The functions of the Educational Reference Center described in this manual include the provision of comprehensive research and retrieval services and SDI in the area of education-related literature and resources, primarily for the professional staff of the Education Division of HEW, and technical assistance available to a variety of other clients. Also described are the resources available and procedures for requesting, processing, and executing a computer search, as well as manual searching using the EPIC tools. Training programs in both online and manual searching are outlined, and the kinds of orientation programs, demonstrations, and technical advice provided are indicated. Appendices include sample forms for processing computer searches, form letters, evaluation forms, statistics forms, and lists of 92 databases available for computer searching and 32 indexes available for manual searching. (JEG)
INFORMATION SERVICES MANUAL

by

Mary A. Campbell

Educational Reference Center

September 1979

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Patricia Roberts Harris, Secretary
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National Institute of Education
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PREFACE

This manual is intended as an internal record of Educational Reference Center services and procedures, as of April, 1978. It was prepared in response to a management request to outline the operation of the Center. Since the manual includes information on administrative procedures as well as available services, it may be of interest to personnel of similar reference/information centers.

Staff members —— Charles Miasar, William Higgins, Judy Stark, and Joan Trumble —— generously shared their thoughts and experience to assist in the organization and development of the manual.

Mary A. Campbell
Educational Reference Center
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I. INTRODUCTION: EDUCATIONAL REFERENCE CENTER

The Educational Reference Center (ERC) provides comprehensive research and retrieval services in the area of education-related literature and resources primarily to the professional staff of the Education Division of HEW. Technical information services are also provided to the Executive Office of the President, Congressional offices, other Federal agencies, national and international organizations and associations, and various other requesters. The staff consists of four Technical Information Specialists and one Secretary. The Center is located at 1832 M. St., N.W., Washington, D.C. 20208.

II. FUNCTIONS

A. Search Services

The ERC Specialists:

1. Negotiate, structure, conduct, and review computerized literature searches. Select from over eighty-five (85) accessible online data bases and three computer search systems in order to obtain the requested results.

2. Conduct manual searches of a wide range of resources, including Educational Resources Information Center (ERIC) indexes and publications, reference indexes, referral information, directories, newsletters and other related reference tools.

3. Provide current awareness services for the professional and administrative staff of the National Institute of Education (NIE), Office of Education (OE), and Office of the Assistant Secretary for Education (ASE), in the form of monthly Selective Dissemination of Information (SDI) reports and weekly Ascatopics journal literature references. Distribute bulletins announcing the availability of computer searches, ERIC Clearinghouse publications, new data bases, services, and other items of interest to NIE/OE/ASE staff.

4. Prepare comprehensive search packages for key staff members in response to priority needs of the Education Division (information for conferences, national meetings, policy decisions, etc.). These packages include selective coverage of books, journal and research literature, state of the art reviews, and other related information.
B. Technical Assistance

The Specialists:

1. Plan and conduct training programs in manual and computerized search techniques, in the use of various information systems and resources, and in the operation of the computer terminal equipment for DHEW Education Division staff.

2. Provide orientations to the services and resources of ERC and demonstrations of online interactive computer searching for Education Division staff, as well as federal, state, local and foreign visitors.

3. Provide technical advice to staff of other information centers and libraries regarding the operation of the Educational Reference Center as a specialized information service, and methods of online computer searching.

C. Information Services

The Specialists:

1. Provide requesters with referrals to a variety of persons and organizations as sources of information. Maintain Central Referral File of these information sources.

2. Provide quick reference service and general information in response to inquiries from the public.

D. Other Activities

The Specialists:

1. Develop user feedback procedures and review feedback responses in order to assure effective service and to determine need for changes.

2. Maintain liaison with NIE program offices to keep current on program directions and new efforts in order to provide relevant and timely information and to anticipate future informational needs.

3. Participate in professional staff meetings, prepare statistical and other reports, and develop procedures for record keeping, as well as other administrative functions.
III. CLIENTELE

A. The Education Division of the Department of Health, Education, and Welfare (DHEW):

The Education Division includes researchers, program officers, administrators, consultants, and other professional staff of the National Institute of Education, U. S. Office of Education, and Office of the Assistant Secretary for Education.

B. Other Clientele:

Other clientele includes staff of the Executive Office of the President, Congressional offices, DHEW agencies, other Federal agencies, state and local education agencies, education associations and foundations, as well as others concerned with educational research.

IV. RESOURCES

A. Data Bases

1. Direct access to over eighty-five (85) data bases, encompassing education, social and behavioral sciences, business, science and technology, as well as information on Congressional hearings, sources of Federal and foundation assistance, and doctoral dissertations.

2. Access to six (6) additional computerized bibliographic data bases through agreements with the following government agencies:

   - Defense Documentation Center, Department of Defense
   - National Criminal Justice Reference Service, Department of Justice
   - Smithsonian Science Information Exchange
   - National Aeronautics and Space Administration
   - National Institute of Mental Health
   - National Library of Medicine
3. User manuals for three interactive online search systems used in ERC: Lockheed DIALOG system, System Development Corporation ORBIT system, and New York Times Information Bank system.

4. Descriptive information on content and indexing of data bases most frequently used by ERC staff.

B. Reference Information

1. Complete collection of Educational Resources Information Center (ERIC) reference materials:
   a) Resources in Education (RIF) - indexes and abstracts of research and related literature, from 1966 to the present.
   b) Current Index to Journals in Education (CIJE) - indexes and abstracts of journal literature, from 1969 to the present.
   c) Thesaurus of ERIC Descriptors - an official list of the formal vocabulary, or descriptors, used in subject indexing for the ERIC data base.
   d) Other ERIC reference tools, including Title Index, Contract/Grant Number Index, Project Number Index, Source Directory, Acquisitions Data Report.

2. File of computer searches indexed by subject in order to provide duplicate or reference copies.

3. Central Referral File on persons and organizations used as information and referral sources.

4. Reference collection of current publications of sixteen ERIC Clearinghouses, including state-of-the-art reviews, bibliographies, and other information analyses of timely educational topics. ERC maintains a collection of duplicate copies of publications to use as supplementary information with search packages or to distribute to visitors.

5. Reference copies of current publications of the National Institute of Education, the U.S. Office of Education, and other DHEW agencies.

6. Other reference tools, such as directories of information sources, newsletters of education organizations, and copies of Federal education legislation.
C. Equipment

1. One direct-line (480 character-per-second) terminal with cathode ray tube (CRT) for viewing, high-speed keyboard printer (120 characters-per-second), controller, and modem. This terminal has a direct, dedicated telephone line to the computer in California, and therefore is stationary equipment.

2. Two dial-up (30 character-per-second) portable terminals; these can be used wherever there is a telephone and an electrical outlet.

3. Two RemKard microfiche retrieval reader/printer units for quick retrieval and printing of ERIC abstracts.

V. SEARCH SERVICES

A. Search Requests

1. How Received

a) Telephone

The Secretary in ERC answers telephone calls and directs information inquiries to specific staff members, or to whichever staff member is available.

The Information Specialist determines what kind of response is appropriate. If the question calls for quick reference or referral information, the Information Specialist answers the questions immediately or arranges to call back the requester.

If the request calls for a computer search or information which will require more than quick reference, the Information Specialist negotiates the search request. Negotiation involves clarifying the specific questions to be answered, the purpose of the request, type of response needed, and the approximate length of time required to prepare the response.

b) Visitors

Visitors to ERC, individuals or groups, may

- Call in advance to arrange an appointment
- Stop at the Center without advance notice
The Head of ERC may arrange to see visitors or may request that another staff member assist them.

