
- E. 31 - 45
- F. 90 (one semester)
- G. 180 (two semesters)
- H. 180 - 360
- I. one year
- J. two years
- K. more than two years
- L. variable

24. PERSONNEL FACTORS

Could a staff member use the item without training?

Yes

No

If no, what area of training is needed?

25. SPECIAL LEARNING CONDITIONS

Is the item directly aimed at a student with a special learning need?

Yes

No

- 1. Reading disability
- 2. Visual handicap
- 3. Aural handicap
- 4. Ethnic group
- 5. Over-age
- 6. Other: _____

TASK 211-5.0 Rate Overall Suitability to CCEM Needs

28. DESCRIPTORS

(Check appropriate items)

- Not Applicable
- A. Pre-test
- B. Post-test
- C. Systematic program of evaluation
- D. Criterion referenced tests
- E. Outline of content activities
- F. Teaching suggestions
- G. Alternative learning/teaching activities
- H. Suggested resources
- I. Bibliography
- J. Sample student materials
- K. Guidance materials
- L. Inservice training program
- M. Stated relationships to other areas of the curriculum
- N. Provisions for individualized, small group, large group instruction
- O. Out-of-school as well as in-school experiences
- P. Goals and objectives for learners
- R. Statement of desired entry level competencies of the learner
- S. Program organization and administration guidelines
- T. Suggested community relations and community agency support programs, which may include parent education
- U. Student use materials, e.g., workbooks, sample forms, tests, etc.
- V. Other: _____

OVERALL PROFESSIONAL JUDGMENT FOR CCEM PROJECT

(Check H = High, A = Average, or L = Low for each line item below)

- | | High | Average | Low |
|---|--------------------------|--------------------------|--------------------------|
| 29. Degree of Occupational Focus | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. Degree of Internal Consistency | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. Suitability to CCEM Matrix by Grade | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. Suitability to CCEM Matrix by Target Area | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 33. Degree of Need for Special Conditions | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 34. Degree of Use as Self-contained Plug-in-Unit | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 35. Degree of Innovativeness, Substantive | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 36. Degree of Innovativeness, Procedural | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. Degree of Participant Involvement in Learning | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

38. Is the item in the CCEM Modular Form?

Yes No

ASSESSOR: _____

DATE : _____

CHECKER : _____ DATE: _____

SUPPLEMENT FOR X-2J MATERIALS

For items which fit the following target areas:

- E. Staff development
- H. Support systems
- I. Community relations
- L. Management

Check applicable items:

- 1. Elementary level
- 2. Secondary level
- 3. Post-secondary level
- 4. Staff-development/teaching methods
- 5. Staff-development/career education programs
- 6. Staff-development/vocational education programs
- 7. Staff-development/counseling methods
- 8. Staff-development/materials preparation
- 9. Staff-development/other instructional staff
- 10. Administration/career education programs
- 11. Administration/vocational education programs
- 12. Promotional/career education; community focus
- 13. School-community communication
- 14. Other _____

Suitability to CCEM requirement: H A L

Additional Comments:

ASSESSMENT INSTRUMENT - SUPPLEMENT

This form to be used only for items on page 5 of the Assessment Instrument as listed below.

SPECIAL CONDITIONS FOR USER

EQUIPMENT & FACILITIES

If this item is checked, indicate below what special facilities, equipment or transportation is needed.

Special facilities: _____

Special equipment: _____

Special transportation: _____

PERSONNEL AND STAFFING

If this item is checked, indicate below what kind of staffing or specially trained personnel is required.

Differentiated staffing: _____

Special support personnel: _____

Specially trained instructor: _____

SCHEDULING & ORGANIZATION

If this item is checked, indicate the nature of the grade organization required and the nature of the time requirement outside the normal day or year.

Unique grade organization: _____

Outside normal day/year: _____

The Assessment Center Director and Supervisor performed daily quality control checks through over-the-shoulder coaching, retraining of assessors as needed and, answering questions when assessors faced interpretation problems. In addition, Senior Assessors (professionals with considerable experience in instructional materials development and curriculum and program development) provided judgments on a material's overall suitability to CCEM requirements. Finally, the Quality Control Officer performed three types of procedural checks of completed assessment documents.

1. Total Check. At least 10 percent of the materials which had been assessed were set aside. The Quality Control Officer used the form, shown on the following page to make an independent reassessment and to verify the completeness and legibility of work, interpretation of every item, correctness of the decision and the internal consistency between interrelated items. Documents with errors were returned to the Supervisor.

2. Blind Check. A weekly sample of materials which had exited were restarted through the assessment procedure by a second assessor. The completed assessment instruments of the two assessors were compared by the Quality Control Officer to determine if the interpretation and judgment of the two assessors was consistent.

3. Spot-Check. During on-site visits, the Quality Control Officer sampled completed items to spot-check certain crucial items (e.g., exit decisions, career element, consistency between matrix elements).

In total, more than 16 percent of the assessment instruments were subjected to a quality control check by the Quality Control Officer.

