

DOCUMENT RESUME

ED 077 531

LI 004 358

AUTHOR Auster, Ethel; Lawton, Stephen B.
 TITLE Meeting Ontario's Need for Educational Information:
 An Evaluation of the SDC/ERIC On-Line Bibliographic
 Search Service.
 INSTITUTION Ontario Inst. for Studies in Education, Toronto.
 Library.
 PUB DATE Mar 73
 NOTE 92p.; (0 References)
 EDRS PRICE MF-\$0.65 HC-\$3.29
 DESCRIPTORS *Cost Effectiveness; *Data Bases; Questionnaires;
 *Search Strategies; *Use Studies
 IDENTIFIERS *Educational Resources Information Center; ERIC

ABSTRACT

Using an opportunity to test the latest developments of computerized retrieval of Educational Resources Information Center (ERIC) data, various aspects of the ERIC system that had previously gone unexamined were explored. The test of the system, which involved the use of an on-line computer terminal, is documented. Investigators were concerned with the nature of the material in the data base, particularly the extent of the inclusion of Canadian documents; what types of educators the data base could best serve; exploring the possibilities of cooperative efforts with neighboring institutions and agencies that shared certain needs; comparing the value of a machine-based retrieval system with a manual operation; and arriving at some notion of costs involved in adopting the new service. Findings in these areas are reported. Materials developed to acquaint users with the system and questionnaires designed to tap user reaction are appended. (Author/KE)

ED 077531

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

MEETING ONTARIO'S NEED FOR EDUCATIONAL INFORMATION:
AN EVALUATION OF THE SDC/ERIC ON-LINE BIBLIOGRAPHIC
SEARCH SERVICE

Ethel Auster

Stephen B. Lawton

Prepared for the
Office of the Coordinator of Field Development
Department of Educational Administration
The Library

The Ontario Institute for Studies in Education
March 1973

LI 004 358

FILMED FROM BEST AVAILABLE COPY

CONTENTS

Acknowledgements	3
Introduction	4
SDC/ERIC	5
The Test	7
Evaluation of SDC/ERIC	10
Implementation of SDC/ERIC	15
Tables	16 17
Bibliography	19
Appendix A: The Projected SDC/ERIC Search Service: Prospectus for Free Trial	20
Appendix B: SDC/ERIC Search Service: Acceptance of Free Trial	26
Appendix C: Sample Invitations and Acceptances for SDC/ERIC Demonstrations	30
Appendix D: Visitors Attending SDC/ERIC Demonstrations	36
Appendix E: Information Package and Search Forms Distributed to Visitors	40
Appendix F: User Search Topics	64
Appendix G: SDC Correspondence and Tally of Computer Usage	73
Appendix H: University of Washington SDC/ERIC Evaluation Summary	77
Appendix I: OISE Evaluation of SDC/ERIC Services for UCEA Membership	79
Appendix J: Sample Output	87

ACKNOWLEDGEMENTS

We wish to express our appreciation to a number of individuals and groups whose cooperation and assistance made this experiment possible: the University Council for Educational Administration which initiated the trial; System Development Corporation which provided free service and the patient guidance of Mary Jane Ruhl; the Department of Educational Administration which provided members of its staff; the Office of the Coordinator of Field Development which gave its generous financial support; the Library, and particularly the Reference and Information Services, which provided staff, accommodation, and good-humored encouragement; the Department of Computer Applications--particularly Alex Goodall, Doug Dinniwell, and Aubrey Osborne--which gave expert advice and provided equipment; the members of the participating boards of education, the Ontario Ministry of Education, and all other visitors and users whose patience and understanding made it a pleasure to serve them.

E.A.
S.L.

INTRODUCTION

When the opportunity arose to test the latest developments of computerized retrieval of Educational Resources Information Center (ERIC) data, it seemed an appropriate time to explore various aspects of the ERIC system that had previously gone unexamined. We were concerned about the nature of the material in the data base, particularly the extent of the inclusion of Canadian documents; we wanted to find out what types of educators the data base could best serve; we wanted to explore the possibilities of cooperative efforts with neighboring institutions and agencies that shared certain needs; we hoped to compare the value of a machine-based retrieval system with a manual operation; we wanted to arrive at some notion of costs involved in adopting this new service. During the course of the trial period, we gained insight into all of these areas.

The following is a brief report of the test and our findings.

SDC/ERIC

Developed by the U.S. Office of Education and now reporting to the National Institute of Education, ERIC consists of 18 clearinghouses located throughout the U.S., each specializing in one of the following different areas of educational information:

- Adult Education
- Counseling and Personnel Services
- Disadvantaged
- Early Childhood Education
- Educational Management
- Educational Media and Technology
- Exceptional Children
- Higher Education
- Junior Colleges
- Languages and Linguistics
- Library and Information Sciences
- Reading and Communication Skills
- Rural Education and Small Schools
- Science, Mathematics, and Environmental Education
- Social Studies/Social Science Education
- Teacher Education
- Test, Measurement, and Evaluation
- Vocational and Technical Education.

Each of these clearinghouses collects, abstracts, and indexes educational materials that are then reported in two ERIC journals: Research in Education (RIE), a monthly index that publishes citations and abstracts of documents and report literature, and Current Index to Journals in Education (CIJE), a monthly index that publishes citations and occasional brief annotations of the periodical literature. The ERIC data base, updated quarterly, consists

of the information contained in both RIE and CIJE and totals more than 200,000 records dating from 1966 to the present for materials covered by RIE and from 1969 onwards for journals indexed by CIJE.

Based on an interactive retrieval system called Orbit II, the SDC On-line Bibliographic Search Service used the Thesaurus of ERIC Descriptors (1972) as its basic search vocabulary. The data base may be searched using any one of nine information categories or through the use of Thesaurus terms which may be combined by means of logical operators, AND, OR, and AND NOT (User Manual for SDC/ERIC, 1973). The user may further tailor his requests by limiting his information to a specific time period covered by the file, and by controlling the number and format of the citations printed out for him. He may choose to have his material printed on-line immediately or off-line and air-mailed to him the same day from the SDC location in Santa Monica, California.

THE TEST

During the one-month period from January 15 to February 16, 1973, the Department of Educational Administration, the Office of the Coordinator of Field Development, and the Library of the Ontario Institute for Studies in Education cooperated in a test of the System Development Corporation's On-Line Bibliographic Search Service for the data base maintained by ERIC. This opportunity arose under the auspices of the University Council for Educational Administration, of which OISE is a member.

In order to provide maximum access to potential users, a computer terminal was located in the Reference and Information Services section of the OISE library. A Texas Instruments 700 terminal was lent to the project by the Institute's Department of Computer Applications, which also arranged with Bell Canada for the installation of a direct telephone line to Buffalo, the nearest location of the Tymshare communications network.

Publicity

Responsibility for alerting potential users was divided between the Department of Educational Administration and the Library. The former contacted the directors of all the Metropolitan Toronto boards of education, the Halton County Board of Education, and officials of the Ontario Ministry of Education. The Library sent letters to the professional libraries of the Metro boards of education, to the faculties of education at York University and the University of Toronto, to the Faculty of Library Science at the University of Toronto, and to various other public, university and government

libraries in the area informing them of the experiment and inviting them to participate in it by submitting questions for research. Within OISE, all departmental chairmen were contacted, notices were posted of open demonstration sessions, selected faculty members were approached, announcements were made at inter-departmental committee meetings and at a meeting of the heads of the OISE field centres. These efforts at publicity resulted in the holding of 22 formal lecture-demonstrations and numerous informal explanations of the system and generated almost 200 requests. An information package was assembled and distributed to each visitor (see Appendix E).

The Users

Requests for SDC/ERIC Searches came from three different types of organizations: boards of education (65 requests), the Ministry of Education (17 requests) and OISE (99 requests). The total number of searches, 186, required approximately 49 hours of computer time and produced 7,508 pages of bibliographic materials, indicating that the average search required 15 minutes on-line, in addition to at least 15 minutes of preparation with the ERIC thesaurus.

Bibliographic searches from the boards of education can be broken down in two ways—by board and by the position of the requester. Halton County Board, which had been asked to serve as a representative of Ontario's county boards, requested a total of 27 searches, while the Metro boards, which had been asked to limit their number of requests, submitted the following totals: East York 1, Etobicoke 4, Metro Board 6, Metro Separate 5, North York 7, Scarborough 2, Toronto 10, and York 3. Of the total, 13 were originated by board officials, 31 by research personnel and 21 by library personnel. Of the Ministry of Education's requests, 7 came from officials and 10 from research and development personnel. The relatively late date scheduled for the demonstration of the SDC/ERIC system to the Ministry resulted in the number of requests being an estimated half of what might otherwise have been expected from that body.

OISE was the heaviest user of the SDC/ERIC system, with over one-half the total number of searches to its credit. Twenty-four were conducted specifically for professors (with a single professor requesting up to 8 searches), 12 for research assistants connected with funded projects, 41 for graduate students (most of whom were students in Educational Administration),

9

8 for OISE field centre heads, and 14 for library staff members who needed to search ERIC as part of their routine work (see Appendix I).

Types of Questions

Questions submitted for ERIC searches (Appendix F) encompassed an exceedingly wide range of subjects. Surprisingly, there was no apparent relationship between the organizations and positions of those requesting and the topics on which they sought information. Teacher evaluation, curriculum effectiveness, teaching methods, and many other subjects appeared among the queries received from Ministry and board personnel, from graduate students, and from academics alike. Most striking, perhaps, is the sheer scope of many of the questions which implies a need for a great deal of information and analysis on the part of educators in Ontario.

User Evaluation of Bibliographies

On the whole, users of the SDC/ERIC system found the results to be satisfactory and timely (Appendix I). Virtually all found some references relevant to their problem, and a large majority of the 44 users who returned the evaluation forms found the bibliographies useful, felt them to be an important service, and recommended permanent adoption of the service. The few who expressed dissatisfaction with the results generally indicated that the wrong aspects of the topic had been cited—either through misunderstanding on the part of the terminal operator or through their own inability to express the question in the restricted syntax of the SDC/ERIC system. Given the brief preparation of the operators and users, as well as the large number of search requests executed, these results would appear to be very positive.

EVALUATION OF SDC/ERIC

Advantages

If we keep in mind the growing importance of the ERIC files as a source of information in education and the desirability of gaining the most effective access to this information, the advantages normally associated with on-line machine retrieval assume even greater importance. At the risk of stating the obvious, some of the advantages in using the SDC/ERIC On-line Bibliographic Search Service may be summarized as follows:

1. Accuracy. With over 200,000 items to choose from in the ERIC data base, a manual search presents psychological as well as practical difficulties. For instance, the number of terms a searcher must use to retrieve all information on his topic may prove prohibitive in a manual search. Time limitations would probably dictate that the searcher use only a selection of these terms: he would therefore retrieve only part of the material actually available in the collection. Should his question be a complex one, he would have no way in a manual operation of combining various aspects of his question so as to turn up only that material that treats all aspects of his request. By using the manual technique, he would have to wade through much irrelevant material before, almost by chance, as it were, he came upon what he really wanted.

The ability to combine sets of terms and arrive at their intersection--an inherent feature of a computerized retrieval program--is therefore one of the advantages of the system of which the value cannot be overemphasized.

2. Scope. Closely related to the first feature and also a common characteristic of machine-readable information retrieval is the ability of the system to range over the whole field of information in a way that far exceeds in comprehensiveness the possibilities in manual operation. The ability to choose and limit material by year of publication provides another means of being better able to meet specific demands of users.

3. Speed. We have calculated that an average manual search of RIE and CIJE might take about four hours. The average time for a more accurate and comprehensive search using the Orbit II programs was 30 minutes. About half that time is needed to choose appropriate descriptors from the Thesaurus, and the other half for the on-line search.

4. Amount. The ability of mechanized retrieval to return vast amounts of information, information that is not random but rather representative of the total range on one's particular topic in the data base, needs no further elaboration.

5. Immediacy. One of the subtle advantages of the on-line system as compared to a batch retrieval system using punch cards is the ability of the searcher to examine his material immediately--literally by the touch of a button. Thus he is able to modify his search by changing his sets of descriptors when those with which he started fail to turn up exactly what he is hunting for. He can "talk" to the terminal and tailor his request more specifically--without the time loss involved in a batch system and without the inconvenience of working with punched cards.

6. Simplicity. Because the language used is essentially English--i.e. the ERIC descriptors--and the method of retrieval is by an ordinary terminal keyboard similar to that of a typewriter, complex training periods are eliminated and the ability of the patron himself to search his own request by computer becomes a practical reality.

7. Compactness. The terminal needed to link up the system is only slightly larger than a typewriter, needs no special electrical wiring or outlets, can be portable, and is virtually noiseless.