A staff member may also arrange his/her own appointments with prospective visitors. In the case of large groups, two or more staff members may meet with visitors.

Those who request computer searches may occasionally arrange to be present when the staff member runs the search.

Visitors who stop in the Center without advance notice are assisted at that time by staff members, if their schedules permit. If the visitors' request requires more time than is available, the staff member may arrange a future appointment for the visitor.

ERC receives a wide variety of visitors, including those from DHEW, other Federal agencies, education associations, private organizations, other information centers, and foreign countries. Educators from other countries have often visited ERC to learn about its operation and resources.

c) Written Requests

1) Letters

The secretary receives letters directed or referred to ERC, and gives them to the Head of ERC. The Head of ERC, in determining an appropriate response, may:

- Prepare the response
- Assign another staff member to prepare response
- Route to another office if request is inappropriate for ERC

The secretary types and sends letter of response, and places a copy in the ERC reading file.

2) Control Letters

The term "control letter" designates one which is sent from the NIE Executive Secretariat in accordance with formal agency procedures, outlining for whose signature the response is to be prepared, and by what date the response is to be returned to the Executive Secretariat. The procedure is as follows:
Head of ERC prepares letter of response or assigns it to another staff member

Secretary types the letter and files copy

An ERC staff member and the Chief of ERD (or another person delegated by Chief) proofread letter and sign initials as approval of final copy

Secretary sends or hand-carries response to the Office of the Executive Secretariat by given date

3) Search Request Forms

Search Request forms may be completed by requesters and sent to ERC through inter-office or regular mail. The staff member who receives the form notes the request on the Search Request Log and places the request in the central search basket. The staff member who responds to the request may call the requester for additional clarification, if necessary.

4) Memos

Memos requesting information are occasionally received from other DHEW staff members. These are handled in the same manner as letters or Search Request forms.

2. Centralized Request System

In negotiating incoming search requests, staff members complete Search Request forms. The completed forms are attached to manila folders, and placed in a centrally located in-basket. The staff member who received the request enters the pertinent information in the Search Request Log, located near the in-basket.

Search requests are then taken from the basket by staff members, who note, in the Search Request Log, their initials and the date the search was taken. The person who negotiated the request does not necessarily prepare the response, thus there is particular need for skillful and clear search negotiations. When the response has been completed, the staff member notes in the Log the date that the response was sent or picked up, and draws a line through request.

The centralized search system enables ERC staff to know, at any time:

- how many searches are in process
- staff member who is responsible for each request
turn-around time for requests
which searches are awaiting assignment

3. Special Search Projects

Occasionally a staff member is specifically asked to run a
computer search by a requester; that is, it is not to be
given to another staff member to do. These are also entered
in the Search Request Log, although the request is automatically
taken by the person who negotiated it, and is not available
to be taken by other staff members. In this way, all staff
members are aware of searches in process, and the Head of
ERC has an accurate idea of current workload of ERC and of
individual staff members.

4. Coordination of Search Requests

One staff member monitors the central request system
in order that searches are assigned in a timely manner
so that requesters receive results when they are needed

to determine priorities in assigning work

to check on turn-around time of requests

to coordinate workload among searchers

Each week, the professional staff of the Educational Resource
Division (ERD) meets to discuss current projects and develop-
ments. At these meetings ERC staff members discuss topics of
current searches in order to avoid duplication of work, as well
as to receive suggestions or assistance. Occasionally, ERC
staff meets to discuss assignment of search backlog.

B. Computer Searches

1. Negotiation

ERC staff members negotiate search requests by telephone or in
person. Written requests are clarified, if necessary, by call-
ing the requester.

The purpose of the negotiation is to clearly understand the
request and the kinds of information the requester expects to
receive, and to explain the kinds of information ERC can provide.
It is often necessary to divide the request into several parts,
each of which focuses on a certain aspect of the question.
While the requester may wish to provide lists of descriptors, or index terms, which s/he believes will retrieve the correct information, it is more helpful for the requester to state the question(s), as precisely as possible. The Information Specialist then determines the appropriate index terms and computer strategy to use in order to retrieve the desired information.

The ERC Specialist will:

a) Identify the requester, nature of request, and whether the requester is eligible to receive computer search service. ERC provides search service primarily to the Education Division of DHEW and secondarily to other Federal agencies. However, general information or referrals are provided to all requesters.

b) If the requester is eligible to receive computer search service, complete the information outlined in the Search Request Form, including:

   Identifying Information: Name, organizational affiliation, address, telephone number

   Date request was taken; by whom; whether through telephone, letter, or visit; and date when information is needed

   Purpose of request, that is, for what purpose the information will be used

   Age or grade level; for example, elementary, secondary, or higher education

   Time coverage; for example, all references since 1970 or 1976, etc.

   Format for prints: titles, citations, abstracts

   Approximate number of references desired (average number of prints is up to 100; printing more than 100 is discouraged, unless appropriate for broad search)

   In the case of the ERIC data base, whether both journal ("EJ") references and research-related ("ED") references are desired

   Data bases to be searched
Items to be excluded; for example, all journal articles, all references dealing with preschool education, etc.

Known authorities in the given field or examples of relevant articles

Statement of the question(s), clearly and simply written. Descriptors or index terms may be included if they seem to the searcher to be relevant.

The searcher discusses methods which can be used to narrow or broaden the search, as may be required. For example, if too many references are retrieved, results can be limited to a given time period, or several references may be printed in citation rather than abstract format. If the requester specifies, for example, 20-25 references, it is the responsibility of the searcher to retrieve the most relevant references, rather than to be comprehensive.

In most cases, the requester wants no more than 100-150 references; the searcher and requester reach an agreement regarding methods to limit the search to this number. Conversely, the searcher and requester discuss concepts which may be added to broaden the search, in the event that too few references are retrieved.

Also, the staff member discusses a realistic length of time in which the search can be run and results sent to the requester. This is determined with a view toward both the urgency and significance of the request and the priorities and workload of the ERC unit. Also taken into account is the fact that offline printing is done at the computer center in California, so that it takes approximately one week to receive offline prints. Requesters from NIE, OE, and the rest of DHEW receive preference, while searches from other authorized requesters are done as staff is able to work on them.

2. Selection of Data Bases

ERC has access to approximately eighty-five (85) data bases through the Lockheed DIALOG System, the System Development Corporation (SDC) ORBIT System, and the New York Times Information Bank. Approximately twenty-five of these data bases are used regularly, since they are more relevant to requests dealing with education and the social and behavioral sciences. ERC staff members maintain knowledge of the subject content and retrieval methods through:

a) Use of Lockheed, SDC, and New York Times User Manuals, which contain information on search techniques and data base descriptions

b) Attendance at training sessions sponsored by computer service vendors (Lockheed, SDC, New York Times) and data base...
suppliers (ERIC, Psychological Abstracts, Congressional Information Service, etc.)

c) Attendance at national and local conferences, seminars, and meetings of online users

d) Experience in actually using the various data bases on a day-to-day basis

This knowledge of the data bases enables staff members to choose appropriate data bases for a given search. For example, the searcher may determine that searches of ERIC, Psychological Abstracts and Comprehensive Dissertations Index would be appropriate. However, because of the expense of the data bases other than ERIC, searches of multiple data bases are limited to Education Division requesters.