Assessors Work Check

Date _____

1. Name _____ Document # _____

2. Type of Item _____

3. Probable Level of Assessment Difficulty? H A L

4. Exit Point of Material X-1 X-2 X-3

5. Type of Check Made:

_____ a. Reassess blind check, _____ b. Spot-check selected items, _____ c. Total cks.

6. Checked By _____

7. Action Taken:

_____ a. Accepted and filed

_____ c. Rejected:

_____ b. Corrected and accepted

_____ Redone with assessor

_____ Assigned to supervisor

_____ Verified

8. Items Checked:

_____ a. Completeness

_____ b. Legibility

_____ c. Consistency Between Items:

- (1) 33 & 20-23 _____

- (2) 32 & 19 _____

- (3) 31 & 11/17 _____

- (4) 29 & 12-15 _____

- (5) _____

_____ d. Accurate Definition of Terms - Errors Noted

_____ (1) _____

_____ (2) _____

_____ (3) _____

_____ (4) _____

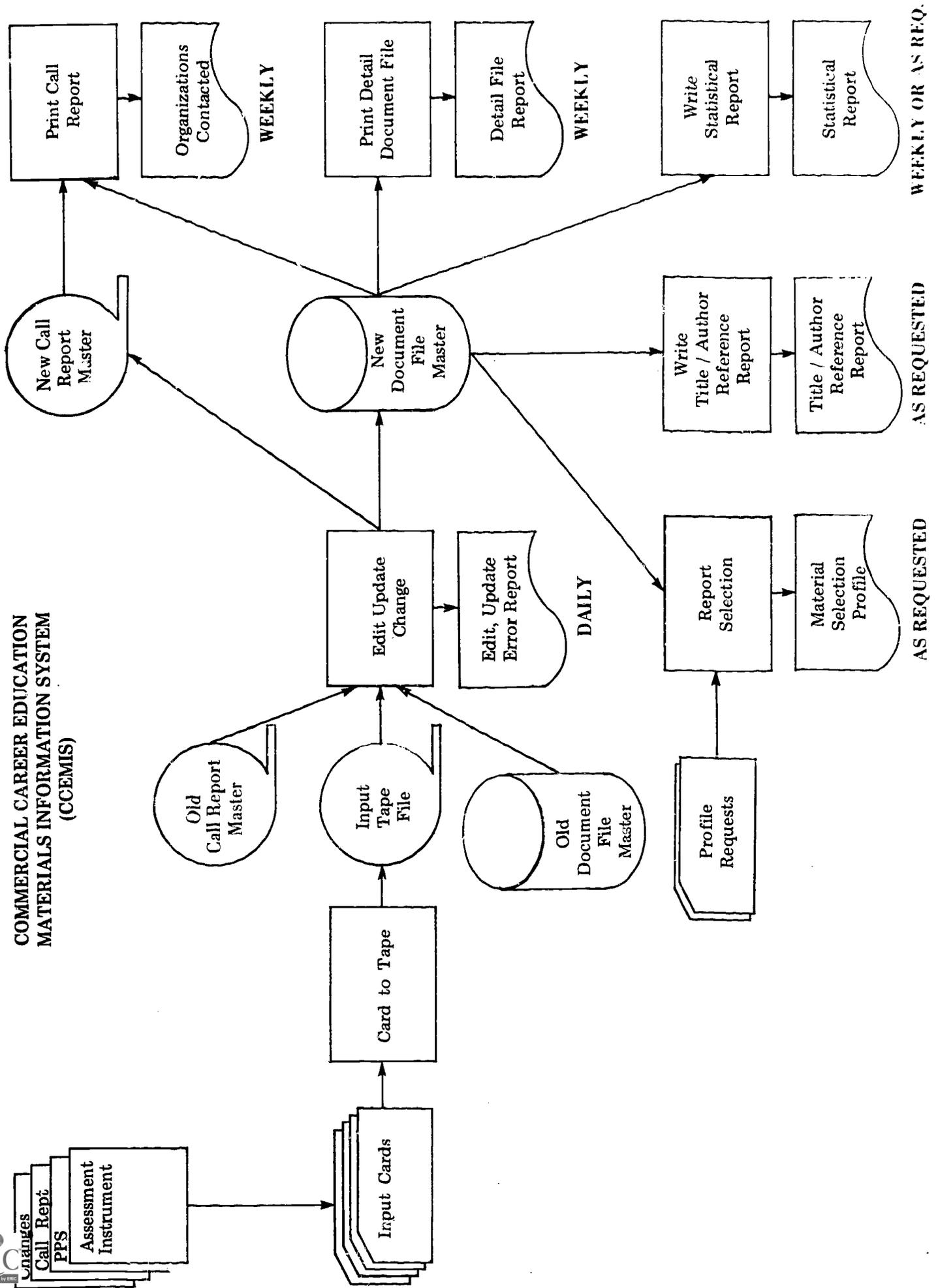
_____ e. Exit Decision Correct? Yes _____ No _____

_____ f. Other Questions: _____

Note: Record on weekly log & file by assessor name.

IV - COMMERCIAL CAREER EDUCATION MATERIAL INFORMATION SYSTEM

**COMMERCIAL CAREER EDUCATION
MATERIALS INFORMATION SYSTEM
(CCEMIS)**





CHAPTER IV

COMMERCIAL CAREER EDUCATION MATERIALS

INFORMATION SYSTEM (CCEMIS)

The Commercial Career Education Materials Information System (CCEMIS) is a computerized system for storing and retrieving descriptive and evaluative data concerning career education materials. The system accepts all data recorded for each item identified as career education material. The retrieval system component can seek out and print all documents relevant to a particular sort descriptor or combination of descriptors such as Grade Level, Target Area, CCEM Element/Target Area, etc.

CCEMIS accepts descriptors of career education materials from input forms for data storage and retrieval. The facing page shows the overall operation of the system. Data is entered into the system from three basic forms: Call Report, Product Profile Sheet and the Assessment Instrument. A fourth form, the Change Form, is used to modify or add data to existing documents (Appendix D).

The input data creates two files:

1. Call Report File is maintained as a tape file and used only for the report or organizations contacted (Appendix D). It has one entry for each company or corporate division to which a call was placed.

2. Document File Master contains all information from the Product Profile Sheets and Assessment Instrument. All entries on the file are referred to as documents and are identified with nine digit document numbers. The first four numbers are the Call Report number, unique to each company, and the last five numbers are the preprinted number from the Product Profile Sheet.

A document is first entered in the data file when a Product Profile Sheet enters the system with one of the following General Status Codes:

- A - Product Profile Present,
No Material Requested.
- B - Product Profile Present,
Material Requested.

The material from the Product Profile Sheet is entered into the file and space is left for adding all information contained in the Assessment Instrument. When the material is assessed and enters the system, the information from the Assessment Instrument is entered into the system and the General Status Code is automatically changed as follows:

- C - Assessed, Exits System at Exit 1
- D - Assessed, Exits System at Exit 2
- E - Assessed, Exits System at Exit 2
Under Condition "J"
- F - Fully Assessed, Exits System at Exit 3.

The system produces six reports, examples of which are reproduced in Exhibit 1:

1. Edit, Update and Change List. Prepared each time new information is added to the file, primarily for system control.



2. Organizations Contacted. Lists all organizations contacted and the product profiles submitted by the organization.
3. Detail File Report. Lists all information on the document file for backup purposes.
4. Title-Author Report. Lists the Document Number, Title and Author of all documents on the file.
5. Statistical Report. Provides statistical information about the total items in the file.
6. Material Selection Report. Provides the information needed by an educator for a specific application for career education material. The user can specify all the conditions of his environment and requirements and CCEMIS will retrieve and list all documents on the file which meet his specific needs.

The specific procedures for using CCEMIS are documented in Exhibit 2. The system has been designed to provide maximum information with minimum user effort.

**CCEMIS Reports
(Illustrative Only)**

- . Edit, Update and Change List (Call Report)
- . Organizations Contacted
- . Detail File Report
- . Title - Author Report
- . Statistical Report
- . Material Selection Report

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CCEM I - DATA CHANGE FORM

--	--	--	--	--	--	--	--

CALL NO.

PPS NO.