Limitations of ERIC

The problems of the ERIC system seem to be those of a new and growing network. It will not diminish the seriousness of the faults to admit that

many of the difficulties arise from the very nature of the subject area, which is broad, vague, and ill-defined. We were encouraged, however, in talks with SDC/ERIC representatives by their apparent willingness to respond to suggestions. We are hopeful that in making our needs known, they will take action to improve the value of the data base to Canadian users. On our part, we must be more active and consistent in supplying appropriate clearinghouses with necessary information and in establishing lines of communication with the responsible agencies in the U.S..

Most serious disadvantages of the SDC/ERIC On-line Bibliographic Search Service are attributable to the ERIC materials themselves.

1. Number of descriptors. Many concepts have several near-synonyms that must all be used to retrieve information, i.e. high schools, secondary schools, secondary education, secondary school students. This presents a loss in two ways: the repetitiveness with which one must use these terms takes up valuable computer-connect time while all the terms have to be typed on the terminal keyboard. Secondly, this time loss is multiplied with the frequency with which one uses these synonymous sets.

2. Meaning of descriptors. Although education itself is a discipline of vague and imprecise terminology, the use by the ERIC Thesaurus of several terms for one concept raises in the searcher's mind questions about what the Thesaurus means when it uses certain terms. A dictionary is, however, being planned as a supplement to the Thesaurus, and should by its definitions solve many doubts and perhaps even act to standardize educational terminology, or at least retard its proliferation and idiosyncrasy.

3. Consistency. With 18 clearinghouses scattered throughout the U.S., there are problems in coordinating the work of indexers. But guidelines must be laid down and so used that the searcher can feel certain that the material he retrieves represents the material available in the data base that would be described the same way were it indexed in Oregon or New York State.

4. Canadian material. A more consistent and comprehensive effort to broaden the scope of Canadian materials, both French and English, would greatly enhance the value of the system in this country. Of the over 500 journals indexed in CLJE, only 17 are Canadian (CLJE January-June 1972). ERIC at this time has no consistent policy for soliciting documents from Canadian institutions. But then Canadian institutions which do not now

forward their publications to ERIC on a regular basis ought to assume some responsibility for submitting materials for consideration for inclusion in the data base.

5. Canadian descriptors. Terms that are unique to Canadian education or that have specific and different meanings from those terms as used in the U.S. should be included and defined. For example, the Canadian senior public school does not correspond to the American middle school or junior high school. Nor can one search "CEGEP", a term unique to Quebec education. Similarly, U.S. terms that describe educational administration, like "state board of education," are inapplicable to Canada, and comparable Canadian terms cannot be searched. Location of Canadian materials would be greatly facilitated if each citation carried both "Canada" and the name of the originating province as descriptors. With the forwarding of such recommendations to ERIC headquarters and their implementation, the value of the materials for Canadian users would be enhanced.

The limitations of ERIC should not be overlooked, but they can be reduced without excessive effort or cost. The effort and cost themselves are eminently worthwhile in view of the opportunity to increase the efficiency of our research activities.

Problems with SDC

An assessment of the mechanical operation of the system must acknowledge that the reliability of the on-line service during the first week and a half of the test was at best fitful. We were assured, however, that operational failures were due to problems in revising the Orbit II program. The faultless performance of the system in the second half of the trial period bore out the validity of this explanation and made us hopeful of the system's dependability in the future.

Other Computerized Bibliographic Search Service

There are two search services in Canada currently available to the individual who wishes to make a retrospective search of the ERIC data bases--the University of Calgary's UNICIS Information System and the National Library's CAN/SDI service. To use either service, the user submits a profile of terms to be searched (or a statement which is translated into allowable terms) and

the tapes are run over this profile. Since the procedure is time consuming, requests are generally collected over a one week period and then processed in a batch. The fees of the two systems differ considerably: Calgarv charges \$20.00 per year of search (or \$140 for a search of the complete file of ERIC tapes extending back 7 years) while the National Library charges a flat fee of approximately \$30.00.

Batch processing, while well suited for current awareness--searches of tapes as they become available for users who have well defined interest profiles on record--is not well suited to retrospective searches. Its four major shortcomings are as follows:

1. Turnaround. The usual turnaround time will be a minimum of seven days, and would probably average at least fourteen days, assuming tapes are run weekly. It is doubtful that more frequent searches would be economically feasible.

2. Definition. The proper definition of a search is difficult, particularly in a file like ERIC which has many synonyms and unlisted terms. A good batch processed search might require three or four cycles taking up to eight weeks.

3. Citations. A batch system prints out all citations, unless a limit is arbitrarily placed. Thus, after a week's wait, a user may find he has far too many or far too few citations.

4. Cost. The actual cost of a batch system, judging from Calgarv's fees, is much higher than on-line services since the latter are able to attract and service more users.

In short, for retrospective literature searches, batch processing services are in no way comparable to the SDC/ERIC system. Though batch processing may prove beneficial to selected academics with fixed interests who wish to use them for current awareness bibliographies, they are poorly suited to general educational needs.

IMPLEMENTATION OF SDC/ERIC

The Costs

Although the exact cost of the SDC/ERIC search service is difficult to estimate, it seems reasonable to assume that costs will be incurred in two phases: a preliminary period during which an operator must be trained, physical facilities modified, training materials developed for users; and the implementation period, or Phase II, which represents the on-going costs of the operational search service. The monthly cost of operating the SDC/ERIC system was based on completing 100 searches, each using 15 minutes of computer time and producing a 50-page bibliography (see Tables 1 and 2).

Revenues

Clearly, the actual cost per search (estimated at \$26.80) depends upon the number and length of searches actually undertaken, with a high rate of use helping to reduce the cost per search. This fact is of importance in developing a fee structure for the system. If charges are too high, then use will be discouraged. Conversely, if they are too low, an excessive number of "curiosity" searches may be requested and the quality of work on serious requests will decrease. We would recommend that outside users such as school boards be charged a modest fee of, say, \$10.00, but that searches for funded projects be assessed the full cost. An estimate of the maximum costs under this scheme can be made by assuming that no searches for funded projects are conducted and hence that \$10.00 is levied for all searches.

TABLE 1

Estimate of SDC/ERIC Budget - Phase I

	<u>1 Month (\$)</u>	<u>2 Months (\$)</u>
<u>Telephone and Telegraph</u>		
Telephone installation	25	50
Telephone monthly charges	25	50
 <u>Professional</u>		
Librarian II	770	1,540
 <u>Travel</u>		
Training session, Falls Church, Virginia		400
Local travel		
 <u>General Supporting</u>		
.25 secretary II	130	260
 <u>Capital Expenses</u>		
Glassed-in partition		1,200
Electrical outlets		100
 <u>Supplies and Printing</u>		
Training manuals		<u>1,000</u>
		4,600

TABLE 2

Estimate of SDC/ERIC Budget - Phase II

	<u>Cost (\$)</u>	<u>Subtotal (\$)</u>
<u>Equipment Rental</u>		
Computer terminal -	125/mo.	125
<u>Telephone and Telegraph</u>		1,325
Long distance (25 hours at \$15/hr. to Buffalo)	375	
Consultation with users SDC/ERIC (25 hours at \$22/hr.)	550	
Tymshare (25 hours at \$10/hr.)	250	
Mailing	150	
<u>Supplies and Printing</u>		330
Terminal paper (4 rolls at \$7.50)	30	
Printed forms	50	
Bibliographies (100 at 50 pages - \$.05 per page)	250	
<u>Professional</u>		
Librarian II trained to operate terminal	770	770
<u>General Supporting</u>		
.25 secretary	130	<u>130</u>
<u>TOTAL</u>		2,680
<u>ESTIMATED COST PER SEARCH (100 searches)</u>		26.80

TABLE 3

Maximum Cost (\$)

	<u>Per Search</u>	<u>Per Month</u>	<u>Per Year</u>
Cost	26.80	2,680	32,160
Assessed on user	<u>10.00</u>	<u>1,000</u>	<u>12,000</u>
Balance	16.80	1,680	20,160

It is to be expected, of course, that the actual monthly cost would be less than the estimated \$1,680 generated by searches for funded projects. Indeed, if all searches were charged to funded projects then there would be no need for additional funds to support the service. We consider this possibility unlikely. Based upon the data collected during the trial period, it appears that only between 15 and 20 per cent of all requests will be from staff members working on funded projects.

Since ERIC covers only a portion of the educational literature, initiation of the SDC/ERIC service would not reduce the need for manual reference and information services. On the contrary, it is to be expected that additional requests for searches of non-ERIC materials will be generated by ERIC users. Hence, it would not be possible to transfer current staff members to the SDC/ERIC staff.

Conclusion

Implementation of the SDC/ERIC On-line Bibliographic Search Service by OISE would make a genuine contribution to OISE, to the province of Ontario, and to the educational profession. OISE would be making use of the latest technological innovation, an innovation which--from the users' evaluations--appears to have valuable returns.

BIBLIOGRAPHY

- System Development Corporation. User Manual for SDC/ERIC. Santa Monica, California: System Development Corporation, 1973. (SDC TM-5058)
- U.S. Office of Education. Thesaurus of ERIC Descriptors. New York: OCM Information Corporation, 1972.

APPENDIX A: THE PROTECTED SDC/ERIC SEARCH SERVICE:
PROSPECTUS FOR FREE TRIAL

University Council for Educational Administration

29 WEST WOODRUFF AVENUE, COLUMBUS, OHIO 43210
TELEPHONE (614) 422-2564

November 27, 1972

Memo to: Plenary Session Representatives
From: Jack Culbertson
Subject: The Projected SDC/ERIC Search Service

Most of you are aware that on the evening of November 13 of the recent Plenary Session we had a demonstration and discussion from System Development Corporation of their on-line retrieval service for ERIC. Several of us witnessed the demonstration. There were many questions asked and there seemed agreement that the system was fast, relatively easy to use, and that it had promise for bringing about more effective uses of the ERIC system.

As a result of the demonstration, we invited SDC's representatives to make a brief presentation at lunch on the following day. At that time, Dr. Carlos A. Cuadra, Manager of SDC's Education and Library Systems Department, made an offer which would enable several UCEA member institutions to use the SDC/ERIC service for one month, free of charge. In addition to providing specific services, such an arrangement would enable Plenary Session Representatives to achieve a more detailed understanding of the system and put them in a better position to advise and assist UCEA in determining whether it should be recommended for membership-wide basis.

I believe that interested institutions should take full advantage of this opportunity to appraise a new information service concept. Therefore, I would like to know the level of interest of your institution in being one of the participants in the trial service. I suggest that you read the brief SDC Prospectus, which describes ERIC and outlines the conditions of the trial service; that, after needed discussions in your institution, you fill out and return the attached response form. The responses we receive will be reviewed with SDC and the details of the trial service period worked out with them.

The free trial service will begin January 15, 1973, with user training scheduled for the previous week. SDC has a tight schedule, and the holiday season is drawing near; therefore, will you please have the results of your decision in this office by December 11. If more than six institutions respond positively and it is not possible to include all respondents in the experiment, those communicating their interest to us first will receive priority.

Encs. (2)

Prospectus for Free Trial SDC/ERIC Service

SDC/ERIC is a service of System Development Corporation, Santa Monica, California. The service involves interactive searching of the ERIC file (see below) from one or more terminals located in the user's facility.

The computer itself is located in Santa Monica. It is connected to the nationwide TYMSHARE communications network, to permit users in 37 cities throughout the U.S. to reach the computer by dialing a local telephone number.

The ERIC File

The ERIC file consists of over 100,000 items covering both the report and journal literature on educational research, development, and practice since 1966. Approximately 2,500 items are added to the file each month by the 18 clearinghouses currently in the ERIC system.

Two of the 18 ERIC clearinghouses regularly input materials of special interest to the educational administrator community.

- The ERIC Clearinghouse on Educational Management (ERIC/CEM) focuses on information concerned with leadership, management, and the structure of public and private educational organizations at all levels. Such topics as the preservice and inservice preparation of administrators, tasks, and processes of administration, methods and varieties of organization, organizational change, and social context of the organization are covered.
- The ERIC Clearinghouse on Teacher Education covers materials on both the preservice and inservice training of school personnel.

The other clearinghouses contribute materials that are of related interest for particular levels (e.g., early childhood education and higher education), or content areas (e.g., reading and communication skills), or special groups (e.g., rural education and small schools).

Operation of the Service

The SDC/ERIC Search Service is one of several on-line retrieval services operated by SDC. (The others involve medical and chemical data bases.) In all, these services are "on the air" approximately 5 hours a day, on a regularly scheduled basis.

Users are able to search these files, daily on an interactive basis, from terminals located in the users' facilities. Users can "dial up" the system each day, conduct searches, and receive responses directly at the terminal or, at their option, by same-day mail from SDC. The latter option is often selected by the user for lengthy bibliographies.