3. Search Structure

When data bases have been selected, it is necessary for the searcher to be familiar with indexing procedures and computer retrieval strategies in order to structure the search in writing before it is run.

a) Index Term Searching

If the data base has a controlled vocabulary, that is, assigned index terms, the searcher may use a thesaurus of index terms to choose appropriate terms to be used for the search. Information on data base structure - whether controlled or uncontrolled vocabulary, or a combination of the two - can be found in the appropriate search service User Manual. Thesauri are available for those data bases which have controlled vocabularies, such as ERIC, Psychological Abstracts, Smithsonian Science Information Exchange. Using a thesaurus, the searcher may choose the terms or descriptors which are closest in meaning to the concepts to be retrieved.

b) Full Text Searching

Many data bases can be searched using only the full text method. In these data bases, each significant word in the entire citation (title, corporate source, abstracts, etc.) is searchable online. Thus the searcher is not limited to using only formal descriptors, but can use free terms and phrases. Structuring full-text searches involves choosing combinations of words to be entered into the computer to retrieve those references which contain the words or phrases. These combinations of words must be entered into the computer in specific ways. For example, to retrieve information on "magnet schools" from the ERIC file, the searcher may enter:
1) "magnet(w)schools" or "magnet(w)school"

The computer will then retrieve this combination of words from all fields: title, descriptor, identifier, corporate source, and abstract.

2) "magnet(w)schools/de, id, ti" or "magnet(w)school/de, id, ti"

The computer will retrieve these words from only the descriptor, identifier, and title fields.

A thorough discussion of full text searching can be found in Lockheed's Brief Guide to DIALOG Searching.

c) Index Term/Full Text Searching

ERIC and certain other data bases can be searched using both descriptors/index terms and free terms. Structuring these searches involves selecting descriptors and free terms, and determining how these terms can be combined or intersected to obtain needed information. For example, to obtain information from the ERIC file on bibliographies related to the aging, a combination of free terms (marked by asterisks) and descriptors can be used, as follows:

**Group I**
- *bibliographies/de, id
- state of the art reviews
- literature reviews
- research reviews (publications)

**Group II**
- *aging/id
- older adults
- senior citizens
- *retired(w)persons/id, ti
- *old(w)age/id, ti
- *gerontoIgy/de, id, ti

Group I is intersected with Group II to retrieve those references which have at least one element from each group.

4. Executing the Search

a) Use of Computer Terminals

With written search strategy as a guide in running the search, the searcher may use either the direct-line terminal with cathode ray tube (CRT) and high speed printer or a dial-up terminal which records the search logic on paper, much like a typewriter. ERC searchers prefer to use the direct-line terminal since it allows immediate viewing of strategy and results on a video screen, and the printer (120 characters per second) has a much higher speed...
capability than the dial-up terminal (30 c.p.s.). The Lockheed computer files are available through both the direct-line and dial-up terminals, while the System Development Corporation and New York Times Information Bank files are available to ERC only through the dial-up.

b) Interactive Online Searching

It is important to note that, whichever computer search system is used to execute a search, the system is interactive. This means that the searcher gets immediate results while transmitting information into the computer, and may vary the strategy depending on the results of this interaction. For example, the searcher may retrieve a large quantity of citations, and therefore may use one or a combination of several methods to limit the number of these results. Or, the searcher may find fewer citations than anticipated and may therefore need to broaden the search. While generally guided by a written strategy, the searcher often needs to revise it as s/he interacts with the computer. The searcher has already discussed with the requester the possible options to broaden or to narrow the search.

c) Search Commands

The searcher uses a variety of search commands, which tell the computer what operations to perform, for example:

- to begin a search
- to expand search terms in an alphabetical display
- to select descriptors or full text terms
- to combine search terms using Boolean operators: "and," "or," "not"
- to limit the quantity of the results in various ways:
  - by document type
  - by accession number range - limits references to given periods of time
  - by journal or research literature references (EJ or ED numbers in the ERIC file)
  - by major descriptors - those which are most relevant to the article
- to display results (titles, citations and abstracts)
- to type results on local printer
to print results offline at the computer center

to end a search

While the above list of commands is not comprehensive, they are those most commonly used. The way in which they are used depends on the search system which the searcher is using. Complete discussions of search techniques and commands are found in:

- Lockheed Information's Brief Guide to DIALOG Searching and Guide to DIALOG Data Bases, Volumes I and II
- System Development Corporation's ORBIT User Manual

d) General Procedure

While specific computer operations vary with each search system, the general procedure is to:

- enter search terms
- use Boolean operators (and, or, not) and limiting factors to obtain desired results
- review the resulting information
- continue or revise search strategy as needed
- check sampling of resulting bibliographic references to verify relevance
- have results printed offline or typed out locally on printer, as appropriate
- end search

5. Record-Keeping for Searches

a) Search Request Form

The searcher uses the Search Request Form as a guide in negotiating searches, completes the form as clearly and completely as possible, attaches it and a blank Search Record Form to a manila folder, and places it in the central search basket.
b) Search Request Log

The staff member who negotiates the search enters the request in one-line format into the Search Request Log, located near the central search basket. Information includes date of the request, staff member's initials, requester's name and agency, topic, and date by which response is needed.

c) Computer Terminal Usage Log

Before running a search, the searcher notes date, search number, initials, requester's name, times when searches are started and completed, computer files used, and costs. Searches are numbered consecutively beginning with each fiscal year, for example, 78-001, 78-002, etc.

Quick look-up searches, such as retrieving publications of given authors or locating specific documents, are not given search numbers but are listed on the Log.

d) Search Record

After completing the search, the searcher fills out a Search Record Form which is already attached to a manila folder under the Search Request Form. This form provides information on the requester, time and cost to run the search, search title, strategy of specific questions or sub-parts, number of prints for each question, and index terms to be used for the Search Index. Index terms are noted only for searches which, in the searcher's judgment, will be useful to keep on file. The Search Record Form is kept attached to the front of the manila folder, while the Search Request Form, the local type-out of the search history, and any other pertinent information is placed inside the folder. The folder is then given to the secretary to be recorded.

e) Computer Search Log

The secretary records each completed search in the Computer Search Log, which provides a complete record of searches run: when, by whom, for whom, topics, time used, number of prints, and costs.
6. Search Review

When computer print-outs are received from the computer center, the secretary sorts them by search number, places them in the appropriate manila folders and distributes them to searchers, who review them for relevancy. The searcher determines whether the results are acceptable. If not, s/he may delete portions of the search or re-run the search with a different strategy. In some cases, the searcher may edit results to include only the relevant references, a procedure followed in preparing a special search package in which the information is to be highly selective.

The searcher titles the search on the first page of the print-out. The sub-parts may also be titled.

7. Delivery of Search

The searcher usually gives the search to the secretary to send to the requester, along with an appropriate cover letter. The searcher may add a note to the pre-printed letter. If the requester wishes to pick up the search, the searcher calls to let the requester know when it has arrived.

C. Manual Searches

ERC staff is able to provide information by manually searching resources in ERC and the Educational Research Library (ERL). Information retrieved manually may be sufficient to provide requesters with needed information; manual searches may also supplement computer searches. For example, in response to a request for information on American Indian education, ERC may provide a computer search, ERIC Clearinghouse publications, and referrals to other agencies or organizations as additional sources of information.