DATE

Description	Field	Value	Description	Field	Value																				
Pub Year	C01	<input type="text"/>	Element #1	C45	1 2 3 4 5 6 7 8																				
Rev Year	C02	<input type="text"/>	-1 Grade	D45	<table border="1"><tr><td>K</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	K	1	2	3	4	5	6	7	8	9										
K	1	2	3	4	5	6	7	8	9																
Copy Year	C03	<input type="text"/>			<table border="1"><tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	A	B	C	D	E															
A	B	C	D	E																					
65 or Later	C04	Y -	Element #2	C46	1 2 3 4 5 6 7 8																				
Ind/Abstract?	C05	Y -	-2 Grade	D46	<table border="1"><tr><td>K</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	K	1	2	3	4	5	6	7	8	9										
K	1	2	3	4	5	6	7	8	9																
Gen Status	C06	A B C D E F G			<table border="1"><tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	A	B	C	D	E															
A	B	C	D	E																					
Mat'l Status	C07	1 2 3 4 5 6	Element #3	C47	1 2 3 4 5 6 7 8																				
Title	C08	<input type="text"/>	-3 Grade	D47	<table border="1"><tr><td>K</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	K	1	2	3	4	5	6	7	8	9										
K	1	2	3	4	5	6	7	8	9																
Author	C09	<input type="text"/>			<table border="1"><tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	A	B	C	D	E															
A	B	C	D	E																					
Single Item?	C10	Y -	Exit X-2?	C48	Y																				
Item Cost	C11	<input type="text"/>	Exit Reason	C49	J K L M N																				
Set?	C12	Y -	-----																						
Cost/Set	C13	<input type="text"/>	Element #1	C50	1 2 3 4 5 6 7 8																				
Pieces/Set	C14	<input type="text"/>	-1 Target	D50	<table border="1"><tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	A	B	C	D	E	F	G													
A	B	C	D	E	F	G																			
Separate?	C15	Y -			<table border="1"><tr><td>H</td><td>I</td><td>J</td><td>K</td><td>L</td><td>M</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	H	I	J	K	L	M														
H	I	J	K	L	M																				
Cost 1	CS1	<input type="text"/>	Element #2	C51	1 2 3 4 5 6 7 8																				
Cost 2	CS2	<input type="text"/>	-2 Target	D51	<table border="1"><tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	A	B	C	D	E	F	G													
A	B	C	D	E	F	G																			
Cost 3	CS3	<input type="text"/>			<table border="1"><tr><td>H</td><td>I</td><td>J</td><td>K</td><td>L</td><td>M</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	H	I	J	K	L	M														
H	I	J	K	L	M																				
Cost 4	CS4	<input type="text"/>	Element #3	C52	1 2 3 4 5 6 7 8																				
Cost 5	CS5	<input type="text"/>	-3 Target	D52	<table border="1"><tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	A	B	C	D	E	F	G													
A	B	C	D	E	F	G																			
Cost 6	CS6	<input type="text"/>			<table border="1"><tr><td>H</td><td>I</td><td>J</td><td>K</td><td>L</td><td>M</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	H	I	J	K	L	M														
H	I	J	K	L	M																				
Type Mat'l	C17	A B C D E F	Equip/Facil	C58	1 2 3 4 5																				
Target Area	C18	A B C D E F G H I J K L M	Pers/Staffing	C59	A B C D E F G H																				
Content/Disc	C19	A B C D E F G H I J K L M N O P Q R S T U	Sched/Org	C60	1 2 3 4 5 6 7																				
Population	C20	1 2 3 4 5 6	Comm Resources	C61	A B C D E																				
Grade Level	C21	K 1 2 3 4 5 6 7 8 9 A B C D E	Pers Factors	C65	Y -																				
Packaging	C22	1 2 3 4	Spec Learn	C69	Y -																				
Printed Mat'l	C23	A B C D E F G H I J K L M N O P R S	Type	C70	1 2 3 4 5 6																				
Films	C26	1 2 3 4 5	Inst Strat	C62	A B C D E F G H I J K L M N O P R S T U V W																				
Manipulative	C27	A B C D E F G H I	Time	C63	A B C D E F G H I J K L																				
Audio-Visual	C28	1 2 3 4 5 6 7 8 9	Descriptors	C54	A B C D E F G H I J K L M N O P R S T U V																				
Cost Factors	C29	1 2 3 4 5 6	Judgment	C67	<input type="text"/>																				
Exit X-1?	C30	Y -																							
Exit Reason	C31	A B C D E																							

K-3 Focus	C37	A B																							
4-6 Focus	C39	1 2 3 4 5																							
7-14 Focus	C42	A B C U V W X F G Y Z I J K L M																							
DOT Codes	C44	<input type="text"/>																							

11/06/72

*** CALL REPORT ***

TYPE OF ORGANIZATION

	NUMBER	PPS MAILED
1	229	2601
2	115	1393
3	2	7
4	9	187
5	47	509
6	15	141
7	4	22
8	63	268
INV	96	
TOTAL	580	5128

MATL. REQUEST STATUS

	NUMBER	PPS MAILED
1	44	1035
2	97	1216
3	174	2576
4	1	8
5	5	25
6	21	227
7		
INV	238	41
TOTAL	580	5128

FIELD SURVEY ACTION TYPE 6 AND NO PROFILES

NUMBER 77 NO. PPS MAILED 1144

11/06/72

/00/00

*** CALL REPORT ***

* * * CONTACTS * * * PROFILES * * *

TYPE -
AVAIL -
DATE READY -
FIELD ACTION -
QTY MAILED -
MR STATUS -

1004 8/17/72
COPLEY PRODUCTIONS
7776 IVANHOE AVE
LA JOLLA CA 92037
714-454-0411

* * * CONTACTS * * * PROFILES * * *
* WARREN TAYLOR VP
* G HOWARD MATSON PRO MGR

TYPE - 2
AVAIL - NNNN
DATE READY -
FIELD ACTION - 1 5
QTY MAILED -
MR STATUS -

1014 8/17/72
SECURITY MUTUAL LIFE INS CO
200 N 15TH ST
LINCOLN NB
402-477-4141

* * * CONTACTS * * * PROFILES * * *
* DONALD CLARK ADV MGR
* PHILIP JAMES PEN ADM

TYPE - 1
AVAIL - NNNN
DATE READY -
FIELD ACTION - 1 5
QTY MAILED -
MR STATUS -

1018 8/17/72
ABBOTT LABORATORIES
ABBOT PARK D-384
N CHICAGO IL 60064
312-688-3931

* * * CONTACTS * * * PROFILES * * *
* TOM CRAIG MGR PRO
* SAM HUFF MGR PUB

TYPE - 1
AVAIL - NNNN
DATE READY -
FIELD ACTION - 1 45
QTY MAILED -
MR STATUS -

1021 8/18/72
DICK A B
5700 W TOUCHY AVE
CHICAGO IL 60648
312-RO8-1900

* * * CONTACTS * * * PROFILES * * *
* GEO JENSEN MKT MGR
* W B GIBSON VP MKTG
* JOHN PAULSON VP MKTG
* RON MEADOWS MGR MKT

TYPE - 1
AVAIL - YYYN
DATE READY -
FIELD ACTION - 1 456
QTY MAILED - 004
MR STATUS - 2

1023 8/21/72
EMC CORPORATION
180 E 6TH ST
ST PAUL MN 55101
612-227-7366

* * * CONTACTS * * * PROFILES * * *
* NORTHROP DAWSON VP
* TOM EDWARDS

TYPE - 1
AVAIL - NNNN
DATE READY -
FIELD ACTION - 1 5
QTY MAILED -
MR STATUS -

1027 8/21/72

* * * CONTACTS * * * PROFILES * * *

*** DETAILED FILE REPORT ***

PAGE 49

1513-07007		BE INFORMED ON FINDING A JOB		BAILEY & CHIDEYA
PUB YR	68	SIN COST		TYP A
REV YR	68	SET COST Y	1	TA A
C/R YR	68	SET QTY	5	CD GP
PUB 65	Y	SEP PUR	CST1	POP 1
ABSTRACT	Y		2	GR 3
GEN STAT	D		3	
M R STAT	2		4	
PACK	1			K-3
P MTL	P			4-6
FILM				7-9/10-14
M MTL				
A MTL				
COST	1			DOT - - - - -
EX 1&2 Y	L			
CCEM/GR-	ELEM			CCEM/TA
	ELEM			ELEM
	ELEM			ELEM

*** DETAILED FILE REPORT ***

11/06/72

PAGE 50

1513-07008		BE INFORMED READING YOUR NEWS		STAUFFER & CAMPBELL
PUB YR	68	SIN COST		TYP A
REV YR	68	SET COST Y		TA A
C/R YR	68	SET QTY	5	CD ADQ
PUB 65	Y	SEP PUR	CST1	POP 1
ABSTRACT	Y		2	GR 34
GEN STAT	A		3	
M R STAT	2		4	
PACK				K-3
P MTL	Y			4-6
FILM				7-9/10-14
M MTL				
A MTL				
COST	6			DOT - - - - -
EX 1&2				
CCEM/GR-	ELEM			CCEM/TA
	ELEM			ELEM
	ELEM			ELEM