Conditions of the Free Trial Service

Six UCEA member organizations will be given account numbers and provided with free SDC/ERIC search service from Monday, January 15, through Tuesday, February 13.

SDC will provide:

1. One and one-half days of training to the one or two key persons from each institution who will be the primary operators of the terminal. This training will be carried out in Chicago, Illinois, during the week of January 8-12.
2. Computer time, up to a total of 44 hours of interactive searching.
3. Long-distance communications between the TYMSHARE number nearest to the using institution and SDC's computer. (See the list of cities currently on the TYMSHARE network.)
4. Off-line printing, up to a total of 2,200 pages.
5. Two User Manuals for each institution.

Each institution that wishes to participate will be expected to provide:

1. A terminal; any of several standard terminals will be quite satisfactory, e.g., Teletype, Execuport, TYMSHARE, Texas Instruments, Hazeltine, Anderson Jacobson, Novar or IBM 2741.
2. Communications between the institution and the nearest TYMSHARE city.
3. One or two attendees for the training session in Chicago.
4. Assurance of intent to exercise the system during the trial period.
5. Feedback to UCEA on the use and value of the service.

SDC believes that, should there be substantial interest in the free trial service, preference should be given to institutions that:

- Plan to assign one or two persons to operate the service during the trial period, on more than a casual basis.
- Plan to announce the availability of search service to potentially interested educators on campus, to assure a reasonable number of real inquiries, and reasonable exposure to the service.
- Do not have, or do not expect to have, comparable search services of their own.

Services Outside of Trial Use Conditions

SDC will provide sufficient computer, communications, and off-line printing support to provide a reasonable opportunity to appraise the value of on-line ERIC searching to the participating institutions. Those institutions that wish to continue ERIC service after the free trial period may do so, at standard SDC/ERIC rates (presently being revised). Those institutions that experience heavy use during the free trial period may arrange for additional service, at 50% of normal rates, but only for the trial period. SDC will apprise each institution, on a weekly basis, of its levels of use during the previous week.

SDC/ERIC Search Service
System Development Corporation
2500 Colorado Avenue
Santa Monica, California 90406

LIST OF TYMSHARE CITIES

Seattle, Wash.	Pittsburgh, Pa.
Portland, Ore.	Philadelphia, Pa.
Los Altos, Ca.	Atlanta, Ga.
Sacramento, Ca.	Chicago, Ill.
Palo Alto, Ca.	Detroit, Mich.
Los Angeles, Ca.	Syracuse, N.Y.
Oxnard, Ca.	Buffalo, N.Y.
Newport Beach, Ca.	Rochester, N.Y.
Cupertino, Ca.	New York, N.Y.
San Diego, Ca.	Boston, Mass.
Inglewood, Ca.	Hartford, Conn.
Oakland, Ca.	Darien, Conn.
San Francisco, Ca.	Englewood Cliffs, N.J.
Colton, Ca.	St. Louis, Mo.
Dallas, Tex.	Baton Rouge, La.
Houston, Tex.	New Orleans, La.
San Antonio, Tex.	Denver, Colo.
Washington, D.C.	Baltimore, Md.
Tampa, Fla.	

APPENDIX B: SDC/ERIC SEARCH SERVICE:
ACCEPTANCE OF FREE TRIAL

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION

252 BLOOR STREET WEST, TORONTO 5, ONTARIO, CANADA TELEPHONE 923-6641
DEPARTMENT OF EDUCATIONAL ADMINISTRATION

M E M O R A N D U M

TO: Jack Culbertson, Executive Director
University Council for Educational Administration

FROM: Peter J. Cistone
U.C.E.A. Representative

RE: SDC/ERIC Search Service

DATE: December 12, 1972

Please be advised that our institution wishes to participate in the SDC/ERIC trial search service as described in your recent memo to Plenary Session Representatives.

In connection with our request to participate in the free trial service, O.I.S.E. is prepared to provide a terminal (IBM 2741 or Executiveport), communication facilities between Toronto and Buffalo (the nearest TYMSHARE city), and two attendees at the training session in Chicago. You may be assured that it is our intent to make use of the system during the trial period and to provide feedback to UCEA on the use and value of the service.

I trust that you will find the completed interest survey form in order. We shall look forward to receiving a favorable decision on our request to participate in the trial service.

PJC:st
Enclosures

cc: Mrs. E. Auster
Mr. D. Dinniwell
Dr. R. Farquhar
Dr. S. Lawton
Dr. L. McLean
Dr. K. Prueter
Miss S. Wigmore

INTEREST SURVEY
OF
UCEA MEMBERSHIP

1. Please indicate your institution's level of interest in participating in the (experiment) proposed in the (cover letter):

 X We wish to participate in this trial service experiment.

 We do not wish to participate in the experiment at this time.

Please explain why not. _____

→ If you have indicated interest in participating, please complete the following:

2. Terminals

Is there a terminal and acoustic coupler presently available to you for use during the trial service period? Yes X No

If yes, identify the model or type Texas Instruments 700

If no, please indicate how you will arrange to have a terminal for the required period _____

3. Potential Users

- a. Please identify the departments and users (e.g., faculty, students) who will participate in this experiment. _____

Faculty and Students in several Departments of the Institute

- b. How many potential users have you identified? 400

- c. Do you plan to involve your institution's library or instructional resources center? Yes X No

If yes, what kind of involvement is planned? _____

Terminal will likely be located in Institute Library and

a Library staff person will likely be responsible for

operating the service during the trial period

4. Training

a. Will your institution be able to send one or two staff members to a 2-day training session? Yes X(2) No

b. Have you identified these staff members? Yes X No

If yes, please indicate their positions. (See Below)

5. General CommentsAttendees at Training Session:

1) Mrs. Ethel Auster (Reference Librarian), Ontario Institute for
Studies in Education, 252 Bloor Street West, Toronto 5, Ont. CANADA

2) Dr. Stephen B. Lawton (Asst. Prof. of Ed. Admin.), Ontario Institute
for Studies in Education, 252 Bloor Street West, Toronto 5, Ont. CANADA

Name Dr. Peter J. Cistone

Institution O.I.S.E.

Address 252 Bloor Street West
Toronto 5, Ontario CANADA

Telephone (416)923-6641, Ext. 418

APPENDIX C: SAMPLE INVITATIONS AND ACCEPTANCES
FOR SDC/ERIC DEMONSTRATIONS

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION

252 BLOOR STREET WEST, TORONTO 5, ONTARIO, CANADA TELEPHONE 923-6641

THE LIBRARY

January 15th, 1973.

Beginning January 15, 1973 and continuing through February 15, 1973, the Library in cooperation with the Department of Educational Administration and the Office of the Coordinator of Field Development of the Ontario Institute for Studies in Education will be taking part in a one month experiment sponsored by Systems Development Corporation and Educational Resources Information Centres to retrieve materials in ERIC/RIE and CIJE by computer. This computerized searching of ERIC data banks will take place in the Reference and Information Services area of the Library.

You and any interested members of your staff are cordially invited to visit us and watch the on-line searching in action. We will be pleased to answer any questions you may wish to ask. To ensure that your visit is a profitable one, please call me at 923-6641, Ext. 203, to arrange for a convenient appointment.

Sincerely,

EA/rcd

(Mrs.) Ethel Auster,
Head,
Reference and Information Services.

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION

252 BLOOR STREET WEST, TORONTO 181, ONTARIO, CANADA

TELEPHONE 923-6441

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

December 22, 1972

Mr. John W. Boich,
Superintendent of Program,
Halton County Board of Education,
2050 Guelph Line N.,
Burlington, Ontario.

Dear John:

As I mentioned to you the other day, we plan to serve as a pilot test site for the SDC computer based retrieval system incorporating the ERIC data base. This opportunity has been offered to us by virtue of our membership in the University Council for Educational Administration. The equipment will be set up on the reference desk in our Library and will remain there for a month, beginning towards the end of January, I think. I am enclosing some information which describes the nature and purposes of this pilot test.

We think that the system to be tested, or something like it, has a great deal of potential for improving the dissemination of educational research. Unlike most selective dissemination of information services (which consist of largely one-way communication from the computer to the user) the system we are testing is interactive in nature (in that the user "communicates" with the computer to the point where the information received is directly related to specific topics the user is interested in).

During the month in which we shall have the equipment up, we would like to invite representatives of one or two boards of education near Toronto to test it out according to their needs. We feel that this will not only be helpful to us in generating better test data as to the usefulness of the system, but may also be of some assistance to those in boards with respect to immediate information needs they may have at present. We would like to offer such an opportunity to members of your project staff and/or others in the Halton County Board of Education who may be interested in taking advantage of it.

To this end, if you feel there may be some interest on the part of your colleagues, we would be pleased to discuss it in detail with you and your colleagues at your convenience (the meeting you have scheduled for January 22/73 might present a good opportunity for a brief discussion on this matter). Should you be interested in following this up, Dr. Steven Lawton (the professor in our Department who will have responsibility for overseeing the trial of the system during the month's testing period) would be pleased to meet with you and your colleagues upon your invitation.

Mr. John W. Boich,
Halton County Bd. of Ed.,
December 22, 1972.

Page 2.

Please feel free to contact him directly if you wish to do so.

Best personal regards to you, Peggy, and the children for
a Joyous Holiday Season.

Yours sincerely,



Robin H. Farquhar,
Chairman.

RHF:gk

Enclosure

cc: Steve Lawton
7 Ken Prueter



December 29, 1972.

Dr. Steven Lawton,
Department of Educational
Administration,
The Ontario Institute
for Studies in Education,
252 Bloor Street West,
Toronto 5, Ontario.

Dear Steve:

Re: SDC - ERIC Search Service

In response to a letter from Dr. Robin Farquhar, dated December 22, 1972, I am pleased to inform you that the Executive Committee of the Halton County Board of Education is most receptive to accepting your offer to be involved in the testing of the SDC computer based retrieval system incorporating the ERIC data base. In Dr. Farquhar's letter, he mentions that you would be available to meet with the Executive Committee on January 22, 1973 at 1:30 in order to discuss in detail our involvement. A map of the route from O.I.S.E. to the Halton County Board of Education office on Guelph Line North is enclosed.

I do not anticipate that you will have to spend a great deal of time at the Executive Committee meeting. However, I believe that we would be interested in the following information:

- 1) a general overview and description of the retrieval system;
- 2) an appropriate format for us to couch our questions so that effective use may be made of the system;
- 3) the mechanics involved in the use of the system.

We look forward to meeting you on the 22nd.

Yours sincerely,

J. W. Boich,
Superintendent of Program.

JWB:tt



Ministry of Education, Ontario

35

In reply please refer to file

17th Floor
Mowat Block, Queen's Park
Toronto 182
Ontario

Telephone 416 965- 2666

January 22, 1973.

Professor Stephen Lawton,
Department of Educational
Administration,
Ontario Institute for Studies
in Education,
252 Bloor Street West,
Toronto 5, Ontario.

Dear Professor Lawton:

Thank you for your invitation to attend the demonstration
of the S.D.C. Computer Based Retrieval System using the
ERIC Data Base on the afternoon of February 2, 1973.

Please find attached the list of names and mailing
addresses of the members of the Ministry that plan to
attend.

We look forward to meeting you at that time.

Yours sincerely,

H.E. Gillies,
Director,
Planning & Research Branch.

Att.