1. Resources for Manual Searching

Several resources may be used for manual searching, including:
a) Educational Resource Information Center (ERIC)

The ERIC reference collection consists of hardbound volumes of:

- **Resources in Education (RIE)** - a monthly publication of abstracts and indexes to research and related literature published since 1966

- **Current Index to Journals in Education (CIJE)** - a monthly publication of abstracts and indexes to journal literature published since 1969

b) RemKard Reader/Printers

Two RemKard microfiche retrieval reader/printers, located in ERC, provide quick mechanical access to ERIC abstracts. When ERIC "ED" or "EJ" numbered citations have been identified, the ED/EJ number can be keyed into the machine, and the abstract displayed on a screen and printed, if needed. This is a quicker method to locate abstracts than to manually locate the abstracts in hardbound volumes of RIE or CIJE.

c) Other ERIC Reference Tools

Other reference tools include the **Thesaurus of ERIC Descriptors**, **Title Index to ERIC documents cited in RIE**, **ERIC Descriptor and Identifier Usage Report**, **Report/Project Number Index**, **Contract/Grant Number Index**, and several ERIC bibliographies, including: **Educational Finance**, **Career Education**, **Early Childhood Education**, **Reading**, and **Library and Information Sciences**.

d) ERIC Clearinghouse Publications

The ERIC Clearinghouses produce a variety of information analysis products, including bibliographies and state-of-the-art reviews on timely educational topics. The reference collection of these materials may be searched manually for appropriate titles.

e) Educational Research in Progress

**Educational Research in Progress (ERP)** is an NIE publication which lists on-going or recently completed research projects funded by NIE. The projects are indexed by subject, investigator, institution, responsible NIE branch, geographic location, contract/grant number, and dollar amount. This information is also online and can be retrieved using the computer terminals.
Reference Indexes

There are numerous indexes available for reference in the Educational Research Library which can be used for manual searching, including:

- American Statistics Index
- Biography Index
- Congressional Information Service Index and Abstracts
- Education Index
- New York Times Index

Referral Information

ERC staff members may check the ERC Central Referral file or personal files for information on names, locations, and telephone numbers of persons or organizations which can provide education-related information to requesters.

Resource Publications

ERC maintains a collection of several publications which list information sources, including:

- Encyclopedia of Associations
- Research Centers Directory
- Foundation Directory
- Encyclopedia of Governmental Advisory Organizations
- Directory of Education Associations

Searching ERIC Indexes

The ERIC indexes to Resources in Education and Current Index to Journals in Education are used for manual searching. General procedures in searching the indexes are:

a) Consult the Thesaurus of ERIC Descriptors to select appropriate descriptors to use for the manual search.

1) It is generally easiest to begin with the "Rotated Descriptor Display," an alphabetic listing of each word of each descriptor. For example, to
find information on audiovisual instruction in education, turn first to the rotated display under "audiovisual;"

One might search the indexes under the descriptors "audiovisual instruction" or "audiovisual programs." Each of these terms is a descriptor which is listed, along with broader, narrower or related terms, in the Main Entry Section of the Thesaurus.
2) Next, turn to the alphabetical Main Entry section of the Thesaurus:

Audiovisual Education
use AUDIOVISUAL INSTRUCTION

Audiovisual Equipment
use AUDIOVISUAL AIDS

AUDIOVISUAL INSTRUCTION
Jul. 1966
CIJE: 523 RIE: 818
UF Audiovisual Education
BT Instruction
RT Audio Video Laboratories
Audiovisual Aids
Audiovisual Communication
Audiovisual Coordinators
Audiovisual Directors
Audiovisual Programs
Closed Circuit Television
Educational Television
Instructional Media
Multimedia Instruction
Open Circuit Television
Protocol Materials
Repetitive Film Showings

Audiovisual Instrumentation
use AUDIOVISUAL AIDS

Audiovisual Materials
use AUDIOVISUAL AIDS

Audiovisual Media
use AUDIOVISUAL AIDS

AUDIOVISUAL PROGRAMS
Jul. 1966
CIJE: 148 RIE: 169
UF Coordinated Audiovisual Programs
BT Programs
RT Audiovisual Communication
Audiovisual Coordinators
Audiovisual Directors
Audiovisual Instruction
Audiovisual Television Systems
use EDUCATIONAL TELEVISION

The abbreviations used are:

SN - Scope note
UF - Used For
NT - Narrower Term
BT - Broader Term
RT - Related Term
In this section, the terms are defined and related to other terms in the Thesaurus. These relationships enable the searcher to select one or several terms which most nearly correspond to the search concepts.

b) After selecting the appropriate descriptors, consult the subject indexes of:

- **Resources in Education (RIE)**, for references to research and related literature from 1966 to the present
- **Current Index to Journals in Education (CIJE)**, for references to journal literature from 1969 to the present

Each of these publications has an Author Index and an Institution Index as well as a Subject Index.

c) Use those indexes which correspond to the time period to be covered. For example, one may need to look only in the most recent monthly indexes to cover recent references or in annual or semiannual indexes to cover earlier years.

While manual searches of ERIC are done for brief or simple searches involving one or two concepts, complex searches involving several concepts are usually done using the computer.

3. Locating Research Documents and Journal Articles

When citations to research-related documents ("ED" citations) or journal articles ("EJ" citations) have been identified by means of manual or computer searching, the full document or article can be located or obtained through various sources.

a) **ERIC Microfiche Collections**

To locate the majority of documents cited in RIE, one can refer to an ERIC microfiche collection, which contains the documents in microfiche form. ERC staff may refer users to microfiche collections in their local areas; most university and large education libraries have these collections. Also, copies of the original document may be ordered in microfiche or paper copy from the ERIC Document Reproduction Services (EDRS). If the document is not available in an ERIC microfiche collection or through EDRS, the citation will include information regarding its availability elsewhere.
The Educational Research Library of the National Institute of Education has a complete ERIC microfiche collection, as well as several microform readers and reader/printers, so that one can read entire documents and have selected pages printed, if needed.

b) Journal Articles

To locate the full journal articles cited in CIJE, one may refer directly to the cited journal or order a copy of the article through University Microfilms International.

D. Current Awareness Services

ERC provides current awareness services to NIE, OE and ASE staff through Selective Dissemination of Information (SDI) and Ascatopics service.

1. Selective Dissemination of Information (SDI)

The SDI reports are monthly computer print-outs providing citations and abstracts of literature announced each month from selected data bases. As an example, an NIE staff member may request to receive monthly SDI print-outs announcing the ERIC journal and research-related literature in the area of work study programs. In this way, NIE, OE, and ASE staff members can keep current in subject areas of interest of them.

(SDI procedures involve several steps:

a) Meet with Education Division staff members, in groups or individually, to explain the SDI service.

b) Discuss information needs with individual staff members and determine specific subject areas to be covered in the SDI.

c) Set up search profile, a combination of descriptors and/or full-text terms, likely to produce desired information

d) Key the information into the computer. This is done only once, and is easily modified after results have been reviewed.

e) Note necessary information on SDI Log Form.

f) Receive, review, and deliver or send monthly print-outs to requesters.

At least each six months, enclose an SDI Evaluation form to receive user's written comments and suggestions.
ERC Secretary logs in print-outs on SDI Log Form as they are received each month and notes charges for each SDI. She distributes SDI reports to searcher who initiated them, who is then responsible to deliver or send them. ERC staff members may have SDI reports duplicated to provide copies to additional users or units involved in the same subject areas in the Education Division. For example, copies of SDI reports for NIE staff may be sent to OE staff members and vice versa.

Specific SDI procedures are described in Lockheed's Brief Guide to DIALOG Searching. The general procedure is to select search terms, input them, and use the end/SDI command to indicate that these terms are to be run in a given data base each month. Charges for the SDI's are determined according to the number of descriptors used in each profile, and the number of references contained in each monthly report. Thus far, SDI service has been provided from the ERIC file; however, as the SDI feature becomes available for additional computer files, the service will be expanded to include other files.

2. Ascatopics

The Ascatopics service is a weekly journal-alerting service provided by the Institute for Scientific Information (ISI), through subscription. Each week the Ascatopics computer system checks over 5,000 professional journals and provides listings of references in given subject areas.