CALL-PROFL

TITLE

AUTHOR

CALL-PROFL	TITLE	AUTHOR
1021-08888	MIMEOGRAPH INSTRUCTION SERIES	A C PASCALE
1021-08889	REPROGRAPHICS IN BUS EDUCATION	SUPER & BOHN
1021-08890	GRAPHICS COMMUNICATIONS SERIES	BASS & VAUGHAN
1021-08891	FLUID SERIES	CHARLES SOLLEY
1021-08892	LEARNING SYSTEM FOR OFFSET INS	MCCAIN & SEGAL
1302-04480	SECRETARIAL SPECIALIST	RICHARD A KALISH
1308-06884	OCCUPATIONAL PSYCH	COOK & HOSS ET AL
1308-06885	TRAINING IN INDUSTRY	LYON
1308-06886	PETERKIN AN EDUCATIONAL FABLE	FREEMAN F ELZEY
1308-06887	THE GAME OF SCIENCE	CULINARY INSTITUTE OF AMERICA
1308-06888	MAKING THE MOST OF COLLEGE	ED BY R S WURMAN
1308-06889	THE SEARCH FOR INDEPEN	GRANT VENN
1308-06890	THE COLLEGE DECISION	IVAR BERG
1308-06893	PROGRAMMED INTRO TO STATISTICS	
1311-04484	INST GDE TCHNG PROF COOKING	
1312-06771	YELLOW PAGES OF LEARNING RESRC	
1316-08579	MAN EDUCATION AND MANPOWER	
1317-08581	EDUC & JOBS GREAT TRAIN ROD	
1318-08592	MATERIALS FOR OCCUPATIONAL ED	
1323-09548	MANPWR ECON ED OPPOR AMER ECON	
1323-09589	THE CHILDS WORLD OF CHOICES	
1505-04077	THE VETERINARIAN FROM 8 TO 5	
1505-04078	GO PHARMACY	
1505-04079	GO FISSION	
1505-04080	REWARDING CAREERS IN AGRICULT	
1505-04081	EXCITING CAREERS IN ENGINEERING	
1507-06859	CHOOSING A COLLEGE	
1507-06860	CHOOSING A VOCATION	
1507-06861	WRITING CAREERS IN ADVERTISING	
1507-06862	CAREERS WORLD OF COMPUTERS	
1507-06863	CAREERS IN FILM MAKING	
1507-06864	CAREERS IN GRAPHIC ARTS	
1507-06865	ART CAREERS IN ADVERTISING	
1507-06866	CAREERS IN TELEVISION	
1507-06867	CAREERS IN PHOTOGRAPHY	
1507-06868	CAREERS IN ILLUSTRATION	
1507-06869	THE CONSUMER AND CREDIT	
1507-06870	BUYING BASICS FOOD & CLOTHING	
1507-06871	CONSUMER BE WARNED FRAUDS	
1507-06872	ADVERTISING & THE CONSUMER	
1507-06873	CONSUMER POWER & SOCIAL CHANGE	
1513-07001	BE INFORMED ON PERSONAL CREDIT	
1513-07002	BE INFORMED ON BUYING AN AUTO	
1513-07003	BE INFORMED ON OWNING AN AUTO	
1513-07004	BE INFORMED ON BUYING A HOUSE	
1513-07005	BE INFORMED ON SOCIAL SECURITY	
1513-07006	BE INFORMED ON RENTING A HOUSE	
1513-07007	BE INFORMED ON FINDING A JOB	
1513-07008	BE INFORMED ON READING YOUR NEWS	
1513-07009	BE INFORMED ON TAXES	
1513-07010	BE INFORMED ON BANKING	
1513-07011	BE INFORMED ON MENTAL RETARD	
1513-07012	BE INFORMED ON MARRIAGE	
1513-07013	BE INFORMED ON MEASUREMENTS	
1513-07014	BE INFORMED ON WISE BUYING	
1513-07015	BE INFORMED ON USING LIBRARY	

LINANNE SACKETT
KENNETH HUMPHREY
KENNETH HUMPHREY
KENNETH HUMPHREY
KENNETH HUMPHREY
BAILEY & CHIDEYA
STAUFFER & CAMPBELL
LINANNE SACKETT
ELSIE GIBBS
MAXINE PHILLIPS
MAXINE PHILLIPS
ELLIE HUBBARD
KATIE BAER
MURIEL RINGSTAD

GENERAL STATUS	NUMBER DOCUMENTS	NUMBER PIECES	COST CODE	NUMBER DOCUMENTS	TYPE MAIL	
A	841	11858	1	2388	Printed	2278
B	422	4650	2	454	Film	1362
C	200	1003	3	117	Manip	110
D	128	1030	4	14	Aud/Vis	447
E	77	188	5	69		
F	1939	14885	6	565		
TOTAL A-F	3607	33614	TOTAL	3607		

G

GRADE NO.	EXIT NO.	INST. NO.	TIME NO.	DESC. NO.
K 258	A 1	A 1357	A 921	A 5
1 338	B 124	B 1709	B 1	B 39
2 391	C 2	C 1	C 1	C 51
3 395	D 23	D 31	D 12	D 6
4 412	E 84	E 23	E 3	E 132
5 437	F	F 47	F 4	F 506
6 544	G	G 1	G 8	G 110
7 975	H	H 127	H	H 454
8 1096	I	I 99	I	I 374
9 1414	J 78	J 86	J	J 21
A 1482	K 13	K 178	K	K 546
B 1708	L 99	L 1237	L 982	L 5
C 1749	M 9	M 24		M 6
D 824	N 22	N 83		N 649
E 836		O 1018		O 33
		P 11		P 55
		Q		Q
		R 26		R 166
		S 100		S 27
		T 23		T 2
		U 16		U 253
		V 36		V 221
		W		

CCEM MATRIX AND GRADE LEVELS

	K	1	2	3	4	5	6	7	8	9	10	11	12	13	14
--	---	---	---	---	---	---	---	---	---	---	----	----	----	----	----

SELF AWARENESS

H	3	7	10	10	4	5	7	7	8	11	20	36	36	11	11
A	8	9	16	11	8	7	9	28	33	47	54	59	60	20	19
L	2	2	3	5	4	7	16	20	25	36	32	38	32	5	5
X															

EDUCATIONAL AWARENESS

H			1	1	1	1	2	29	41	51	55	72	74	18	17
A	5	5	8	5	14	16	30	78	91	128	136	186	181	58	57
L	6	12	7	14	31	39	61	97	101	168	162	191	189	73	73
X															

CAREER AWARENESS

H	38	19	27	23	21	40	45	63	76	117	149	236	236	43	42
A	127	171	188	126	86	96	129	403	430	547	603	680	666	195	193
L	30	42	62	89	142	142	170	160	169	191	113	101	93	42	42
X															

ECONOMIC AWARENESS

H	1	1	5	5	7	6	6	4	5	7	13	12	12	2	2
A	5	7	11	11	10	7	8	7	14	17	30	57	58	14	14
L	2	3	7	8	7	11	13	10	15	20	23	22	23	3	3
X															

DECISION MAKING

H	1	1	2	2	2	2	1	3	3	3	4	4	4		
A		1	1	1	2	2	2	3	4	5	9	13	14	5	5
L							1	4	4	5	4	5	4		
X															

BEGINNING COMPETENCY

H											7	20	20	11	11
A	12	12	12	12	1	1	1	7	7	12	36	67	63	30	29
L				1	1	2	2	5	5	26	35	39	33	16	16
X															

EMPLOYABILITY SKILLS

H							1	1	1	3	12	25	25	9	9
A					1	1	1	16	21	28	43	61	60	27	27
L							1	5	8	22	25	46	45	23	23
X															

ATTITUDES & APPRECIATIONS

H	6	10	15	13	8	23	23	32	21	26	39	46	46	7	7
A	52	96	125	148	141	147	200	229	253	274	207	222	207	74	73
L	71	81	92	45	56	62	83	103	117	125	151	159	151	15	15
X															