APPENDIX D: VISITORS ATTENDING SDC/ERIC DEMONSTRATIONS

VISITORS ATTENDING SDC/ERIC DEMONSTRATIONS, 1973

37

Date	Time	Visitors
Friday, January 12	9:30 a.m.	OISE Library - Collection Development and Reference Staffs
Tuesday, January 23	11:00 a.m.	Professor D. Campbell - Science Objectives Project, OISE
Tuesday, January 23	2:00 p.m.	Mr. H.P. Greaves - F.W. Minkier Library, North York Board of Education
Wednesday, January 24	1:30 p.m.	Professor J. Herbert with class - Department of Curriculum, OISE
Wednesday, January 25	4:00 p.m.	Professor J.C. Croft - Department of Educational Administration, OISE
Thursday, January 25	10:00 a.m.	Miss D. Dermody - Ministry of Education Library Miss C. Ko - Ministry of Colleges and Universities Library Mrs. Linda Reed - Ministry of Education Library Miss P. Ortved - Education Centre Library, Toronto Board of Education
Thursday, January 25	1:00 p.m.	Mr. J. Shearman - Education Centre Library, Toronto Board of Education Dr. E. Wright - Research, Toronto Board of Education Mr. H.P. Greaves - F.W. Minkler Library, North York Board of Education Mrs. J. Henderson - Resource Library, Etobicoke Board of Education Dr. J.P. Somwaru - Research, Etobicoke Board of Education Mr. H. J. Dilling - Research, Scarborough Board of Education Dr. S. Ziegler - Research, York Board of Education Mr. A. Kuder - Research, East York Board of Education Mr. J. Murray - Studies of Educational Facilities, Metro Board of Education Miss S. Snodgrass - York Board of Education

Date	Time	Visitors
Friday, January 26	11:00 a.m.	University of Toronto Library School Faculty Miss B. Aldrich - Faculty of Education Library
Friday, January 26	1:30 p.m.	Professor Kurnev with class - University of Toronto Library School
Monday, January 29	9:30 a.m.	OISE Library - Technical Services Staff
Tuesday, January 30	10:00 a.m.	Miss Nancy Young - Faculty of Education Library Mrs. Wolfe - Ministry of Education Library Miss Guignard - Etobicoke Board Library Miss C. Shinnall - Etobicoke Board Library Miss B. Beardslev - Studies of Educational Facilities, Metro Board of Education Ms. Pheba Adoloh - Faculty of Education, York University Miss Harriett Goldsborough - Canadian Education Association, Editorial Miss Diane Sibbett - Canadian Education Association
Tuesday, January 30	4:00 p.m.	Professor M. Robbins - Department of Educational Administration, OISE
Wednesday, January 31	9:00 a.m.	Professor S. Lawton with class - Depart- ment of Educational Administration, OISE
Wednesday, January 31	12:30 a.m.	OISE Field Centre Representatives
Thursday, February 1	10:00 a.m.	Miss M. Shortt - Faculty of Education Library University of Toronto Reference Librarians
Thursday, February 1	2:00 p.m.	Miss B. Dewsnat - Etobicoke Board Library Mr. M.R. Seymour - Ministry of Education Library University of Toronto Reference Librarians
Friday, February 2	10:00 a.m.	Professor D. Campbell - Department of Curriculum, OISE Mr. Grant Parker - Department of Curriculum, OISE

Date	Time	Visitors
Friday, February 2	1:00 p.m.	Ministry of Education Representatives Mr. J.K. Kinlin - Assistant Deputy Minister, Ministry of Education Mr. D. Bagshaw - Educational Officer, Curriculum Development Branch Mr. G. C. Bonham - Chief Educational Officer, Planning and Research Branch Miss P.C. Moscall - Research Assistant, Planning and Research Branch Mr. B.F. Webber - Director, Education Data Processing Mr. Peter Hardy - Planning and Research Branch Ms. Joan St. Rose-Haynes - Statistics Officer, Planning and Research Branch
Monday, February 5	1:30 p.m.	Open Session for OISE Staff and Students
Tuesday, February 6	1:30 p.m.	Dr. R. McLean with class - Department of Computer Applications, OISE Mr. J. Feenev - Research, Metro Separate School Board Ms. Lorna Mohun - Research, Metro Separate School Board
Wednesday, February 14	10:00 a.m.	University of Toronto Science and Medicine Librarians
Wednesday, February 14	2:15 p.m.	Mr. Chumakov - Education Bibliographer, York University Library York University Library Staff

APPENDIX E: INFORMATION PACKAGE AND SEARCH FORMS
DISTRIBUTED TO VISITORS

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION

SDC/ERIC On-Line Bibliographic Search Service

During a one-month period from January 15 to February 15, the Department of Educational Administration, the Office of Field Development, and the Library of the Ontario Institute for Studies in Education are cooperating in a test of the Systems Development Corporation's On-Line Search Service for the data base maintained by the Educational Resources Information Center (ERIC). This opportunity has arisen under the auspices of the University Council for Educational Administration of which OISE is a member. Throughout the test period, the SDC/ERIC service will be operated by Mrs. Ethel Auster, Head, Reference and Information Services, and Dr. Stephen Lawton, Assistant Professor of Educational Administration.

The ERIC base contains citations and abstracts of documents from Research in Education (RIE) and articles from the Current Index to Journals in Education (CIJE). RIE is a monthly printed index with abstracts that announces the report literature. RIE is available from the U.S. Government Printing Office. CIJE covers the journal literature without abstracts and is available from the CCM Information Corporation, Riverside,

New Jersey 08075. Complete sets of both RIE and CIJE are maintained in the reference section of the OISE library.

To use the SDC/ERIC search system, contact either Mrs. Auster or Dr. Lawton (see addresses below) and obtain a SDC/ERIC Search Request Form, which should be completed and returned. If the explanation of the desired search is insufficient or if too many references are obtained (there is a limit of 300 references), you will be contacted for more information. After the search is completed, you will be sent a bibliography either from OISE (up to 15 references) or the SDC off-line printer in California (between 15 and 300 references). Off-line printouts require a week to ten days for delivery.

You will be notified when the search has been completed, and will be sent an Evaluation Form for User Feedback which is to be completed after you have received and used the bibliography. The evaluation form is extremely important during the test period, since it provides the data needed to assess the SDC/ERIC search system.

Reports located in ERIC by the bibliographic search can be obtained in several ways:

- 1) non-circulating microfiche copies are located in the reference section of the OISE library;
- 2) "hard copies" -- i.e. paper copies printed from microfiche--can be purchased from the OISE library at \$.15 per page;

3) microfiche copies can be ordered directly from ERIC Document Reproduction Service (EDRS), Leasco Information Products, 4827 Rugby Avenue, Bethesda, Maryland 20014, normally for \$.65 each;

4) "hard copies" can also be purchased from EDRS, Leasco Prices are printed with the bibliographic references and average approximately \$3.29 for up to 60 pages, \$6.58 for up to 120 pages, etc.*;

5) reports not available from EDRS are available from sources noted in bibliographic references.

Journal articles referenced in CIJE are also available in several ways:

1) non-circulating copies of many educational journals cited in CIJE are located in the OISE library;

2) most journals sell extra copies of individual issues or reprints;

3) authors will often provide reprints free or for a nominal cost;

4) single xeroxed copies of articles in the OISE journal collection are available from the OISE library at \$.10 per page.

* ERIC Cost Note: Hard copy prices are \$3.29 per 100 pages
eg #329 - 1-100 pages
#250 - 101-200 pages
#487 - 201-300 pages
OK

Mrs. Ethel Auster, Head
Reference and Information Services
(416) 923-6641 Ext. 203

or

Dr. Stephen B. Lawton,
Assistant Professor, Educational Administration
The Ontario Institute for Studies in Education
252 Bloor Street West
Toronto Ontario M5S 1V6
(416) 923-6641 Ext. 428

III. THE UNIT RECORD OF THE ERIC DATA BASE

The ERIC data base contains citations and abstracts of documents from Research in Education and articles from Current Index to Journals in Education.^{*} Each citation is represented by a unit record, containing up to 19 different categories of descriptive information. In Figure III-1, these 19 categories are listed and each is followed by a two-letter abbreviation and an X if it is a searchable category.

Terms from searchable categories--e.g., BURCHINAL, LEE G. (from the Author Category) or COUNSELING (from the Descriptor Category)--can be entered in a search statement alone or in combination with other terms. Terms are combined by using the logical operators AND, OR, or AND NOT. Information in service or all categories can be displayed by using one of the Print Commands (see Chapter V, Section B).

CATEGORY NAMES	ABBREVIATION	SEARCHABLE CATEGORIES
ERIC Accession Number	ED	X
Year (of Publication Date)	YR	X
Clearinghouse Code	CC	X
Clearinghouse Accession No.	CH	
Author	AU	X
Title	TI	
Publication Date	PD	
Issue	IS	X
Institution Code	IC	X
Institution Name	IN	
Sponsoring Agency Code	SC	X
Sponsoring Agency	SN	
EDRS Price	PR	
Contract/Grant No.	CG	
Bureau No.	BN	
Availability	AV	
Journal Citation	JC	
Descriptive Note	NO	
Descriptors	DE	X
Identifiers	ID	X
Abstract	AB	

Figure III-1. The ERIC Unit Record

^{*}Research in Education (RIE) is a monthly printed index with abstracts that announces the report literature. RIE is available from the U.S. Government Printing Office. Current Index to Journals in Education (CIJE) covers the journal literature and is available from CCM Information Corporation.

A brief explanation of each category--both those that are searchable and those that can be displayed--is provided in Figure III-2. Examples of full unit records are displayed in Figure III-3.

46

ERIC Accession Number	<p>An identification number sequentially assigned by ERIC. The two-letter prefix may be ED (for a report from <u>Research in Education</u>) or EJ (for an article from <u>Current Index to Journals in Education</u>). The prefix is followed by six digits.</p> <p>The ED number (from <u>Research in Education</u>) is used to order hard copy or microfiche from the ERIC Document Reproduction Service.*</p>
Year	The year of publication, which can be used in date ranging (see Chapter IV, Section C). The file dates back to 1966.
Clearinghouse Code	The searchable part of the Clearinghouse Accession Number is the two-letter prefix. It identifies the clearinghouse that processed the item. (Clearinghouse codes are listed in Appendix C.)
Clearinghouse Accession Number	A two-letter prefix, followed by a six-digit number (see Clearinghouse Code above).
Author(s), including editors, compilers, principal investigators	Personal authors are entered last name first, comma, and first name or initials. (First names with middle initials are also used.)
Title	Full title of the document.
Publication Date	Usually includes the month and year, but the file is searchable only by year (see "Year" above).
Issue	The issue of <u>RIE</u> or <u>CIJE</u> in which the citation appears.
Institution Code	Requires use of the <u>Source Directory</u> ,** a list of codes for corporate authors or organizational sources (e.g., government agencies, universities).

*ERIC Document Reproduction Service (EDRS), Leasco Information Products, Inc.
4827 Rugby Avenue, Bethesda, Maryland 20014.

**Source Directory is available from Leasco/ERIC Processing and Reference Facility, 4833 Rugby Avenue, Bethesda, Maryland 20014.

Figure III-2. Overview of ERIC Unit Record Categories (Sheet 1 of 2)

Institution Name	Same as above, but entry is the name, not the code.
Sponsoring Agency Code	Used for reports performed under government contract or grant. The code numbers for these agencies are included in the <u>Source Directory</u> .
Sponsoring Agency Name	Same as above, but the name, not the code is used.
EDRS Price	When a document is available from EDRS, the prices for microfiche and hard copy are provided.
Contract/Grant Number	Used for government-sponsored research reports.
Bureau Number	Report number assigned by government agency bureau.
Availability	Identifies alternate sources (i.e., not EDRS) for obtaining documents since all documents are not necessarily available through EDRS.
Journal Citation	Citation, including journal name, volume, issue, and page numbers, for journal articles.
Descriptive Note	Includes pagination and descriptive information concerning preprints, reprints, and conference papers.
Descriptors	Index terms from the <u>Thesaurus of ERIC Descriptors</u> used for subject searching.
Identifiers	Descriptors that are not included in the controlled vocabulary, i.e., the <u>Thesaurus</u> . Includes categories of index terms such as acronyms, names of projects, or test names.
Abstract	For reports, the lengths of abstracts are up to 200 words; for journal citations the lengths are up to 50 words, and appear only if the title does not adequately cover the scope of the article.

Figure III-2. Overview of ERIC Unit Record Categories (Sheet 2 of 2)

FROM RIE

ED - ED063324
 YR - 70
 CH - TM000320
 AU - FLAUGHER, RONALD L.
 TI - TESTING PRACTICES, MINORITY GROUPS, AND HIGHER EDUCATION: A REVIEW
 AND DISCUSSION OF THE RESEARCH.
 PD - JUN 70
 IS - RIESEP72
 IC - QAT24225
 IN - EDUCATIONAL TESTING SERVICE, PRINCETON, N.J.
 PR - EDRS PRICE MF-\$0.65 HC-\$3.29
 CG - OEC-3-6-051182-1634
 NO - 36P.
 DE - ABILITY GROUPING
 DE - ADMISSION CRITERIA
 DE - COLLEGE ADMISSION
 DE - COMPETITIVE SELECTION
 DE - DISADVANTAGED GROUPS
 DE - EDUCATIONAL DISCRIMINATION
 DE - EDUCATIONALLY DISADVANTAGED
 DE - ENVIRONMENTAL INFLUENCES
 DE - HIGHER EDUCATION
 DE - LITERATURE REVIEWS
 DE - MINORITY GROUPS
 DE - OBJECTIVE TESTS
 DE - PREDICTION
 DE - PREDICTIVE ABILITY (TESTING)
 DE - PREDICTIVE VALIDITY
 DE - RACIAL DIFFERENCES
 DE - SUCCESS FACTORS
 DE - TESTING PROBLEMS
 DE - TEST VALIDITY
 AB - SOME OF THE CONTROVERSIAL ISSUES INVOLVED IN THE USE OF OBJECTIVE
 TESTS BY INSTITUTIONS OF HIGHER EDUCATION, AS THIS USE AFFECTS THE
 SELECTION AND ATTENDANCE BY MEMBERS OF MINORITY GROUPS, ARE
 REVIEWED. ADMISSIONS COMMITTEES NOW RELY ON THE ABILITY OF A TEST
 TO PREDICT STUDENTS' PERFORMANCE AT THEIR INSTITUTION TO GUIDE
 THEIR SELECTION. HOWEVER, MINORITY GROUP MEMBERS HAVE CRITICIZED
 SUCH USES OF TEST SCORES. THREE POTENTIAL SOURCES OF BIAS AGAINST
 MINORITY GROUPS INCLUDE: IRRELEVANCE OF THE TEST CONTENT,
 PARTICULARLY VERBAL CONTENT, TO THEIR CULTURE AND BACKGROUND;
 DISCRIMINATORY ADMINISTRATION OF THE TESTING PROGRAM; AND
 DISCRIMINATORY USE OF THE TEST RESULTS. RESEARCH INVESTIGATING THE
 COMPARATIVE PERFORMANCE OF MINORITY AND MAJORITY GROUP MEMBERS,
 THE PREDICTIVE VALIDITY OF TESTS, AND THE INFLUENCE OF THE TESTING