ERC is providing Ascatopics reports to six units within NIE, including one for ERC/ERL. ERC staff announced the availability of this service to a limited number of NIE staff, to provide the service on an experimental basis. Each of the NIE units has a contact person to receive the reports and distribute them to other staff members.

The secretary initially receives the reports, logs them in, and distributes them to designated NIE staff.

During 1978, this service will be evaluated to determine its usefulness and the need for expansion.

3. Information Bulletins

As another current awareness service, ERC staff members prepare monthly bulletins for distribution to staff of National Institute of Education, Office of Education, and Office of the Assistant Secretary for Education, covering any of the following:
Recent computer searches run by ERC

Recent ERIC Clearinghouse publications

Announcements of information packages, conference papers, or other items of interest to NIE/OE/ASE staff

Announcements of new ERC services or availability of new data bases

The announced materials are provided to requesters on a loan basis. The secretary circulates the materials and keeps records of the loans.

E. Comprehensive Search Packages

1. Package Searches Prepared By ERC Staff

Package searches are provided in response to priority requests, such as background information for national conferences, policy decisions, requests for proposals, or other special projects which require comprehensive information. These packages may include computer searches of one or more data bases, copies of journal articles, microfiche of original research documents, books, additional publications, and referral information.

These packages may be prepared by ERC staff or jointly with the Educational Resource Library staff.

2. Package Searches Prepared By Contractors

In addition to preparing package searches in-house, ERC has contracted to receive comprehensive information packages from other information centers. These packages are original searches which are individually tailored to a specific research question asked by NIE, USOE, and ASE staff. Each package contains a custom bibliography and selected journal articles or research reports in their entirety. The purpose of this service is to utilize the expertise and indepth searching capability of other centers in order to provide specialized searches which ERC does not have sufficient staff time to do.

When extensive search questions are received, an ERC staff member:

a) Negotiates the search

b) Contacts the appropriate information center to arrange for the search package to be prepared within a given period of time
c) Reviews the completed package and prepares a written report
d) Delivers search package to requester
e) Solicits feedback from the requester

Turn-around time for this specialized service is approximately four to six weeks, therefore the information needs of the user must be anticipated well in advance.

3. Edited Computer Searches

This service involves executing a computer search on one or more databases and reviewing resulting print-outs so that only those abstracts judged to be relevant are delivered to the requester.

This service may be provided on a short term basis by using the computer to retrieve abstracts, viewing them one by one, and printing only selected abstracts. Generally, this method is not advisable unless the need is urgent, because of the cost of on-line computer time which is used and the professional time of the ERC staff member who evaluates and compiles results.

VI. TECHNICAL ASSISTANCE

A. Training Programs

1. Manual Searching

ERC staff provides training in manual search techniques on a one-to-one basis or for groups, as requested. This training includes the use of:

- Thesaurus of ERIC Descriptors
- Resources in Education
- Current Index to Journals in Education
- Other ERIC reference tools, including Title Index, Contract/Grants Number Index, Descriptor-Identifier Postings, etc.
- Various directories, such as Survey of ERIC Data Base Search Services, Directory of ERIC Collections in the Washington, D.C. Area, Directory of ERIC Microfiche Collections
- RemKard retrieval reader/printers, for displaying and printing ERIC abstracts
The training also includes information on obtaining original journal articles cited in CIJE, using ERIC microfiche collections to locate original documents cited in RIE, and procedures for ordering documents from various sources.

2. Computer Searching

a) Introductory (One or Two Sessions)

This basic training is provided for individuals or groups and includes:

- Explanation of the capabilities of computer searching
- Meaning of "descriptor searching" and "full text searching"
- Description of computer commands
- Demonstration of computer terminal operation
- Hands-on experience in operating the computer terminal to do quick look-up searches

b) Computer Search Techniques (Three or More Sessions)

This training is provided for individual NIE/OE staff members or small groups, as requested. The training includes:

- Explanation of interactive online searching
- Search strategy: selection of index terms or descriptors, free terms, and appropriate Boolean logic
- Use of computer commands: logon, begin, explain, select, combine, display, type, limit, print, end, logoff
- Boolean logic: Use of "and," "or," "not" operations
- Methods of descriptor searching and full text searching
- Various output formats: titles, citations, abstracts
- Printing locally and offline at the computer
- Methods to limit search output
- Hands-on experience in using computer terminal
Following the completion of training sessions, the ERC staff member prepares a written report for each trainee's personnel record. The report covers:

- length of training
- content of training
- additional comments

B. Orientations/Demonstrations

Orientation to ERC services and resources, and demonstration of online computer terminals are provided to individual DHHS staff members or groups, visitors from other agencies or organizations, and visitors from foreign countries. The orientations are arranged in advance by telephone. Staff of the Department of State, the U.S. Information Agency, and the OE/International Teacher Exchange Program occasionally request that ERC staff provide these orientations as part of itineraries for educators from other countries.

C. Technical Advice

ERC staff members provide technical advice to other organizations and individuals, including administrators and staff of other information centers and agencies, as well as visitors from foreign countries. Kinds of technical advice may include:

1. Information regarding methods of operation in ERC; for example, with a view toward evaluating their own operation, the staff from a state department of education visited to review the kinds of services ERC offers and methods for providing such services.

2. Discussion with individuals or groups, in the process of formulating plans for their own information services, regarding such issues as availability of education resources and methods of obtaining additional information if needed; for example, visitors from other countries have asked for information on the use and availability of ERIC collections and how to get further information about computer search systems.

3. Assistance in planning or evaluating search strategies or in operating specific search systems; for example, an Information Specialist from an education association sent copies of several searches she had completed and asked that ERC evaluate them. Staff members from other agencies who have limited online searching experience sometimes call for technical advice on operating the search systems.
VII. INFORMATION SERVICES

A. Referrals

Referrals to other information sources - persons or organizations - may be provided as responses to information requests or in addition to other information provided. Sources of referral information may be found through:

1. Central Referral File:

The Central Referral File, a 3"X5" card index, contains names of persons and organizations which ERC staff members have collected as a result of their individual contacts and knowledge. Each staff member may also maintain a personal file, but adds to the Central Referral File as contacts are made.

2. Other Information Centers

ERC staff members may obtain information from or refer requesters to other information centers, for example:

a) ERIC Clearinghouses:

Each of sixteen ERIC Clearinghouses specializes in a particular educational area, such as career education or urban education.

b) Nexus:

A toll-free information and referral service of the American Association for Higher Education, covering information in post secondary education, with emphasis on specific programs, knowledgeable people, and new developments in the field.

c) National Referral Center, Science and Technology Division, Library of Congress:

Referral service which directs requesters to organizations or individuals with specialized knowledge in the physical, biological, social, and engineering sciences.

3. Directories of Information Sources

ERC staff members may obtain additional resource information from several directories, such as the Encyclopedia of Associations, Directory of Education Associations, Research Centers Directory, or the Catalog of Federal Education Assistance Programs.
4. ERIC Collections/Search Services

Requesters from various parts of the country call to inquire about sources of education-related information in their local areas, including specific information regarding locations of ERIC microfiche collections and available computer search services. In providing referral information to these requesters, ERC staff may consult:

- Directory of ERIC Microfiche Collections (Arranged by Geographic Location)
- Directory of ERIC Collections in the Washington, D.C. Area
- Survey of ERIC Data Base Search Services

B. Quick Reference/General Information

ERC staff members receive frequent questions from NIE and other agency staff, as well as the general public, regarding identification of specific documents, publications about particular topics, procedures for ordering documents, information related to ERC services or the use of the ERIC system, and similar general inquiries. Staff members supply the needed information based on their knowledge of the subject or by consulting other resources.