CCEM MATRIX AND TARGET AREAS

	A	B	C	D	E	F	G	H	I	J	K	L	M
--	---	---	---	---	---	---	---	---	---	---	---	---	---

SELF AWARENESS

H	11	38	12	38			1						
A	25	66	29	44		1	2				1		
L	9	35	27	16	1								

EDUCATIONAL AWARENESS

H	3	94	11	54									
A	16	246	31	116						1			
L	15	243	11	101	1								

CAREER AWARENESS

H	35	505	37	138			1						
A	91	712	93	213	2	2	1		1	4			
L	93	336	37	73	1								

ECONOMIC AWARENESS

H	15	13	4	5			1						
A	18	69	12	26		1							
L	12	41	4	3									

DECISION MAKING

H	3	3	2	3			2						
A	8	5	7	8							1		
L		1	2	1									

BEGINNING COMPETENCY

H	7	10	26	1									
A	36	39	53	14							5		
L	2	33	33	5			2				2		

EMPLOYABILITY SKILLS

H	2	9	24	6									
A	7	53	29	42		1					1		
L	2	32	18	27	1								

ATTITUDES & APPRECIATIONS

H	18	85	12	30									
A	117	505	76	141		1	1		1	1			
L	24	293	30	24									

JUDGMENT

	H	A	L
OCCUPATIONAL FOCUS	781	690	466
INTERNAL CONSISTENCY	208	1686	44
CCEM MATRIX BY GRADE	180	1388	370
CCEM MATRIX BY TARGET AR	505	953	480
NEED FOR SPEC. CONDITION	1	9	1928
SELF-CONT. PLUG-IN UNIT			
INNOVATIVENESS, SUBSTANTI	71	434	1432
INNOVATIVENESS, PROCEDURA	37	304	1596
PARTICIPANT INVOLVEMENT	162	452	1324

**CCEM-J NATIONAL COMMERCIAL CAREER EDUCATION MATERIALS SEARCH
(MATERIALS SELECTION REPORT)**

DOCUMENT NUMBER	CALL NO	IPS NO	TARGET AREA	TO AVOID SET	CONTENT/ DISCIPLINE AREA	GRADE LEVEL	TYPE MATERIAL	OC	EX	ND	OC	FOCUS	DOT	ELEMENT-GRADE MATRIX	ELEMENT MATRIX	SPECIALISM CONCLUSIONS	OVERALL SUITABILITY
10210888	F2Y1C		MIMOGRAPH INSTRUCTION SERIES	12 T	BCD	RJ						D	22 23	AAA 5 A		YHNLNSU LCFNU	HHHHA HHH
10210889	E2Y1C		REPROGRAPHICS IN BUS EDUCATION														
10210890	F1Y1C		GRAPHICS COMMUNICATIONS SERIES	12 EM	BC	BJ						KD	97 145 5	AA 5 A HH 5 H		YHNLNS LAFNU	HAAL HML
10210891	F1Y1C		FLUID SERIES	12 TM	BC	RJ						D	20 22 24	AA 5 A		YHNLNSU LAFNU	HAAL LLA
10210892	F1Y1C		LEARNING SYSTEM FOR OFFSET PINS	12 T	RCOE	BC						O	22 23	AAAA 5 A		YHNLNSU LAFNU	HHHHA HHH
102903505	C2 6RD		OPPORTUNITIES IN WELDING IND	14 DPU	9ARCOE	H											
130204480	R2 A		THE SECRETARIAL SPECIALIST														
130806884	E2 1F		OCCUPATIONAL PSYCH														
130806885	C2 1		TRAINING IN INDUSTRY														
130806886	C2 1		PETRY IN AN EDUCATIONAL FABLE														
130806887	C2 1		THE GAME OF SCIENCE														
130806888	C2 1		MAKING THE MOST OF COLLEGE														
130806889	C2 1		THE SEARCH FOR INDEPENDENCE														
130806890	C2 1		THE COLLEGE DECISION														

CCEMIS

FIELD DEFINITION CODES FOR
MATERIAL SELECT PROFILE

CCEM-I - NATIONAL COMMERCIAL CAREER EDUCATION MATERIALS SEARCH

DOCUMENT NUMBER	CALL NO	PPS NO	TARGET AREA	CONTENT DISCIPLINE AREA	GRADE LEVEL	TYPE MATERIAL	OCCUPATIONAL FOCUS	ELEMENT GRADE MATRIX	ELEMENT TARGET MATRIX	SPECIAL LEVEL CONDITIONS	OVERALL SUSCEPTIBILITY
C00											
C06			C18	C19	C21	PREPARED	1	C42 C44	C45 C46 C47 D45 D46 D47	C50 C51 C52 D50 D51 D52	C62 C64 C67
C07					C23	REFLECTION	2				
C12					C26	TEACHING	3				
C29					C27	TEACHING	4				
					C28	TEACHING	5				
					C31 C48	TEACHING	6				
					C37	TEACHING	7				
					C39	TEACHING	8				
											C58
											C59
											C60
											C61
											C65
											C69
											C63

CXX INDICATES FIELD DEFINITION CODE(S) APPLICABLE
See details of field on attached Field Definition Listing

FIELD DEFINITION CODES FOR
MATERIAL SELECT PROFILE

- C00 Document Number
- C06 General Status Code
- A. Product Profile Only
 - B. Materials Requested
 - C. Assessed - Exit 1
 - D. Assessed - Exit 2
 - E. Exit 2 Type J, Indexed & Abstracted
 - F. Fully Assessed, Indexed & Abstracted
 - G. Inactive Product Profile
(Items assessed individually)
- C07 Materials Request Status (from Call Report)
- 1. Complimentary Copy
 - 2. 2 Complimentary Copies
 - 3. Loan (Examination)
 - 4. Rental
 - 5. Purchase
 - 6. Undecided
- C12 (S) Set Y—
- C18 Target Area
- A. Curriculum
 - B. Career Information
 - C. Career Preparation
 - D. Guidance
 - E. Staff Development
 - F. Placement/Guidance
 - G. Evaluation
 - H. Support Systems
 - I. Community Relations
 - J. Post Secondary 13, 14
 - K. Rural Education
 - L. Management
 - M. Personnel Services
- C19 Content/Discipline Area Breakdown
- A. Language Arts
 - B. Mathematics
 - C. Sciences
 - D. Social Sciences
 - E. Fine Arts
 - F. Health/Physical Education
 - G. Career Education
 - H. Agriculture/Natural Resources
 - I. Office Education
 - J. Distributive Education
 - K. Health Occupations
 - L. Home Economics Education

FIELD DEFINITION CODES (CONT.)

- M. Industrial Education
- N. Consumer Education
- O. Industrial Arts
- P. Vocational Education
- Q. Business Education
- R. Data Processing
- S. Recreation
- T. Not Used
- U. Technical Education
- V. Other

C20 Career Education Population Served

- 1. Students
- 2. Instructional Personnel
- 3. Non-Instructional Personnel
- 4. Parents
- 5. Community at Large
- 6. Other

C21 Grade Level

- K
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- A
- B
- C
- D
- E

C23 Printed Materials

- A. Instructional Guide/Manual
- B. Teaching Guide/Manual
- C. Curriculum Guide
- D. Program Planning Guide
- E. Unit of Study (subject fields)
- F. Instructional Module
- G. Student Workbook
- H. Student Manual
- I. Laboratory/Practice Manual
- J. Textbook/Workbook
- K. Simulation/Environmental Situation
- L. Evaluation Instruments
- M. Administrative Materials

FIELD DEFINITION CODES (CONT.)