Figure III-3. Sample Unit Records from the ERIC Data Base
(Sheet 1 of 2)

FROM RIE (Cont'd)

ENVIRONMENT ON PERFORMANCE IS REVIEWED. EFFORTS TO ISOLATE CULTURALLY BIASED TEST ITEMS HAVE BEEN UNSUCCESSFUL. EVIDENCE INDICATES THAT MINORITY GROUP MEMBERS TEND TO SCORE LESS WELL ON MOST TESTS; HOWEVER, TESTS SEEM TO VALIDLY PREDICT ACADEMIC SUCCESS REGARDLESS OF THE STUDENT'S BACKGROUND. IN ADDITION, THE PHYSICAL AND PSYCHOLOGICAL ATMOSPHERE IN WHICH THE TEST IS ADMINISTERED SEEMS TO HAVE A SIGNIFICANT INFLUENCE ON PERFORMANCE. SUGGESTIONS FOR SUPPLEMENTARY RESEARCH ARE DELINEATED. (PR)

FROM CIJE

ED - EJ055894
 YR - 72
 CH - AA512533
 AU - DAVIS, CHARLES
 AU - FANTON, JAMES H.
 TI - A DELINQUENCY PREDICTIVE SCALE FOR THORNE'S INTEGRATION LEVEL TEST SERIES
 PD - APR 72
 IS - CIJAUG72
 PR -
 CG -
 JC - JOURNAL OF CLINICAL PSYCHOLOGY; 28; 2; 186-9
 DE - DELINQUENCY
 DE - HIGH SCHOOL STUDENTS
 DE - INSTITUTIONALIZED (PERSONS)
 DE - ITEM ANALYSIS
 DE - MEASUREMENT INSTRUMENTS
 DE - PREDICTIVE ABILITY (TESTING)
 DE - PREDICTIVE VALIDITY
 DE - RESPONSE MODE
 DE - TABLES (DATA)

Figure III-3. Sample Unit Records from the ERIC Data Base
 (Sheet 2 of 2)

IV. SEARCHING

A. USE OF LOGICAL (BOOLEAN) OPERATORS

A term can be entered individually in a separate search statement as a particularly useful first step in learning the number of postings for that term (i.e., how many documents are indexed by that term). Terms can also be linked within a single search statement by the Boolean operators AND, OR, and AND NOT. Previous search statements (see Section B below) can also be entered as "terms" and linked with new terms by the same Boolean operators.

Figure IV-1 displays the uses of single entries and Boolean operators to trace the differences in postings that occur for each kind of search statement.

<u>Single Entries</u>	
PROG:	
SS 1 /C?---SEARCH STATEMENT 1 OR COMMAND?	
USER:	
INSTI TIONAL MEDIA	(CR)
PROG:	
PSTG---NUMBER POSTINGS (734)	
SS 2 /C?	
USER:	
INSTRUCTIONAL TELEVISION	(CR)
PROG:	
PSTG---NUMBER POSTINGS (621)	

Figure IV-1. Use of Boolean Operators

Use of AND

PROG:

SS 3 /C?---SEARCH STATEMENT 3 OR COMMAND?

USER:

1 AND 2

(CR)

PROG:

PSTG---NUMBER POSTINGS (55)

"1" refers back to the term entered in SS 1 and "2", back to SS 2.

Use of OR

SS 4 /C?---SEARCH STATEMENT 4 OR COMMAND?

USER:

INSTRUCTIONAL MEDIA OR INSTRUCTIONAL TELEVISION

(CR)

PROG:

PSTG---NUMBER POSTINGS (1300)

Note that the total number of postings does not equal the total of SS 1 and SS 2. The 55 records containing both terms are counted only once.

Use of AND NOT

SS 5 /C?---SEARCH STATEMENT 5 OR COMMAND?

USER:

INSTRUCTIONAL MEDIA AND NOT INSTRUCTIONAL TELEVISION

(CR)

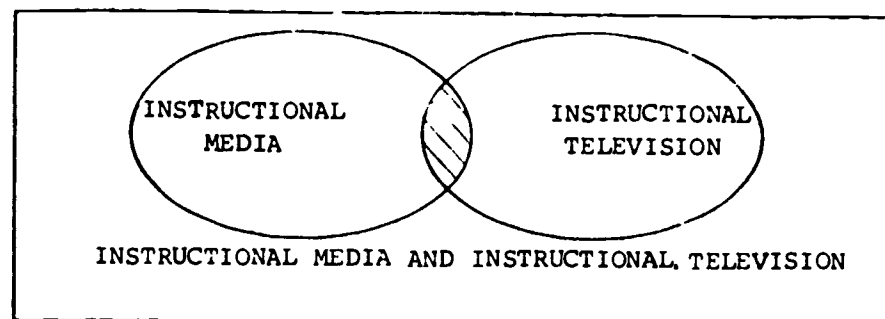
PROG:

PSTG---NUMBER POSTINGS (679)

Figure IV-1. Use of Boolean Operators (Sheet 2)

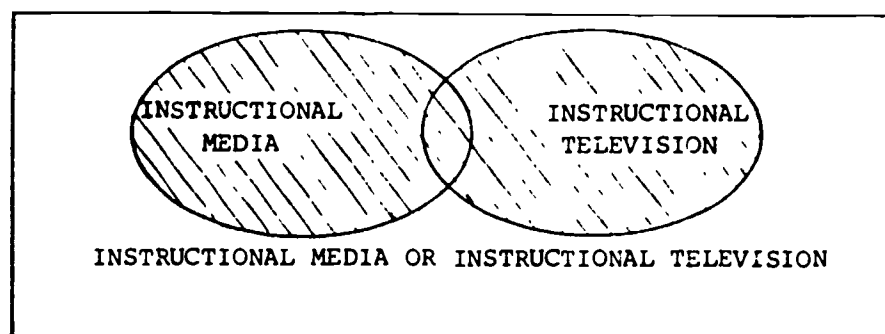
1. The Use of AND

When you link two or more entries with AND, the program retrieves only those unit records that have been indexed by all the ANDed terms in your search statement. The retrieved records are represented by the shaded area in the diagram below.



2. The Use of OR

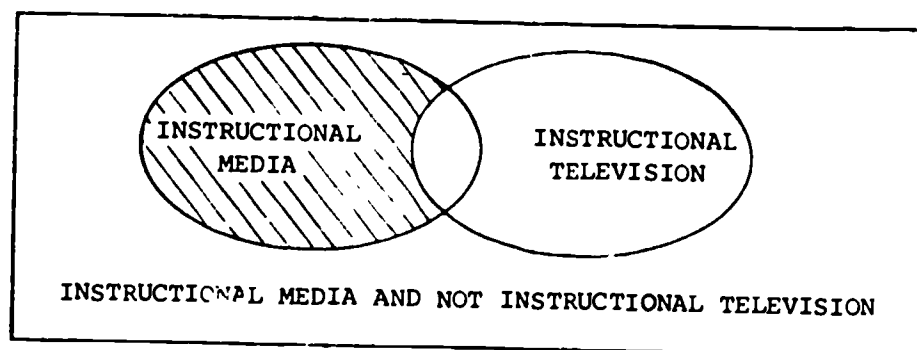
When you link two or more entries with the word OR, the program retrieves all unit records that contain either one or more ORed terms in your search statement. The retrieved records are represented by the shaded area in the diagram below.



3. The Use of AND NOT

When you precede a term with AND NOT, the program rejects any unit record containing the negated term in combination with the positive term. A negated entry is used only in conjunction with other terms.

The rejected records are represented by the unshaded area, part of which includes the overlapping area in the diagram below.



B. HANDLING COMPLEX SEARCH STATEMENTS

1. Combining Boolean Operators

Terms may be linked by different Boolean operators within one search statement, but it is important to understand how the program interprets and retrieves on such statements.

Sample Search By User

INSTRUCTIONAL MEDIA OR INSTRUCTIONAL TELEVISION AND
MULTIMEDIA INSTRUCTION

The example above is a complex statement containing both AND and OR. In interpreting such statements, the program first assumes implicit parentheses around the ANDed terms and then around each ORed term. (Note that you do not use the parentheses in creating logical combinations; the program automatically assigns them in interpreting your logic.) Thus, in the example above, the program would search on the following:

Interpretation By Program

(INSTRUCTIONAL MEDIA) OR (INSTRUCTIONAL TELEVISION AND
MULTIMEDIA INSTRUCTION)

SDC'S ON-LINE BIBLIOGRAPHIC SEARCH SERVICE ON EDUCATIONAL LITERATURE

The Data Base

ERIC (Educational Resources Information Center) is the educational data base developed and maintained by the U.S. Office of Education. Utilizing the clearinghouses located throughout the United States, and now receiving information from the Institute of Education, collect, screen, index and abstract the published and periodic literature in education and education-related fields. The following are the ERIC clearinghouses on:

Adult Education	Languages and Literacy
Counseling and Personnel Services	Library and Information Science
Disadvantaged	Reading and Communication
Early Childhood Education	Rural Education and Small Schools
Educational Management	Science, Mathematics, and Technology
Educational Media and Technology	Environmental Education
Exceptional Children	Social Studies/Social Science
Higher Education	Teacher Education
Junior Colleges	Tests, Measurement, and Evaluation
	Vocational and Technical Education

SDC's ERIC data base covers all citations, including abstracts, published monthly in Research in Education and Current Index to Journals in Education, the two major products of the ERIC system.

Coverage

1966 to the present.

File Size

The SDC/ERIC file currently contains over 100,000 records. Approximately 2,500 new records are added monthly into the ERIC system.

Updates

The SDC/ERIC file is updated quarterly.

Unit Record

The records in the SDC/ERIC file contain up to 21 different categories of bibliographic information. Nine of these categories (shown with asterisks) are searchable. All information in the other categories can be requested by the user through various "print" commands.

*ERIC Accession Number	*Issue	Contract/Grant Number
*Publication Year	Institution Name	Bureau Number
*Clearinghouse Code	*Institution Code	Availability
Clearinghouse Accession	Sponsoring Agency	Journal Citation
Number	Name	Descriptive Note
*Author	*Sponsoring Agency	*Descriptors
Title	Code	*Identifiers
Publication Date	EDRS Price	Abstract

Rates

Effective January 1, 1973, prices for SDC/ERIC service will be as follows:

Hourly rate for each computer-connect hour, rounded to the nearest hundredth of an hour	\$22.00
Off-line printing, for each page	.05
TYMSHARE communications (optional), per hour, rounded to the nearest hundredth of an hour	10.00

The only additional cost to the user is for telephone charges to the nearest TYMSHARE city (if required) and the rental or purchase of a terminal. On request, SDC will assist customers in selecting appropriate terminals and making arrangements with terminal suppliers.

Customers are obligated to a total minimum of \$150/month for SDC/ERIC. The minimum applies to any combination of computer-connect time, off-line printing, and TYMSHARE communications.

Contract Period

The minimum contract period is three months. After that time, service may be discontinued with 30 days notice.

SPECIAL INTRODUCTORY OFFER

SDC will provide free computer time during the first 30 days of the three-month contract period to help users explore the data base and become experienced in using the SDC system. The customer pays only for communications and off-line printing during this 30-day period. The standard rate schedule applies thereafter.

MICROFILM & MICROFICHE

Revised May, 1972

Library Leaflet No. 4

Microfilm and microfiche are important supplements to the OISE Library collection of print materials. Reports, journals, theses, etc., photographed and reduced in size, form a compact and permanent record on reels of film or transparent cards. We hope that this leaflet will assist you in using this valuable part of the Library collection.

MICROFILM

In order to add to and preserve the very important periodical collection, as well as to save space, the Library has acquired a large number of journals on microfilm. Many of these are files backdated to the earliest available issue of a particular journal. These microfilms are filed alphabetically by journal title in cabinets located directly behind the central core area of the Library on the Second Floor in front of the shelved periodicals. To determine whether a specific periodical is held on microfilm, consult the Visible File Index which includes titles of journals, listed alphabetically, and indicates the form in which they are held, e.g., unbound, bound, microfilm.