These requests are classified as quick reference when it is necessary to look up the information in a particular reference tool. Otherwise, they are identified as general information requests.

VIII. OTHER ACTIVITIES

A. User Feedback Procedures

User feedback is solicited for both computer search service and selective dissemination of information (SDI) service by means of written evaluation forms, which are periodically enclosed with computer searches and SDI reports.

1. Computer Search Service

The Search Feedback form includes information on the relevancy, usefulness, and timeliness of searches, as well as additional user comments and suggestions for improvement. Return envelopes are included for the user's convenience. ERC staff members review the completed forms in order to determine any need for improvement in service.
2. Selective Dissemination of Information (SDI)

The SDI Evaluation form includes information on the usefulness of the monthly SDI searches and the need for any changes in the SDI profiles, as well as user comments and suggestions. Searchers enclose these forms with SDI searches approximately every six months. Since users are NIE/OE/ASE staff members, responses are returned through inter-office mail.

B. Liaison with Program Offices

In order to keep current on NIE programs and to provide the most timely information, ERC staff members maintain contact with program staff through:

- Discussions with individual staff members regarding their daily inquiries, SDI profiles, and other information needs
- Attendance at NIE program seminars or presentations
- Attendance at program staff meetings
- Orientations for new employees
- Training of staff members
- User feedback information

C. Administration

1. Staff Meetings

Educational Resource Division (ERD) professional staff meets weekly to keep each other informed of recent inquiries, projects, and new developments in education or library and information science. Each person briefly describes his/her current search topics and projects so that other staff members may provide assistance or suggestions, as well as avoid duplication of efforts.

ERC staff meets when the need arises to discuss ERC projects, new developments, or search backlog.

2. Reports

a) Weekly Status Reports

The Educational Resource Division staff prepares a Weekly Status Report for the Associate Director, Office of Administration and Management. The report outlines the significant activities of each unit of ERD. The ERC portion of the report consists of information regarding:
Weekly statistics on services, clientele, and sources of requests

- Summary of numbers of searches completed, for whom, and examples of topics
- Congressional requests/responses
- Visitors to ERC
- Orientations/Training provided
- Summary of the most significant events or activities
- Backlog of searches
- Projects and visitors for the coming week

Each ERC staff member keeps statistics for the week, using an ERC Weekly Statistics Report form. Each staff member also prepares a weekly narrative report, outlining his/her most significant activities. At the end of the week, ERC staff members compile the narrative section of the report, and the secretary compiles the statistical report.

b) ERC Monthly Statistical Reports

Each month an ERC staff member compiles cumulative statistics for ERC records. A portion of this report dealing with categories of clientele is forwarded to the Library, to be combined with similar information from the rest of ERD and sent to the Office of the Director.

An ERC staff member prepares a semi-annual statistical report of ERC activities, using the monthly reports. Periodically, graphs and charts are prepared to draw comparisons or illustrate trends.

c) Special Reports

ERC has prepared special reports requested by various NIE administrative sources, including Office of the Director; Associate Director, Division of Administration and Management; and Chief, Educational Resource Division. Reports have included such subjects as:

- Operational Planning Systems - Outline of ERC objectives and time schedules for completion
- Educational Reference Center functions
Major achievements of ERC

Categories of work units and staff time per work unit, as part of agency evaluation

Descriptions of ERC services to Congressional offices

Listings of clientele: visitors from Congress, education associations, other information centers, foreign countries

Listings of current data bases accessible through ERC

Potential functions of ERC as a national resource center

ERC Future Plans and Goals

3. Files

The ERC secretary maintains filing systems for:

a) ERC Administrative Records

These records include reports, planning papers, statistics, purchase orders, memoranda, and records of contractor services. Also, there is a clipboard reading file consisting of copies of all written material prepared by ERC staff. Each three months this information is added to the Administrative Record file.

b) Computer Searches

Those searches which in staff members' judgment are to be indexed and kept, are filed according to search number. Approximately every six months, an ERC staff member reviews the searches and discards those which are not of general interest to NIE/OE/ASE staff. Only those files from the previous and current fiscal years are maintained.

c) ERC Reference Materials

These materials include program reports and other publications of the National Institute of Education, Office of Education, National Center for Educational Statistics, other DHEW offices, as well as other Federal agencies, education associations, and the Education Resources Information Center (ERIC).
d) ERIC Clearinghouse Publications

One copy of each publication sent by the ERIC Clearinghouses is kept on shelves in the ERC reference area. The publications consist of state of the art papers, bibliographies, and other information analysis products. Duplicates of any publication are filed in cabinets to be provided to requesters or used to supplement computer searches.
Appendix A. 1

Computer Search Forms

A. 1. 1  Search Request
A. 1. 2  Search Request Log
A. 1. 3  Computer Terminal Usage Log
A. 1. 4  Computer Terminal Log – New York Times Information Bank
A. 1. 5  Search Record
A. 1. 6  Computer Search Log
A. 1. 7  Selective Dissemination of Information (SDI) Results
SEARCH REQUEST
EDUCATIONAL REFERENCE CENTER

REQUESTER

AGENCY/ORG. 

ADDRESS

TELEPHONE NO.

PURPOSE

AGE/GRADE LEVEL

TIME COVERAGE

OUTPUT: ABSTRACTS CITATIONS TITLES OTHER

NUMBER OF REFERENCES DESIRED

ED EJ

ITEMS TO BE EXCLUDED

KNOWN AUTHORITIES

SUBJECT (INCLUDE DESCRIPTORS, KEY WORDS OR PHRASES USED IN SUBJECT AREA)

DATE

TAKEN BY

NEEDED BY

T L V:

41
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<th>DATE OF REQUEST</th>
<th>STAFF MEMBER</th>
<th>AGENCY &amp; REQUESTOR</th>
<th>TOPIC</th>
<th>NAME OF SEARCHER</th>
<th>SENT SEARCH OUT</th>
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*Appendix A.12.*
## Computer Terminal Usage Log

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<th>Comments</th>
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<th>Off</th>
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<th>Cost</th>
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"144"
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<tr>
<th>DATE</th>
<th>SEARCH #</th>
<th>SEARCHER</th>
<th>REQUESTER</th>
<th>COMMENTS</th>
<th>MINS/HRS</th>
<th># OF PRTS.</th>
<th># OF ABS. LINES</th>
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<td>SEARCHER</td>
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<td>DATE REQUESTED</td>
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<th>SEARCH TITLE</th>
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<tr>
<th>FILE</th>
<th>SEARCH QUESTIONS</th>
<th>PRINTS/FORMAT</th>
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43 47
### SDI Results

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<tr>
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<th>SERIAL NO.</th>
<th>FOR/ GROUP</th>
<th>NO. DESCR.</th>
<th>MAX. NO. PRINTS</th>
<th># COST</th>
<th># COST</th>
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Appendix A. 2

Form Letters

A. 2. 1 Search Cover Letter for NIE/OE/ASE Staff
A. 2. 2 Search Cover Letter for Requesters Other Than NIE/OE/ASE Staff
MEMORANDUM

TO: NIE/OE/ASE Staff

FROM: Educational Reference Center
Educational Resource Division/OAM

SUBJECT: Response to Recent Request for Information

A literature search of the resources of the Educational Reference Center has yielded the enclosed references. The entries headed by EJ-numbers refer to journal articles cited in Current Index to Journals in Education. This monthly guide to periodical literature published since 1969 covers more than 600 education and education-related journals. Entries headed by ED-numbers are references cited in Resources in Education. This monthly abstract journal published since 1966 announces recently completed research reports, descriptions of outstanding programs, and other documents of educational significance.