- N. Bibliographies
- O. Directories
- P. Supplementary Reference Materials
- R. Textbook
- S. Other

C26 Film

- 1. Films
- 2. Filmstrips
- 3. Cassettes
- 4. Videotapes
- 5. Slides

C27 Manipulative Materials

- A. Puzzles
- B. Laboratory Kits
- C. Puppets/Dolls/Figures
- D. Activity Kits
- E. Tools & Related Items
- F. Games
- G. Blocks & Related Items
- H. Rods/Counters/etc.
- I. Other

C28 Audio-Visual Materials

- 1. Reccrds, Discs
- 2. Audio Tapes
- 3. Transparencies
- 4. Models/Mock-ups
- 5. Flat Pictures
- 6. Posters
- 7. Charts & Graphs
- 8. Single Concept Loops
- 9. Other

C29 Cost Factors

- 1. Less than \$100
- 2. \$101 - \$250
- 3. \$251 - \$500
- 4. \$501 - \$750
- 5. Over \$750
- 6. Unknown

C30 Exit X-1 Y-

C31 Exit Conditions

- (a) Exit 1
 - A. Cost
 - B. Textbook
 - C. Non-Commercial Material
 - D. Incomplete Component
 - E. Other

FIELD DEFINITION CODES (CONT.)

- C37 K-3 Focus
 A. Good
 B. Services
- C39 Grades 4 - 6
 1. Industry
 2. Commerce
 3. Social Sciences
 4. Services
 5. Arts
- C42 Grades 7 - 14
 A. Natural Resources
 B. Construction
 C. Manufacturing (u) *
 D. Transportation & Communication (v)
 E. Trade and Finance (w) (x)
 F. Government
 G. Education
 H. Health & Welfare (y) (z)
 I. Personal Services
 J. Product Services
 K. Arts & Humanities
 L. Recreation & Entertainment
 M. All of the Above
- C44 DOT Occupational Group Code (5)
- C45,C46, Element Code
C47 CCEM Matrix and Grade Level
 (a) Element Code
 1. Self Awareness
 2. Educational Awareness
 3. Career Awareness
 4. Economic Awareness
 5. Decision Making
 6. Beginning Competency
 7. Employability Skills
 8. Attitudes and Appreciations
 (b) Grade Level
- D45,D46, Rating
D47 L: Low
 A: Average
 H: High
 X: Relevant but not assessed
- C48 Exit X-2 Y-
- } Matrix Elements

*Letters in parentheses appear only on Detailed File Report.

FIELD DEFINITION CODES (CONT.)

C50,C51, C52	CCEM Matrix and Target Areas (a) Element Code 1. Self Awareness 2. Education Awareness 3. Career Awareness 4. Economic Awareness 5. Decision Making 6. Beginning Competency 7. Employability Skills 8. Attitudes and Appreciations (b) Target Areas A. Curriculum B. Career Information C. Career Preparation D. Guidance E. Staff Development F. Placement G. Evaluation H. Support Systems I. Community Relations J. Post Secondary 13, 14 K. Rural Education L. Management M. Personnel Services	Matrix Elements
D50,D51, D52	Rating L: Low A: Average H: High X: Relevant but not assessed	Matrix Elements

SPECIAL CONDITIONS FOR USER

C58 Equipment & Facilities
1. Open Space, Multiple Group Instruction
2. Special Facilities
3. Special Equipment
4. Special Transportation
5. Other

C59 Personnel and Staffing
A. Team Teaching
B. Differentiated Staffing
C. Low Pupil-Teacher Ratio
D. Paraprofessional support
E. Peer Student Support
F. Special Support Personnel
G. Specially Trained Instructor
H. Other

FIELD DEFINITION CODES (CONT.)

- C60 Scheduling & Organization
1. Unique Grade Organization
 2. Outside Normal Day/Year
 3. Modular or Flexible Schedule
 4. Community Organization Based Classroom
 5. Industry Based Classroom
 6. Business Based Classroom
 7. Other
- C61 Community Resources
- A. Volunteer Support, General or Specific
 - B. Industry/Business Instructors
 - C. Community Agency Support
 - D. Work Experience Stations
 - E. Other
- C62 Instructional Strategies
- A. Self-Instruction
 - B. Discussion
 - C. Micro-Teaching
 - D. Programmed Instruction
 - E. Modeling
 - F. Simulation or Gaming
 - G. Psychodrama
 - H. Individualized Projects
 - I. Role Playing
 - J. Field Observations
 - K. Self-Evaluation
 - L. Group or Panel Discussions
 - M. Demonstrations
 - N. Drill and Practice
 - O. Individual or Group Counseling
 - P. Supervised Work Experience
 - R. Lab Simulation/Practice
 - S. Problem Solving
 - T. Dramatic Activities
 - U. Manipulative Skill Development
 - V. Psychomotor Activities
 - W. Other
- C63 Time Needed
- A. 1 - 5 (clock hours)
 - B. 6 - 10
 - C. 11 - 20
 - D. 21 - 30
 - E. 31 - 45
 - F. 90 (one semester)
 - G. 180 (two semesters)
 - H. 180 - 350
 - I. One Year
 - J. Two Years
 - K. More Than Two Years
 - L. Variable

FIELD DEFINITION CODES (CONT.)

- C64 Descriptors
- A. Pre-Test
 - B. Post-Test
 - C. Systematic Program of Evaluation
 - D. Criterion Referenced Tests
 - E. Outline of Content Activities
 - F. Teaching Suggestions
 - G. Alternative Learning/Teaching Activities
 - H. Suggested Resources
 - I. Bibliography
 - J. Sample Student Materials
 - K. Guidance Materials
 - L. Inservice Training Program
 - M. Stated Relationships To Other Areas
Of The Curriculum
 - N. Provisions for Individualized, Small Group,
Large Group Instruction
 - O. Out-of-School as Well as In-School
Experiences
 - P. Goals and Objectives for Learners
 - R. Statement of Desired Entry Level Competencies
of The Learner
 - S. Program Organization and Administration Guidelines
 - T. Suggested Community Relations and Community
Agency Support Programs, Which May Include
Parent Education
 - U. Student Use Materials, e.g., Workbooks, Sample Forms,
Tests, Etc.
 - V. Other
- C65 Personnel Factors Y-
- C67 Overall Professional Judgment
- (1) Degree of Occupational Focus
 - (2) Degree of Internal Consistency
 - (3) Suitability to CCEM Matrix by Grade
 - (4) Suitability to CCEM Matrix by Target Area
 - (5) Degree of Need For Special Conditions
 - (6) (Not Used)
 - (7) Degree of Innovativeness, Substantive
 - (8) Degree of Innovativeness, Procedural
 - (9) Degree of Participant Involvement in Learning
- C69 Special Learning Conditions Y-
- Y - Staff member can use item without special training
N - Special training required

V - SUMMARY OF FIELD SURVEY EFFORTS

SUMMARY OF FIELD CONTACTS

	<u>AMOUNT</u>	<u>PERCENT</u>
1. COMMERCIAL SUPPLIERS OF EDUCATIONAL MATERIALS	580	67%
2. CHAMBER OF COMMERCE GROUPS OF CITIES WITH POPULATION OF 100,000 OR MORE	143	17
3. SELECTED COMMERCIAL/INDUSTRIAL CORPORATIONS	130	15
4. INDIVIDUALS AND MISCELLANEOUS ORGANIZATIONS	<u>11</u>	<u>1</u>
TOTAL	864	100%

CHAPTER V

SUMMARY OF FIELD SURVEY EFFORTS

This chapter describes the scope of survey activities and the results of the procurement efforts.