In the same area, there is also a microfilm collection of doctoral dissertations. Master cards for each of these are filed by author, title and subject in the main library card catalogue. In addition, a separate author file, located east of the main card catalogue at the end of the Test File cabinets, is maintained for all theses regardless of the form in which they are held. A notation on the card in the upper left hand corner, "MICRO", followed by an identifying number, indicates that a dissertation is available in the microfilm collection.

MICROFICHE

Microfiche forms are produced by a photographic technique whereby pages of printed text are reduced to rows of small images on a 4" x 6" sheet of film. One microfiche holds up to 60 pages of text. The forms require a microfiche reader which enlarges images back to normal page size. Microfiche is filed in cabinets in the Reference area of the Library adjacent to the east windows.

THE MICROFICHE COLLECTION

A. ERIC - WHAT IS IT?

The Educational Resources Information Center (ERIC) is a national information

system supported by the U.S. Office of Education for the dissemination of educational research results and research-related materials concerned with educational organization, curriculum, methods, facilities, etc. In various parts of the United States, decentralized information centers, or Clearinghouses, focus upon specific areas of education, such as Educational Administration (University of Oregon), Adult Education (Syracuse University), Vocational and Technical Education (Ohio State University), etc. These Clearinghouses contribute their best and most timely materials and information to ERIC for dissemination. Canadian material is included as dispatched to and used by the Clearinghouses. In brief, ERIC's services are as follows:

Publications

Research in Education. The best known and most used publication of ERIC is the monthly abstract journal *Research in Education*. This is a listing of the material and information contributed by the Clearinghouses. Issues prior to January 1971 are divided into two main sections — *Documents* (formerly *Reports*) and *Projects*. The *Documents* section abstracts reports which have been produced in some printed form, while the *Projects* section describes current research under way for which no report has yet been issued. As of January 1971 the *Projects* section has been discontinued. Both reports and projects are listed numerically by an identifying ERIC code number. Detailed subject, author or investigator, and institution indexes are provided for each section. These indexes presently cumulate annually and semi-annually. (It should be noted that the 1967 cumulation indexes the first fourteen issues of *Research in Education* which began publication in November, 1966.) Cumulated indexes refer to ERIC reports or projects by number. To obtain a description of an item, refer to the monthly issue of *Research in Education* which contains this number.

ERIC has also published résumés and indexes to other special collections which supplement items abstracted in *Research in Education*.

(1) ERIC Catalogue of Selected Documents on the Disadvantaged

The pilot project for the ERIC system, this collection deals with reports on special needs of the disadvantaged to 1966 and consists of two volumes *Number and Author Index* and *Subject Index*.

(2) Office of Education Research Reports, 1956-1965

Two volumes, *Résumés* and *Indexes*, provide access to a collection of research reports received before the publication of *Research in Education*.

(3) Pacesetters in Innovation

An annual résumé of *projects* to advance creativity in education, indexed by subject and local educational agency.

(4) Selected Documents in Higher Education

A number and subject index to a collection of 845 documents related to higher education.

(5) **Manpower Research; Inventory for Fiscal Years 1966 and 1967; 1968; 1969**

These volumes were prepared for the Interagency Committee on Manpower Research and include abstracts of research reports with indexes.

Document Reproduction Service

This service provides, either on microfiche or in hard copy, any *report* cited as available from ERIC. The OISE Library acquires, as available, all reports reproduced on microfiche by ERIC. It should be noted that some reports listed in *Research in Education* are not available from ERIC. In this case, information is given as to publisher of the report, his address and price of the document. It is possible that the Library may have such publications in print form; this can be ascertained by checking the card catalogue.

For further information on ERIC, refer to the U.S. Office of Education publication *How to Use ERIC*, copies of which are available at the Reference Desk in the Library and in the area where the microfiche are housed.

B. NEW PUBLICATIONS AND CONSOLIDATIONS OF ERIC MATERIALS

(1) **Educational Documents Abstracts**

A cumulation has been prepared of the report résumé sections of the 1968-1971 issues of *Research in Education*. Forty-eight abstract sections from RIE have been reduced to four volumes, one for each year. A volume including abstracts covering pre-1968 ERIC material will be published later this year.

(2) **Educational Documents Index, 1966-1969, and 1970-1971**

In two volumes, Volume 1 — Major Descriptors and Volume 11 — Minor Descriptors, Author Index, the ERIC *Educational Documents Index* provides access by subject and author to all documents and reports abstracted in *Research in Education* from November 1966 through December 1969. It also includes the work covered in *Office of Education Historical Reports, 1956-1965* and *Résumés and Catalog of Selected Documents on the Disadvantaged*. It is, in fact, a cumulated index to all items in the ERIC collection to the end of 1969.

A third volume provides access by subject and author to all ERIC documents abstracted in *Research in Education* during the period 1970-1971.

(3) **Thesaurus of ERIC Descriptors**

For phrasing reference queries, users are encouraged to refer to the *Thesaurus of ERIC Descriptors*, 'a vocabulary of educational terms developed by and for educators based on the literature in the ERIC collection'. A fourth edition has been prepared,

including all newly assigned descriptors as of March 1972. Use of the ERIC *Thesaurus* to determine appropriate subject headings greatly reduces searching time in the various ERIC indexes.

59

C. IDEA (INSTITUTE FOR THE DEVELOPMENT OF EDUCATIONAL ACTIVITIES)

IDEA, funded by the Charles F. Kettering Foundation in the United States, was created in 1965 as an "action-oriented" institute, whose purpose is to create and make available new methods, materials and programs in elementary and secondary schools. Canadian material is included. The Library is a subscriber to the complete microfiche collection put out by IDEA's Curriculum Materials Center in California. The key to this collection lies in three indexes: subject, author-source, and combined numerical. The collection itself is filed by number in microfiche cabinets.

EQUIPMENT

Microfilm and microfiche readers are available in the south-central area of the Second Floor of the Library. Additional microfiche readers are located with the ERIC, IDEA and Clearinghouse collections which are housed in the Reference area of the Library.

The Library also has film and fiche reader-printers which produce print-outs from microform. Although the OISE Library does not at present hold any material on microcard, a microcard reader is also available for the convenience of patrons.

THE REFERENCE LIBRARIANS WILL BE HAPPY TO ASSIST YOU IN USING ERIC AND IDEA INDEXES AND ABSTRACTS. IF YOU REQUIRE INSTRUCTION IN THE USE OF EQUIPMENT, PLEASE INQUIRE AT THE CIRCULATION DESK.

SDC/ERIC SEARCH REQUEST FORM

60

Name _____

Department _____

Position _____

Address _____

Phone _____

1. Search Description. Describe the topic or subject area you wish searched. Specify any institutions or authors you wish to be included. Please be as specific as possible in your description. _____

2. Levels. Specify the levels that apply to your topic:

<input type="checkbox"/> Early Childhood	<input type="checkbox"/> Elementary	<input type="checkbox"/> K-12	<input type="checkbox"/> Adult
<input type="checkbox"/> Kindergarten	<input type="checkbox"/> Junior High	<input type="checkbox"/> Junior College	<input type="checkbox"/> Professional
<input type="checkbox"/> Primary	<input type="checkbox"/> Senior High	<input type="checkbox"/> College	<input type="checkbox"/> No Level
<input type="checkbox"/> Intermediate	<input type="checkbox"/> Secondary	<input type="checkbox"/> Graduate	<input type="checkbox"/> Other (please specify) _____
	<input type="checkbox"/> Higher Education		

3. How will this information be used?

<input type="checkbox"/> Project/Proposal Research	<input type="checkbox"/> Instructional Methods
<input type="checkbox"/> Thesis Research	<input type="checkbox"/> Administration/Management
<input type="checkbox"/> Dissertation Research	<input type="checkbox"/> Demonstration of the System
<input type="checkbox"/> Literature Review for Course	<input type="checkbox"/> Other (please specify) _____
<input type="checkbox"/> General/Personal Information	

4. Number of References. Please circle the approximate number of references desired:

25 50 150 300 500 Other _____

5. Time Period. Please circle the time period that you want the information to cover:

1966 - 1972	1968 - 1972	1970 - 1972	1972 only
1967 - 1972	1969 - 1972	1971 - 1972	

Indicate a second choice for a time period if too many references are retrieved:

- List below in one of the Descriptor Set columns all ERIC descriptors that describe a major concept or key phrase in your search problem. Use a new Set column for each concept in the search. If you need more columns, feel free to use the reverse side of the page.

Descriptor Set Descriptor Set Descriptor Set

Information on instructional materials for adult reading programs.
(concept) (concept) (concept)

Descriptor Set	Descriptor Set	Descriptor Set
Instructional Materials	Adult Basic Education	All terms beginning with Reading
Instructional Media Materials	Adult Literacy	English (second language)
	Literacy Education	

*The completion of this section is not required.

INTERNAL SEARCH LOG

62

Date _____

Search Performed by _____

1. Search Title _____

2. Descriptor Sets

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Special Qualifications: Year(s) _____

Level _____

Author(s) _____

Special Groups (slow learners, disadvantaged)

4. Time:

In conversation(s) with User _____

With the Thesaurus _____

On-Line _____

5. Search Results: Number of Postings _____ Pages _____

6. Comments on system performance: _____

SEARCH TITLE: _____

1. Please rate your general level of satisfaction with the search results.
☐ Excellent ☐ Satisfactory ☐ Poor
2. How adequately was your search topic covered in the printout?
☐ Covered very well ☐ Covered adequately ☐ Not well covered
3. Did the printout include particularly relevant citations?
☐ None ☐ A Few ☐ Several ☐ Many ☐ More than I needed
4. Did you skim or read any of the referenced documents or articles? ☐ Yes ☐ No
If yes, were they: _____ microfiche _____ journal article _____ hard copy
5. Did you use the information from the printout and/or the referenced materials in your work? Yes ☐ No ☐
If yes, describe the usefulness of the material for your purposes _____

6. Do you think you could have done an equally good or better literature search manually? Yes ☐ No ☐
7. Would you have done a literature search if the Service were not available?
Yes ☐ No ☐
If yes, how much time do you believe the Service saved you? _____ hr. _____ min.
8. Was the printout received
☐ earlier than expected ☐ in time for your purpose ☐ too late for your purpose
9. How important do you feel that this Search Service would be to your professional functioning in the future?
☐ Very important ☐ Important ☐ Not very important
10. How frequently do you feel you will use the Service?
☐ Frequently ☐ On occasion ☐ Rarely ☐ Not at all
If frequently or On occasion, please estimate the number of searches you might request over a 3 month period _____
11. What is your general recommendation for continuing this Service?
☐ I recommend that we continue to subscribe to this Service.
☐ I recommend that we continue to subscribe to this Service, but with certain suggestions. (Please comment below)
☐ I do not recommend that we continue to subscribe in this service.

Comments:

APPENDIX F: USER SEARCH TOPICS

<u>Search Topics</u>	<u>Affiliation</u>	<u>Position</u>
Elementary Teacher Evaluation Criteria	Ministry	Administrative Official
Secondary Computer Science Education	Ministry	Administrative Official
Preschool Training Certification	Ministry	Administrative Official
Teacher Qualifications and Requirements	Ministry	R & D*
Play and Reading	Ministry	R & D*
Interdisciplinary Curriculum Planning	Ministry	R & D*
Computer-Assisted Counseling	Ministry	R & D*
Open Education	OISE Centre	Professor
Need Assessment	Ministry	R & D*
Inquiry vs. Conventional Teaching Methods	Etobicoke	Library
Administrator Selection in Higher Education	OISE	Student
Making and Evaluating Assignments	Etobicoke	Library
Classroom Observation Techniques	OISE	Student
Teacher Evaluation	OISE	Professor
Faculty Evaluation	OISE	Professor
Moral Development in Elementary and High School	OISE	Student
Student Decision-Making in High School	OISE	Professor
Modern Mathematics Success in Elementary School	Ministry	Administrative Official
ETV Use and Success	Ministry	Administrative Official
Success of Computer-Assisted Instruction in High School	Ministry	Administrative Official

* Research and Development.