For your convenience, the Educational Research Library of NIE, located on the sixth floor of the Marsh Building, 1832 M Street, N.W., maintains an ERIC microfiche collection of research documents as well as an extensive collection of journals. The OE Branch Library, FOB-6, Room A-038, also has an ERIC microfiche collection and a selected collection of current journals. To obtain copies of any listed references including those not available from EDRS, please contact the NIE Educational Research Library, 254-5060.

We hope that this information will be useful to you. If the Educational Reference Center can be of further assistance, please contact us at 254-7934.
Dear Requester:

This is in reply to your recent inquiry.

A literature search of the resources of the Educational Reference Center has yielded the enclosed references. The entries headed by EJ-numbers refer to journal articles cited in Current Index to Journals in Education, while those headed by ED-numbers refer to research and research-related reports cited in Resources in Education (formerly Research in Education). Both of these monthly publications are sponsored by the Educational Resources Information Center (ERIC) of the National Institute of Education. They are available for reference in many college and public libraries and in the offices of many State and local education agencies. They are also available on subscription from the publishers.

Copies of journal articles (EJ-citations) can be obtained through your local library or through journal publishers. Individual copies of research documents (ED-citations) are usually available for purchase on microfiche and paper copy from the ERIC Document Reproduction Service (EDRS), P. O. Box 190, Arlington, Virginia 22210. Reference collections of these microfiche are maintained by most libraries and information centers which specialize in educational information.

We hope that this information will be useful to you. If the Educational Reference Center can be of further assistance, please let us know.

Sincerely,

Educational Reference Center
(202) 254-7934

Enclosures
Appendix A. 3

Evaluation Forms

A. 3. 1
Search Feedback Form

A. 3. 2
Evaluation of Selective Dissemination of Information (SDI) Service
USER'S EVALUATION OF ERC SEARCH

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTE OF EDUCATION
OFFICE OF ADMINISTRATION

We need your assistance to enable us to improve our services. Please complete this evaluation of the enclosed literature search.

(Check only one alternative for each question.)

1. How RELEVANT to your topic were the entries?
   - Highly relevant
   - Somewhat relevant
   - Not relevant

2. How USEFUL for your professional functioning were the results to you?
   - Very useful
   - Useful
   - Not useful

3. Were the number of entries:
   - Too few
   - Right amount
   - Too many

4. The search arrived:
   - Much earlier than expected
   - Slightly earlier than expected
   - In time for your purposes
   - Late but still useful
   - Too late for your purposes

5. Circle the degree to which you think the titles or abstracts adequately represented the document in its entirety.

   Very poorly  Very Well
   1        2        3        4        5
6. After receiving the ERC search, it was used for:

[ ] Making a decision concerning an educational issue
[ ] Planning a program that currently is not available
[ ] Modifying or improving a program that currently exists
[ ] Increasing professional background knowledge about a topic
[ ] Other (please specify)________________________

7. Will the search be circulated in your division? [ ] yes [ ] no

Will parts of the search be reproduced for wider dissemination? [ ] yes [ ] no

8. What part of the search would you have done alone if the service had not been available from ERC?
[ ] all [ ] little
[ ] most [ ] none
[ ] some

9. Would you use ERC and the ERIC system again? [ ] yes [ ] no

If no, why________________________

10. What general comments or suggestions can you offer about the information search?
________________________________________

________________________________________

________________________________________

(OPTIONAL) Name ____________________________

Agency ____________________________

Search Title and Number ____________________________

FOLD, STAPLE, AND MAIL

RETURN TO:
EVALUATION OF SDI SERVICE

The Educational Reference Center staff is interested in your comments about our monthly Selective Dissemination of Information (SDI) service. We will appreciate your returning this questionnaire to:

Educational Reference Center
Room 705 -- Marsh Building
NIE -- (Stop 116)

1. How long have you been receiving SDI service?

2. In what ways have you used the SDI service?

3. Have the monthly SDI print-outs contained too few, too many, or about the right number of references for your purposes?

4. Has the subject area coverage been too broad, too narrow, or sufficient to cover your area of interest?

5. Are you interested in making any changes in the SDI's you currently receive or in receiving additional SDI print-outs?

6. Do you wish to continue receiving SDI service?

7. Other comments or suggestions?

The SDI search profiles can easily be changed to increase or decrease the number of references or to broaden or narrow subject area coverage. Please don't hesitate to contact us to request changes or to offer suggestions for improvement of service.

Name __________________________________________ Date ____________

Agency, Unit __________________________________________ Telephone No. ______________________

Address ________________________________________________
Appendix A. 4
Statistics Forms

A. 4. 1  ERC Weekly Statistics Report
A. 4. 2  ERC Cumulative Statistics Report
### ERC WEEKLY STATISTICS REPORT

#### Services (Numbers)

<table>
<thead>
<tr>
<th>Service</th>
<th>Number</th>
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<tbody>
<tr>
<td>Searching</td>
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<tr>
<td>Computer Searches</td>
<td></td>
</tr>
<tr>
<td>Branch Searches</td>
<td></td>
</tr>
<tr>
<td>Typeouts</td>
<td></td>
</tr>
<tr>
<td>Search Negotiations</td>
<td></td>
</tr>
<tr>
<td>Searches Reviewed</td>
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</tr>
<tr>
<td>Manual Searches</td>
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<td>Distribution</td>
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<td>Publication Sent</td>
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</tr>
<tr>
<td>Publication Lent</td>
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<tr>
<td>SDI's Distributed</td>
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#### Technical Assistance

<table>
<thead>
<tr>
<th>Assistance</th>
<th>Number</th>
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<tbody>
<tr>
<td>Orientations</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
</tr>
<tr>
<td>Assistance to ERIC Users</td>
<td></td>
</tr>
<tr>
<td>Technical Advice</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td></td>
</tr>
<tr>
<td>Quick Reference</td>
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<tr>
<td>Referrals</td>
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<td>General Information</td>
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### Clientele (Numbers)

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<th>Number</th>
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<tr>
<td>NIE</td>
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</tr>
<tr>
<td>OE</td>
<td></td>
</tr>
<tr>
<td>ASE</td>
<td></td>
</tr>
<tr>
<td>OS-BEW</td>
<td></td>
</tr>
<tr>
<td>Other HEV'</td>
<td></td>
</tr>
<tr>
<td>Congress</td>
<td></td>
</tr>
<tr>
<td>Ex. Office of the President</td>
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</tr>
<tr>
<td>Other Federal incl. Judiciary</td>
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</tr>
<tr>
<td>Int'l./Foreign Educators</td>
<td></td>
</tr>
<tr>
<td>Associations &amp; Foundations</td>
<td></td>
</tr>
<tr>
<td>Colleges &amp; Universities</td>
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<tr>
<td>State &amp; Local Ed. Agencies</td>
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<tr>
<td>Public &amp; Others</td>
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### Source of Requests (Numbers)

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<tr>
<td>Visitors</td>
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<tr>
<td>Letters Received</td>
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<tr>
<td>Calls: In</td>
<td></td>
</tr>
<tr>
<td>Out</td>
<td></td>
</tr>
<tr>
<td>Letters Answered</td>
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### ERC Statistics

**Source of Request**

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</table>

**Clientele**

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<tr>
<th>Total</th>
<th>NIE</th>
<th>OE</th>
<th>ASE</th>
<th>OS-</th>
<th>Other</th>
<th>Exec.</th>
<th>Other Fed.</th>
<th>Int'l/For.</th>
<th>Fdns.</th>
<th>Coll. &amp; State</th>
<th>Public &amp; Others</th>
</tr>
</thead>
</table>