SURVEY CONTACTS

Extensive efforts were made to identify commercial or quasi-commercial businesses that have career education materials available. The detailed steps and procedures for doing so and the system for procuring those that meet CCEM-I objectives are set forth in Chapter II of this report.

As shown on the facing page, 864 contacts were made with commercial producers of educational materials, industrial/commercial firms, Chambers of Commerce and individuals who reportedly had career education materials available. Of this total, 580 were commercial suppliers. This group was judged as the primary market target. It is estimated that the 580 firms represent 75 to 85 percent of the suppliers of career education materials and that they produce from 85 to 90 percent of the materials available.

Of the 580 commercial suppliers contacted, 313 (54 percent) reported that they had materials available and were willing to cooperate as shown on the following page. In addition to having materials currently on the market, 128 of the 313 reportedly have additional materials under development. Also, 35 of the 267 suppliers that now have no materials available indicated that materials were being readied for the market. Hence, more than 340 of the 580 firms have or will soon have career education materials available commercially.

MATERIALS PROCESSED

Most of the 313 suppliers responded to the request for materials with a single contact. However, several required five or six. In total, 1,130 contacts were made by field survey personnel to obtain the materials judged appropriate for assessment (see following pages).

On the basis of initial field survey contacts and the suppliers' estimates of the number of materials that would meet CCEM-I criteria for assessment, 5,128 Product Profile Sheets were mailed. Of this number, 3,607 were returned completed. It is assumed that after receipt of printed materials, suppliers determined that some of the materials they had originally identified as applicable were not.

A review of the Product Profile Sheets resulted in the initiation of 2,766 Material Procurement Requests. This represented approximately 77 percent of the materials identified. This high percentage of applicable materials was attributable to the accuracy of the Product Profile screening process.

Approximately 85 percent of the Requests for Materials resulted in their receipt, and all materials were assessed. Of the 2,344 units received (12,859 pieces of materials), 2,016 were positively assessed. All positively assessed materials were indexed and abstracted for subsequent entry into the Education Research Information System (ERIC).

SURVEY PARTICIPATION
BY COMMERCIAL SUPPLIERS
OF EDUCATIONAL MATERIALS

	<u>NUMBER</u>	<u>PERCENT</u>
1. NO MATERIALS AVAILABLE AT THIS TIME	267	46%
2. MATERIALS ARE AVAILABLE AND WILL PARTICIPATE	<u>313</u>	<u>54</u>
TOTAL	580	100%
3. NO MATERIALS AVAILABLE, BUT MATERIALS ARE UNDER DEVELOPMENT	35	6%
4. MATERIALS AVAILABLE, AND ADDITIONAL MATERIALS ARE UNDER DEVELOPMENT	<u>128</u>	<u>22</u>
TOTAL	163	28%

SUMMARY DATA

MATERIAL PROCUREMENT & ASSESSMENT

PROJECT TOTALS NOVEMBER 10, 1972

	<u>NUMBER</u>	<u>PERCENT</u>
1. Supplier Contacts	1130	—
2. Call Reports Inputed to EDP System	580	—
3. Product Profile Sheets Mailed to Suppliers	5128	—
4. PPS's Received	3607	—
5. Percent Received	—	70%
6. Material Procurement Requests Initiated	2766	—
7. Percent Initiated	—	77
8. MPR's Not Initiated	841	—
9. Percent Not Initiated	—	23
10. Materials Received (Units)	2344	—
11. As a Percent of MPR's	—	85
12. Materials Assessed (Units)	2344	—
13. As a Percent of Materials Received	—	100
14. Materials Positively Assessed (Units)*	2016	—
15. MPA's (4) as a Percent of MA's (12) (Units)	—	86
16. Assessed Materials Exiting at X-1 (Units)	200	—
17. E (1) 's as a Percent of MA's	—	9
18. Assessed Materials Exiting at X-2 (Units)	120	128
19. E (2) 's as a Percent of MA's	—	5
20. Index/Abstracts Completed for PAM's	2016	—
21. I/A's as a Percent of PAM's	—	100%

*Includes 77 X-2J's.

SELECTED CHARACTERISTICS OF ASSESSED MATERIALS

Materials applicable to specific grade levels (indicated by suppliers) as a percent of the total materials procured and assessed ranged from 2 percent for kindergarten to nearly 14 percent for grades 12 as shown on the following page. By grade groupings, nearly 22 percent were applicable to K-6, 27 percent to grades 7 - 9, 36 percent to grades 10 - 12, and 13 percent to grades 13 and 14.

**APPLICABILITY OF
ASSESSED MATERIAL
BY GRADE LEVEL**

<u>GRADE</u>	<u>NUMBER OF MATERIALS</u>	<u>PERCENT</u>	
K	258	2.0	} 21.5
1	338	2.6	
2	391	3.0	
3	395	3.0	
4	412	3.2	
5	437	3.4	
6	544	4.3	
7	975	7.6	
8	1096	8.5	
9	1414	11.0	
10	1482	11.5	
11	1708	13.3	
12	1749	13.7	
13	824	6.4	
14	<u>836</u>	<u>6.5</u>	
TOTAL*	12,859	100%	

*Based on 2344 units of assessed materials.

**MEDIA CHARACTERISTICS
OF SCREENED MATERIALS**

<u>TYPE MATERIAL</u>	<u>AMOUNT</u>	<u>PERCENT</u>
1. PRINTED	2270	54%
2. FILM	1362	32
3. MANIPULATIVE	110	3
4. AUDIO-VISUAL	<u>447</u>	<u>11</u>
TOTAL AMOUNT	4189*	100%

***The count is greater than 2344 due to multi-media packaging of units.**



Of the materials assessed, more than 50 percent were printed as shown on the facing page. Approximately one-third were film and the remainder were either audio-visual or manipulative.

Suppliers were requested to indicate the selling price of materials on the completed Product Profile Sheets. The responses are shown on the following page. The costs ranged from a few cents for a piece of printed material to more than \$8,000 for a set of films. Of the 3,607 Product Profile Sheets processed, suppliers indicated that the cost of 2,388 (66 percent of total) were available at \$100 or less. However, a relatively large number - - 16 percent - - did not include cost information.

**COST DISTRIBUTIONS OF
SCREENED MATERIALS***

	<u>COST RANGE</u>	<u>NUMBER</u>	<u>PERCENT</u>
1.	UNDER \$100	2388	66.2%
2.	\$101 to \$250		12.6
3.	\$251 to \$500	117	3.3
4.	\$501 to \$750	14	.4
5.	OVER \$750	69	1.9
6.	UNKNOWN	<u>561</u>	<u>15.6</u>
	TOTAL	3607	100%

*Based on completed Product Profile Sheets.

VI - FINDINGS AND RECOMMENDATIONS



CHAPTER VI

FINDINGS AND RECOMMENDATIONS

The findings resulting from our engagement are presented in this chapter, followed by our recommendations for CCEM actions.

FINDINGS

Findings resulting from the assessment of materials are presented in tabular form in Appendix A. Because multiple responses could be made in several judgments, statistical treatment is not always valid without qualification. In addition, several judgments were highly subjective.