<u>Search Topics</u>	<u>Affiliation</u>	<u>Position</u>
Professionals and Urban Programs	OISE	Professor
Canadian Teacher Evaluation	OISE	Student
Equal Education	OISE	Professor
Equality of Educational Opportunity	OISE	Professor
Preschool Teacher Programs	Ministry	R & D*
Kinds of Learning Experience	Ministry	R & D*
Evaluation of Experimental Programs	Ministry	R & D*
Dogmatism and Authoritarianism in Administration	OISE	Student
Observation and Special Education	OISE	Professor
Classroom Observation Criteria and Special Education	OISE	Professor
Individualized Instruction in Teacher Training	York	Professor
Evaluation of School-Community Decision-Making	Toronto	Library
Horizontal and Vertical Organization of Schools	Halton	R & D*
Evaluation of Vocational Education	Toronto	Library
Open Plan Schools' Effects on Students	Toronto	Library
Dropout Identification	Toronto	Library
Effectiveness of ETV	Toronto	Library
Elementary Games	OISE	Library
Museums and Effectiveness in Teaching	OISE	Library
Educational Needs of Secondary Schools	OCE	Professor
Vocational High Schools	OISE	Professor
Change in State Education Systems	OISE	Student
Self Concept and Academic Achievement	OISE	Student
Evaluation of Montessori	Halton	R & D*
Evaluation of 11 Reading Programs	Halton	R & D*

* Research and Development.

<u>Search Topics</u>	<u>Affiliation</u>	<u>Position</u>
Curricula for Gifted Students K-3	Halton	R & D*
Effective In-service Workshops	Halton	R & D*
Planning and Organizing Workshops	Halton	R & D*
Second Language Learning	Halton	R & D*
Evaluation of PE Instruction	OISE	Student
Identification of Learning Disabilities, K-3	Halton	R & D*
Traffic Control in Elementary Schools	Ministry	R & D*
Student Attitudes and Self Concept in Middle Schools	Halton	R & D*
Academic Achievement in Middle Schools	Halton	R & D*
Teacher Attitudes in Middle Schools	Halton	R & D*
Individualized Programs and Decision-Making	OISE	RA**
Individualized Programs and Student Attitudes	OISE	RA**
Individualized Programs and Parent Attitudes	OISE	RA**
Individualized Programs and Teacher Attitudes	OISE	RA**
Individualized Programs and Achievement	OISE	RA**
Counseling Effectiveness in Elementary Schools	Halton	Administrative Official
Psychological Services in Elementary Schools	Halton	Administrative Official
Differentiated Staffing in Elementary Schools	Halton	Administrative Official
Differentiated Staffing in Secondary Schools	Halton	Administrative Official
Nongrading in Elementary Schools	OISE	Library
Nongrading in Secondary Schools	OISE	Library
Open Plan Schools	OISE	RA**
Open Education	OISE	RA**

* Research and Development.

** OISE Research Assistant.

<u>Search Topics</u>	<u>Affiliation</u>	<u>Position</u>
Self-directed Classrooms	OISE	RA**
Performance Criteria and Teacher Education	York	Professor
PREP Documents in ERIC	Metro Separate	R & D*
Curriculum Development of Political Science	Halton	R & D*
Developing Nations and Educational Development	OISE	Professor
Simulation and Teaching Techniques	OISE	RA**
Simulation and Leadership Training	OISE	RA**
Minimally Brain-Damaged or Perceptually Handicapped	OISE	Library
Color Presentation and Instructional Media	Toronto	Library
SF0880, SF08800 (2 searches)	Toronto	Library
SF068743	Ministry	R & D*
Elementary Teacher Evaluation	Ministry	R & D*
Elementary Science Objectives	OISE	Professor
Biological Sciences	OISE	Professor
Comparative Study of Primary Education	Halton	Administrative Official
School Board Elections	OISE	Professor
Political Influences on Board Elections	OISE	Professor
Impact of Libraries and Media on Learning	Library School	Professor
In-service Teacher Education and Effective Teaching	Halton	Administrative Official
Building Obsolescence	Metro	R & D*
Educational Facilities Guidelines	Metro	R & D*
Building Obsolescence	Metro	R & D*
Education Facilities Laboratory	Metro	R & D*

* Research and Development.

** OISE Research Assistant.

<u>Search Topics</u>	<u>Affiliation</u>	<u>Position</u>
Education Facilities and Facility Inventory	Metro	R & D*
Facility Inventory (Case Study)	Metro	R & D*
Elementary Science Education and Objectives	OISE	Professor
Auditory Discrimination and Auditory Training	York	Library
Attainment of Academic Objectives	York	Library
Changes in Verbal Fluency	Scarborough	R & D*
Library Information Retrieval	University of Toronto	Library
Programs for Gifted Students	York	Library
Trainable Mentally Retarded (in Regular Classes)	Metro Separate	R & D*
Reading in Scandinavian Countries	Etobicoke	R & D*
Implementing the Semester System	Etobicoke	Library
Dogmatism and Administrator Training	OISE	Student
Dogmatism and Principals	OISE	Student
Innovation in Schools	OISE	Student
Innovation in Elementary Schools	OISE	Student
Sex Differences and Organizational Power	OISE	Student
Outdoor Education and Leadership	OISE	Student
Law Instruction and Student-Developed Materials	OISE	Professor
Concept Teaching in Kindergarten	OISE Centre	RA**
Curricula for Students of Varying Ability	OISE Centre	RA**
Programs for High Risk and Gifted Children	Halton	R & D*
Identifying Learning and Emotional Disturbances	Halton	R & D*
Development and Evaluation of Reading Comprehension	Scarborough	R & D*
Enrichment for Gifted Students	Halton	Administrative Official

* Research and Development.

** OISE Research Assistant.

<u>Search Topics</u>	<u>Affiliation</u>	<u>Position</u>
Acceleration of Students in Elementary Schools. Is it desirable?	Halton	Administrative Official
Secondary School Dropouts	OISE Centre	Professor
Carnegie Foundation and Higher Education	OISE	Student
Changing Teacher Attitudes, Performance	Halton	R & D*
Educational Administration in Canada	OISE	Student
Evaluation of Middle School's Effects on Students	OISE	Student
Nursery Education	OISE	Student
English as a Second Language	OISE Centre	Professor
Selection for Early or Multiple Age Entry to School	Metro	R & D*
Optimum Time of Tenure in Principalship	OISE Centre	Professor
Evaluation of Psychological Services	Halton	Administrative Official
Relationship of Class Size to Effectiveness of Teaching	Halton	Administrative Official
Social Problems and Biology, Genetics	OISE	Student
Education Policy re Immigrants	OISE	Professor
History of Teaching Prejudice	OISE	Professor
History of Canadian Immigration	OISE	Professor
Teacher Training of Immigrants	OISE	Professor
Early Childhood Education	Metro Separate	R & D*
Compensatory Education	Metro Separate	R & D*
Treatment of Boys and Girls in Classroom	Toronto	R & D*
Physical and Earth Sciences	OISE	Professor
Environment, Education, and Personnel	OISE	Professor

* Research and Development

<u>Search Topics</u>	<u>Affiliation</u>	<u>Position</u>
Sciences	OISE	Professor
Graphs	OISE	Professor
Evaluation of Student Teachers	OCE	Professor
Precision Teaching	OISE	Student
Lesson Observation Criteria	OISE	Professor
Employment of Graduates and Secondary Programs	North York	Library
Relationship of Secondary Courses to Post Secondary Programs	North York	Library
Dropouts at Secondary Level	North York	Library
Self Concept Instruments	OISE	Student
Junior Kindergarten and Development of Self Concept	North York	Library
Foreign Language Immersion Programs	North York	Library
Assessment and Record-Keeping at Primary Level	OISE	Library
The Formal Education of Athletes	OISE	Library
Cross-Cultural Curricula	OISE	Professor
Curriculum Trends	Halton	Administrative Officials
Effect of Media Training on Learning	OISE	Library
Core Curriculum	OISE	Library
English as a Second Language	Toronto	Library
Self Concept as a Function of Sex	North York	Library
Innovation in State Education Programs	OISE	Student
Change in State Education Programs	OISE	Student
Change Strategies and Implementation of Programs	OISE	Student
Foundations and Education	OISE	Student

<u>Search Topics</u>	<u>Affiliation</u>	<u>Position</u>
Demonstration (2 searches)	OISE	Library
	OISE	Student
University and College Presidents	OISE	Student
University and College Deans	OISE	Student
Environmental Education	OISE	Student
Biological Sciences in Elementary School	OISE	Professor
Biological Sciences in Secondary School	OISE	Professor
FLES Programs	North York	Library
Administrator Evaluation	OISE	Student
Administrator Role	OISE	Student
Leadership	OISE	Student
Politics of Education	OISE	Student
Voting Behavior and Board Elections	OISE	Student
Community Action	OISE	Student
Assessment of Individualized Instruction	OISE Centre	Professor
OISE Code	OISE	Library
Educational Administration Code	OISE	Library
Student Demonstration - 6 searches	OISE	Student

APPENDIX G: SDC CORRESPONDENCE AND TALLY OF
COMPUTER USAGE

SDC

SYSTEM DEVELOPMENT CORPORATION

2500 Colorado Avenue, Santa Monica, California 90406

February 9, 1973

Dr. Stephen Lawton
Ontario Institute for
Studies in Education
252 Bloor St., West
Toronto 5, Ontario, Canada

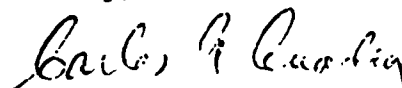
Dear Dr. Lawton:

We are pleased to have you on board as a trial SDC/ERIC user for UCEA. I am fully aware of the difficulties that you have experienced over the past two weeks in working around the mysterious computer problems we have been encountering. The "bug" has been found, as Mary Jane Ruhl informed you, and we are confident that your experience--and the experiment--from here on should be an entirely satisfactory one. To help ensure that the experiment is successful, we would like to offer you time extension, through the end of February. By then, we believe that you will have gained quite a bit of experience, made many observations, and received user feedback that will be useful in a report to UCEA. We hope that it will be possible for you to submit a report to Jack Culbertson of UCEA by the first week of March.

To help you in your planning for the remainder of the time, I am enclosing a report on your usage of computer-connect hours and off-line printout pages. We will keep you informed of your weekly usage from this point on, and will be working with Mary Jane Ruhl to see that she receives the information from us in time for a Monday morning call to you each week.

I greatly appreciate your patience and understanding during this period; my staff members and I understand how difficult it can be when a system fails to behave during an important demonstration for visitors or when one has promised a search to a user. The other side of this story is, of course, the pleasure that can come from having a demonstration for visitors--when the system is working well--and those who are observing can see the full benefits of the on-line capability. I am confident that you will now realize the pleasurable side.

Sincerely,



Carlos A. Cuadra, Manager
Education and Library
Systems Department

CAC:cb
Enc.
CC: Dr. Jack Culbertson

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION

252 BLOOR STREET WEST, TORONTO 181, ONTARIO, CANADA

TELEPHONE 925-6441

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

February 14, 1973.

Dr. Carlos A. Cuadra, Manager,
Educator and Library Systems Department,
Systems Development Corporation,
2500 Colorado Avenue,
Santa Monica, California 90406.

Dear Dr. Cuadra:

Thank you for your encouraging letter of February 9, 1973. We can confirm your statement that the "bug" has found, as the system has been working very well. Unfortunately, we find ourselves unable to extend the trial period beyond Friday, February 16, since our own resources have been expended. Unlike many U.S. users, we are faced with considerable line charges to the Buffalo Tymeshare Center. Also, we chose to "install" the system in the O.I.S.E. library where Mrs. Ethel Auster (Head Reference and Information) and myself have handled all requests ourselves. In our opinion, the system is not suited to casual users in education, but needs to be "interfaced" with a trained operator knowledgeable about the ERIC system. As a result of wide ranging invitations to boards throughout Ontario to forward requests, we have handled well over 100 searches, and find that we cannot commit any more of our time to the project. In any case, I do feel that, judging from the number of completed searches, we have given the system a fair test.

We expect to have the evaluation forms completed on February 16, 1973. However, a thorough evaluation report will probably be delayed until mid or late March, due to other matters that we have postponed until now.

Thank you for providing us an opportunity to test your system. The interest shown by those we have contacted has indeed made the test a pleasurable experience.

Sincerely,

Stephen B. Lawton.

cc: Dr. Jack Culbertson,
Mrs. Ethel Auster,
Dr. Robin Farquhar.

SBL/da

ONTARIO INSTITUTE FOR STUDIES IN EDUCATION

TALLY OF COMPUTER TIME AND BIBLIOGRAPHIC PAGES PRODUCED

JANUARY 2 - FEBRUARY 16, 1973

Week	Hours	Pages
<hr/>	<hr/>	<hr/>
January 2 - 5	—	—
January 8 - 12	4.06	59
January 15 - 19	1.84	—
January 22 - 26	9.25	694
January 29 - 31	6.08	583
February 1 - 2	7.35	1,033
February 5 - 9	8.24	1,588
February 12 - 16	12.15	3,551
<hr/>		
TOTALS	48.97	7,508

APPENDIX H: UNIVERSITY OF WASHINGTON
SDC/ERIC EVALUATION SUMMARY

WASHINGTON LIBRARY LETTER

UNIVERSITY OF WASHINGTON LIBRARIES • SEATTLE ⁷⁸

~~Volume XIV~~

Number 2

January 15, 1973

ERIC TRIAL SERVICE SUCCESS

The response to the ERIC free trial service which was offered by SDC (Systems Development Corporation) from October through December was overwhelming. 297 searches were processed by Library personnel on the Health Sciences Library terminal and 219 searches were processed by the College of Education on their TWX terminal.