**Services**

<table>
<thead>
<tr>
<th>Total</th>
<th>Searching</th>
<th>Information</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Computer Searches</td>
<td>Branch Searches</td>
<td>Typeouts</td>
</tr>
</tbody>
</table>

**Technical Assistance**

<table>
<thead>
<tr>
<th>Total</th>
<th>Orient.</th>
<th>Train'g</th>
<th>ERIC Users</th>
<th>Advice</th>
</tr>
</thead>
</table>

**Computer Searches**

<table>
<thead>
<tr>
<th>Total</th>
<th>NIE</th>
<th>OE</th>
<th>ASE</th>
<th>OS-</th>
<th>Other</th>
<th>Exec.</th>
<th>Other Fed.</th>
<th>Int'l/For.</th>
<th>Fdns.</th>
<th>Coll. &amp; State</th>
<th>Public &amp; Others</th>
</tr>
</thead>
</table>

**Questions**

<table>
<thead>
<tr>
<th>Total</th>
<th>Searches</th>
<th>Questions</th>
</tr>
</thead>
</table>

---

Appendix A.4.2.
Appendix B

Data Bases Available for Computer Searching
Appendix B
Data Bases Available for Computer Searching (April 1, 1978)

The following data bases are available for online computer searching. Those marked with an asterisk are those most often used by ERC Staff.

1. *Abstracts of Business Information (ABI/INFORM)
2. *Abstracts of Instructional/Research Materials (AIM/ARM)
3. Accountants Index
4. Air Pollution Technical Information (APILIT)
5. America: History and Life
6. American Petroleum Institute - Literature (APILIT)
7. American Petroleum Institute - Patents (APIPAT)
8. American Statistical Index (ASI)
9. Aquatic Sciences and Fisheries Abstracts (ASFA)
10. Art Bibliographies Modern
11. Biological Abstracts/Bioresearch Index (BIOSIS PREVIEWS)
12. Cambridge Scientific Abstracts Group - Scientific/technical literature
13. Chemical Abstracts Condensates (CA Condensates, Chemcon)
15. Chemical Abstracts Subject Index Alert (CASIA)
16. Chemical Name Dictionary (CHEMNAME)
17. Chemical Industry Notes (CIN)
18. *Child Abuse and Neglect
19. CLAIMS - Chemical Patents (CLAIMS/CHEM)
20. CLAIMS - General, Electrical, and Mechanical Patents (CLAIMS/CHM)
21. CLAIMS - U.S. Patent Classification System (CLAIMS/CLASS)
22. Commonwealth Agricultural Bureaux Abstracts (CAB Abstracts)
23. *Comprehensive Dissertation Index/Abstracts
24. *Congressional Information Service Index (CIS Index)
25. *Congressional Record (CRECORD)
27. Defense Audio - Visual Information System (DAVIS)
29. Domestic Statistics (Prediasts)
30. *Educational Research in Progress (NIE)
31. *Educational Resources Information Center (ERIC)
32. Energy Information Abstracts/Energy Index (ENERGYLINE)
33. Engineering Index (COMPENDEX)
34. Environmental Information (ENVIROLINE)
35. *Exceptional Child Education Resources (ECER)
36. Federal Assistance Program Retrieval System (FAPRS)
37. *Federal Index
38. *Federal Index Weekly
39. Food Science and Technology Abstracts (FSTA)
40. *Foundation Directory
Appendix B - cont'd.

41. *Foundation Grants Index
42. Funk & Scott Indexes (F&S Indexes-Predicasts) - Domestic/international industry information
43. Geoarchive - Geoscience
44. Geological Reference File (Geo Ref) - Grants - Federal, state, local, private grant programs
45. Historical Abstracts
46. Industrial Plants (EIS PLANTS)
47. International Annual Time Series (Predicasts)
48. International Pharmaceutical Abstracts (IPA)
49. International Statistical Abstracts (Predicasts)
50. *Language and Language Behavior Abstracts (LLBA)
51. Library and Information Science Abstracts (LISA)
52. Library of Congress - English Materials (LIBCON/E)
53. Library of Congress - Non-English Materials (LIBCON/F)
54. *Magazine Index
55. Management Contents
56. Maritime Research Information Service Abstracts (MRIS Abstracts)
57. Market Abstracts (Predicasts)
58. Mechanical Engineering (ISMEC)
59. Metals Abstracts/Alloys Index (METADEX)
60. Meteorological and Geoastronomical Abstracts (MGA)
61. *National Information Center for Educational Media (NICEM)
62. *National Information Center for Special Education Materials (NIMIS/NICSEM)
63. *National Technical Information Service (NTIS)
64. *New York Times Information Bank
65. Oceanic Abstracts
66. Online Training and Practice File (ONTAP)
67. Paper and Board, Printing, and Packaging Industries Abstracts (PIRA Abstracts)
68. Paper Chemistry (PAPER CHEM)
69. Patents-Central Patents Index/World Patent Index
70. Petroleum Abstracts (TULSA)
71. Petroleum and Energy News (P/E News)
72. Pharmaceutical Literature (RINGDOC)
73. Pharmaceutical News Index (PNI)
74. Physics Abstracts (INSPEC - PHYSICS)
75. Pollution Abstracts
76. Psychological Abstracts
77. Predicasts Weekly - Updates of Market Abstracts and F&S Indexes
78. *Public Affairs Information Service (PAIS INTERNATIONAL)
79. Science Citation Index (SCISEARCH)
80. Searchable Physics Information (SPIN)
81. *Smithsonian Science Information Exchange (SSIE)
82. *Social Sciences Citation Index (SOCIAL SCISEARCH)
83. Society of Automotive Engineers Abstracts (SAE Abstracts)
84. Sociological Abstracts
Appendix B - cont'd.

86. Textile Industry Citations (TITUS)
87. Toxic Substances Control Act Candidate List (TSCA)
88. U.S. Annual Time Series (Predicasts)
89. U.S. Regional Time Series (Predicasts)
90. U.S. Statistical Abstracts (Predicasts)
91. World Aluminum Abstracts (WAA)
92. World Textile Abstracts (WTA)
Appendix C

Indexes Available for Manual Searching
## Appendix C

### Indexes Available for Manual Searching

1. Abstracts of Instructional and Research Materials in Vocational and Technical Education (AIM/ARM)
2. American Statistics Index
3. Biography Index
4. Book Review Digest
5. Child Development Abstracts and Bibliography
6. Congressional Information Service Index and Abstracts
7. Current Biography
8. Current Contents:
   - Life Sciences
   - Social and Behavioral Sciences
9. Current Index to Journals in Education (CIJE)
10. Dissertation Abstracts International
    - A: The Humanities and Social Sciences
    - B: The Sciences and Engineering
11. Education Index
12. Educational Administration Abstracts
13. Exceptional Child Education Abstracts
14. Index to Legal Periodicals
15. Index to Periodical Articles Related to Law
16. Human Resources Abstracts
17. Language and Language Behavior Abstracts
18. Language Teaching and Linguistics: Abstracts
19. Library Literature
22. New York Times Index
23. Psychological Abstracts
24. Public Affairs Information Service Bulletin
25. Readers Guide to Periodical Literature
26. Resources in Education (ERIC)
27. Research Relating to Children
28. Social Science Citation Index
29. Sociological Abstracts
30. State Education Journal Index
31. Vertical File Index
32. Weekly Government Abstracts: Behavior and Society (NTIS)