The Quality Control Function carefully monitored the consistency of responses by individual assessors and responses from different assessors on similar materials. However, the comparative frequency, rather than number of responses, is a more reliable indicator of the applicability and quality of materials assessed against CCEM criteria.

It is estimated that 75 to 80 percent of the suppliers of commercial career education materials were contacted in the Field Survey effort. A review of these contacts by publishing organizations and research groups indicates that these firms produce from 85 to 90 percent of the materials available. The time and cost of obtaining the remainder of materials was judged excessive at this time.

The Field Survey procedure included careful screening (through structured interview guides and a review of catalogs) of the appropriateness of materials before the decision was made to enter them into the assessment process. Hence, 86 percent of the materials entering the assessment process were positively assessed. Of the 14 percent of the materials which exited the process, 9 percent were classified as non-career education material or incomplete units. The remaining 5 percent exited because they did not fit the content-discipline, CCEM target area emphasis, CCEM consumer population or element/grade level.

Nearly 40 percent of the cooperating suppliers classified themselves as independent commercial and an additional 20 percent as affiliated commercial organizations. Approximately 11 percent classified their organization as a film producer or distributor. Of those remaining, most did not indicate type of organization.

Only four firms declined to participate in the project. However, only 20 - 30 percent of the cooperating companies made their material available on a complimentary basis.

During the project, 33,614 pieces of material grouped in 3,607 units were identified. As indicated earlier, many units contained large numbers of individual pieces as sets or series. In addition to this relatively large amount of materials now available, 162 of the 580 commercial suppliers (28 percent) indicated that career education materials were under development.

Of the materials entering the assessment process, 54 percent were printed. Approximately 32 percent were classified as film. The remainder were manipulative and audio-visual.

The cost of materials ranged from a few cents per piece of material to \$8.000 for one set of films. However, 66 percent of the more than 3,600 units entering the assessment process sell for less than \$100.

Career education materials are available commercially for all grade levels. On the basis of judgments on applicability to specific grade levels, there are more than 250 units appropriate for use in kindergartens and nearly 1,750 for grade 12.

More than 1,000 units were determined appropriate for each of the following instructional strategies:

Discussion	1,709
Self-instruction.	1,357
Group or panel discussions. . .	1,237
Individual or group counseling.	1,018

Only one unit was judged appropriate for micro-teaching and psychodrama.

Assessors were given the opportunity to identify each unit by one or more of 21 descriptors. A total of 3,661 responses were given for the 2,016 positively assessed units. The descriptor "provisions for individualized, small group or large group instruction" was used 649 times. "Suggested community relations and community agency support programs, which may include parent education" was determined applicable to only two units. Other descriptors frequently used included: teaching suggestions - 506, suggested resources - 454, bibliography - 374 and guidance materials - 546.

Judgments were made regarding the degree of appropriateness (high, average, low) of each unit to the CCEM matrix by grade level and element. Each document could be judged applicable to a maximum of three elements and to as many grade levels as appropriate. General findings are as follows:

The frequency of applicability to grades K-14 in descending order were:

- Career Awareness
- Attitudes and Appreciations
- Educational Awareness
- Economic Awareness
- Beginning Competency
- Employability Skills
- Decisionmaking

Most units classified as applicable to self-awareness are for grades 9-12. Of these, approximately 50 percent were judged average, 25 percent high and 25 percent low

- . Educational awareness units are most applicable to grades 7-12. From 15 to 20 percent were judged high
- . Significant numbers of career awareness units are available for all grades (at least 195). About 60 percent of the total judgments indicated average applicability. However, more than 50 percent of units for grades 4, 5 and 6 were judged low
- . At least eight economic awareness units were judged appropriate for grades K-12. The majority of judgments of appropriateness for all grades was that materials are average. However, nearly 50 percent of the units for grades 5 through 9 were judged to be low
- . Only 136 decisionmaking units were judged applicable. Most of these units were judged appropriate for grades 11 and 12 and judged as having average applicability. Of the 136, only 21 were determined appropriate for grades 1 through 6. However, approximately 50 percent of those were judged high
- . Most judgments of applicability for beginning competency were for grades 10 - 14. More than 50 percent of the judgments were that units were of average applicability. Materials were judged applicable for grades 4, 5 and 6 and most of them were classified as having low applicability. None were assessed as having high applicability for grades 1 through 9
- . Units determined appropriate for employability skills were judged most suitable above grade 9. Only five judgments of appropriateness were made for lower than grade 7
- . A large number of materials were judged applicable to the attitudes and appreciations element. Although the highest frequency was for grades 6-12, at least 100 units were indicated for each grade level. However, the percent judged high is significantly lower than for other elements where high frequency was indicated.

Judgments on the appropriateness of units to target areas by elements resulted in most units being classified as appropriate for curriculum, career information, career preparation and guidance. Only 41 positive judgments were made for the other nine target areas. The element most frequently indicated was career awareness, followed by attitudes and appreciations. Materials determined appropriate for career awareness also received the highest frequency of judgments of high applicability.

These and other findings resulting from this project indicate that great effort has been made by commercial suppliers to provide career education materials. However, on the basis of CCEM criteria, comparatively few materials were judged highly appropriate for a number of elements, target areas and grade levels (i.e., self awareness materials below grade 9; educational awareness below grade 6; career awareness for grades 4, 5 and 6; economic awareness; decisionmaking; beginning competency; employability skills; and attitudes and appreciations at all grade levels). This is confirmed by judgments of over 400 suitability to CCEM needs for materials. 74 percent of materials were rated low for "innovativeness, substantive;" nearly 83 percent rated low for "innovativeness, procedural;" and approximately 68 percent rated low for participant involvement.

RECOMMENDATIONS

CCEM has significant opportunities to aid users of career education materials in identifying available materials and their sources. In addition, CCEM can assist commercial suppliers by maintaining an active, accurate inventory of this information. This can be accomplished without infringing on the prerogatives of individual school officials or teachers or the proprietary interests of commercial businesses.

If appropriate, CCEM can also be of major assistance to commercial suppliers of career education materials by conducting seminars to help them better understand the specific needs of the consumers. Many suppliers are attempting to be responsive by merely changing titles and/or inserting chapters in traditional materials. Most of these materials only minimally meet CCEM-I objectives. In part, this has been done because of the time required to develop new materials. However, several suppliers are unclear about the definition, theory and desired nature, scope and use of career education materials.

Specific recommendations are as follows:

1. Place the results of the project(s) in the ERIC system.
2. Establish and make available necessary resources for continuing the process of identifying, procuring, assessing, abstracting and indexing career education materials.
3. Place high emphasis on screening materials through careful review of catalogs to determine their probable appropriateness before issuing Material Procurement Requests. This will substantially reduce the resource and time requirements associated with each positively assessed unit.
4. Adopt and implement systems used in this project and make modifications and refinements deemed necessary to keep them efficient and operable at the least required cost.
5. Maintain and expand relationships with suppliers as appropriate. This requires prompt and responsive handling.
6. Do not change the CCEM matrixes or definitions for at least one year. Although refinements might improve the structure, they can be confusing to both consumers and suppliers.

7. Distribute detailed findings of this project to LEA's as soon as possible.
8. Begin a formal plan of action to convey CCEM's concept of career education and provide specific direction in terms of required types of commercially produced materials.

In summary, CCEM - - in conjunction with other educational agencies, institutions, organizations and commercial suppliers - - has a unique opportunity to assume leadership in improving the nature, scope and use of educational materials. Much of its success in doing so will depend on taking immediate advantage of the comprehensive data assembled in this project and its earlier companion study of the availability of non-commercial material.