This opportunity to gain access the ERIC data base without charge enabled librarians to familiarize themselves with the mechanics of operating a remote terminal and with on-line search techniques for retrieval of bibliographic data. It also enabled the Library to demonstrate a new service to library users and to evaluate response to that service.

Users of the service were asked to fill out a brief questionnaire. The results showed that 72% of the bibliographies retrieved were highly useful, 28% were moderately useful, and 0% were of little or no use. 56% of those responding indicated that they would use the service 1-5 times per year if it were available, 19% would use it 6-10 times per year, 25% would use it over 10 times per year, and 0% would not use the service at all.

The positive attitudes expressed by the survey data are reinforced by comments such as "the service is invaluable"; "useful instructional aid"; "tremendous savings both in time and money"; "good service"; "speedy service"; "personnel is very helpful and considerate"; "essential service - can the University be urged to continue to offer the service"; "just received my second retrieval - it's even better than the first"; "one of the most useful things I've found in my graduate studies"; "provides references which can be used at home".

The Committee on Computerized Information Services wishes to thank Nancy Blase of Health Sciences, Claire Marston of Suzzallo Reference, and Paul Marsh, College of Education, who contributed so significantly to the success of the experiment.

It is gratifying to have someone say to the Library, "On my College's behalf, I congratulate and thank you."

- JB -

APPENDIX I: OISE EVALUATION OF SDC/ERIC SERVICES
FOR UCEA MEMBERSHIP

EVALUATION OF GOLF/ERIC SERVICES
FOR
UCEA MEMBERSHIP

80

Please complete this evaluation as soon as the experimental period is over.
Send it to Dr. Jack Culbertson, at UCEA Headquarters, with an information copy
to Dr. Carlos Cauda, SEC, 2500 Colorado Avenue, Santa Monica, California 90406.

A. SERVICE RESOURCES AND PROCEDURES

1. Organizational Structure

- a. Department with primary responsibility Department of Educational
Administration - Administration and Arrangements for Demonstration, one
b. ~~financial~~ ^{financial} arrangements (including participation by other departments)
Library - Co-administration; location for terminal; one operator
Office of Field Development - Finance; assistance contacting - 4 channeling
Computer Services Group; supply terminal; arrangements for phone line

2. Publicity

- a. How was the service advertised on campus (attach any flyers, memos,
meeting agendas, etc.)? Contacted by phone or letter (1) Ministry of
Education through Research Dept. (2) Directors of Metro Toronto Boards
(3) School and College Libraries (4) Library School. By circular - OISE
departments, concentrating on Education Administration. In addition
met with Field Centre Heads.
- b. Who (e.g., faculty, students) were the targeted audiences for
this publicity? Faculty, Boards of Education, Library School and
Education Librarians, Project offices for on-going projects, Field Centre
Ministry of Education, National Library, Graduate Students in Educational
Administration, and OISE Computer Users group.

3. Available Equipment and Materials

a.	<u>Item</u>	<u>Availability</u> (check or indicate number and title)	<u>Location</u>
(1)	<u>Terminal</u>	<u>1</u> <u>Texas Instruments</u>	<u>Library</u>
(2)	<u>Research in Education</u>	<u>3</u> <u>700</u>	<u>Library</u>
(3)	<u>Current Index to Journals in Education</u>	<u>3</u>	<u>Library</u>
(4)	<u>Thesaurus of ERIC Descriptors</u>	<u>4</u>	<u>Library</u>

Also available in some Board libraries in Metropolitan area.

<u>Item</u>	<u>Availability</u> (check or indicate number available)	<u>Location</u>
		81
(5) Microfiche Collection	<u>2</u>	<u>OISE, Toronto Boards.</u>
(6) Periodicals Collection	<u>1 + ?</u>	<u>N.Y. Board; Separate</u>
(7) Microfiche Reader	<u>6 + ?</u>	<u>School Board</u>
(8) Microfiche Reader/inter	<u>1 + ?</u>	<u>OISE and Separate School</u>
(9) Other(s) _____	_____	<u>Board</u>
_____	_____	_____
_____	_____	_____

- b. Were microfiche available on loan? Yes _____ No X
 For review on site? Yes X No _____
- c. Were Microfiche Readers available on loan? Yes _____ No X
 Were Microfiche Readers available for use on-site only? Yes X No _____

4. Terminal Operators

a. Service personnel:

<u>Name</u>	<u>Position</u>	<u>Department</u>	<u>Prior Experience</u>
(1) <u>Mrs. Ethel Auster</u>	<u>Head Ref. & Information Service</u>	<u>Library</u>	<u>Reference Librarian - 5 years</u>
(2) <u>Dr. Stephen B. Lawton</u>	<u>Asst. Prof.</u>	<u>Ed. Admin.</u>	<u>Computer User - 6 years</u>
(3) _____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

- b. How many users performed their own searches at the terminal? 2

5. Request Procedures

a. Requests were received by:

X Walk-in - appointments usually made
X Letter or memo
X Telephone

(The learning process was judged too long to make user searches economical. Off-line assistance was provided with the thesaurus so users could design their own searches.

- b. Service personnel were available for the following hours, each day:⁸²
9:00 - 3:30 Mon. - Fri.

- c. What procedures were used for ensuring that the request was fully understood by the service personnel (terminal operators)?

We discussed the question in many cases.

Sessions were held with potential users in advance

so that they would be able to state questions in

appropriate manner. Whenever possible they worked with the
thesaurans under guidance.

B. SERVICE EVALUATION

1. Summary of Usage Statistics

- a. Number of requests received and processed (per week)

	# Received	# Processed
Week 1 (1/15-20)	_____	<u>5</u>
Week 2 (1/22-26)	_____	<u>31</u>
Week 3 (1/29-2/2)	_____	<u>40</u>
Week 4 (2/5-9)	_____	<u>36</u>
Week 5 (2/12-16)	_____	<u>74</u>
TOTAL	_____	<u>186</u>

- b. How many, if any, searches were re-processed at the request of users?

- c. Positions of Requesters

<u>Organization and Position</u>	<u>Number of Searches</u>	<u>Total</u>
OISE		99
Professor	24	
Research Assistant	12	
Graduate Student	41	
Field Cent on	8	
Library	14	
Ministry of Education		17
Officials	7	
Research and Development	10	
Library	0	
Boards of Education		65
Officials	13	
Research	31	
Libraries	21	
Other		5

d. Purpose of Search

<u>Purpose</u>	<u>Number of Searches</u>
Project/Proposal Research	56
Thesis Research	32
Disertation Research	
Literature Review for Course	7
Instructional Methods	22
Administration/Management	57
General/Personal Information	5
Demonstration of the System	6
Other (s) ?	1
Total	186

2. Summary of User Feedback (see "Suggested Evaluation Form for User Feedback")

In general, users felt the SDC/ERIC service was satisfactory. The main problem was the low ratio of useful to useless items appearing in the bibliography. The main advantages are the saving of time and quick response. Approximately 90% recommended the system be permanently installed, though some suggested minor changes in the procedures used.

C. SYSTEM EVALUATION

1. Description of Start-Up Activities

- a. How helpful was the SDC training in understanding the data base and the system?

Too unstructured. A programmed text would have been more effective. Also, advice on organization and most effective use of the system.

- b. How soon did the terminal operators begin to feel at east in performing searches (i.e., number of days)?

Two - three days; but imprecision of terms makes it continually frustration.

- c. Were the SDC staff members available and helpful in telephone consultations? Yes.

- d. How helpful was the User Manual for SDC/ERIC in increasing staff familiarity with the system?

Fairly good - see comment above.

Suggestions: prepare an audio-visual short course for users.

2. Search Time

- a. What was the average time spent with the Thesaurus in preparing for searches?

15 min. - but up to 1 1/2 hours

- b. What was the average time spent on-line at the terminal for each week?

15 hours (?) - 10 hour operational time

- c. How much time did service personnel spend in search-related conversations with users (before and/or after a search)?

15 min. average per person - but up to 1 1/2 hours.

Note: A time signal every 15 minutes would be of great help in keeping

3. Off-Line Printout Service track of time per search.

- a. What was the average turn-around time for off-line printouts, i.e. elapsed time between printout request and the arrival of the printout?

4 days

- b. To whom did you have most off-line printouts sent?

the terminal operator 50% whenever the library desired a copy for file
the requester 50%

D. GENERAL COMMENTS AND OBSERVATIONS OF THE UCEA REPRESENTATIVE

The system was very unreliable the first 2 1/2 weeks. We never knew when it would be working or when it would stop. Wasted hours of valuable time due to this factor. Very frustrating - and very embarrassing

when it would not work for Director of OISE! It worked very well the last week--after all demonstrations had been completed.

I do not recommend that the UCEA membership seriously consider making the SDC/ERIC Search Service available to the membership

Reasons for either choice above:

This system makes ERIC more accessible by at least a factor of 5. Also, long term and wide spread use might serve to standardize educational terminology, which would be of great benefit. However, more accurate cost data is needed, as well as a systematic way of getting actual material to users without a micro fiche collection.

EVALUATION FORM FOR USER FEEDBACK

SEARCH TITLE: Tabulation of Evaluation Results

85

1. Please rate your general level of satisfaction with the search results.
(8) Excellent (22) Satisfactory (7) Poor
2. How adequately was your search topic covered in the printout?
(11) Covered very well (18) Covered adequately (8) Not well covered
3. Did the printout include particularly relevant citations?
(2) None (14) A Few (10) Several (10) Many (-) More than I needed
4. Did you skim or read any of the referenced documents or articles? (10) Yes (9) No
If yes, were they: 17 microfiche 18 journal article 1 hard copy
5. Did you use the information from the printout and/or the referenced materials in your work? Yes (29) No (7)
If yes, describe the usefulness of the material for your purposes _____
6. Do you think you could have done an equally good or better literature search manually? Yes (15) No (19)
7. Would you have done a literature search if the Service were not available?
Yes (27) No (9)
If yes, how much time do you believe the Service saved you?
1/2 day - 8
1 day - 8
2 days - 1
1 week - 1
more than 1 week - 1
8. Was the printout received
(9) earlier than expected (26) in time for your purpose (-) too late for your purpose
9. How important do you feel that this Search Service would be to your professional functioning in the future?
(11) Very important (21) Important (5) Not very important
10. How frequently do you feel you will use the Service?
(11) Frequently (19) On occasion (6) Rarely (-) Not at all
If frequently or On occasion, please estimate the number of searches you might request over a 3 month period 1 to 5 - 17
6 to 10 - 8
11. What is your general recommendation for continuing this Service?
(22) I recommend that we continue to subscribe to this Service.
(4) I recommend that we continue to subscribe to this Service, but with certain suggestions. (Please comment below)
(3) I do not recommend that we continue to subscribe in this service.

Comments: See attached sheet

COMMENTS ON THE SDC/ERIC SYSTEM

"Design a better form for describing search topics."

"I think that OISE should subscribe to the SDC/ERIC service."

"The service saves much time."

"Have a training program for users so that others may use the terminal."

"This service would be excellent for work on thesis or dissertations."

"An effort should be made to assure that reports from Canadian educational institutions and boards be sent to the ERIC data bank."

"The search can only find what's there in store. We should not therefore expect to find everything."

"Allow student interaction with the terminal after a training program."

"I feel that I would be able to zero in more closely on my topic next time now that I have used the system and am more familiar with it."

"It serves the purpose, but much literature is apparently not listed."

"I found that I would need to learn how to be much more selective of terms describing the topic being searched, because I received far too much, requiring too much time to sift for relevance."

"From this first round it has to be recorded as a pretty poor total response. I would hope, of course, that with experience and more careful direction some of these difficulties could be eliminated. Sorry that our little trial didn't work out a little bit better."

APPENDIX J: SAMPLE OUTPUT

SAMPLE OUTPUT

Computer output for two SDC/ERIC searches are reproduced on the four pages which follow. In the first example, the user, after having been greeted by the system, indicated she was an experienced user (E) and proceeded to do a search on Assessment and Record Keeping at the Primary Level (see p. 71). A look through the ERIC Thesaurus suggested that three terms be referenced-- student evaluation, primary grades, and student records. These proved to have 1151, 638, and 199 citations respectively in the ERIC file. However, their "intersection"--that is, the citations having all three terms as descriptors--consisted of only one posting, which the operator had printed in full. It proved to be a relevant report from a Missouri school system.

The second example is a simple search to obtain a bibliography of all OISE material in the ERIC data base (see p. 72). The appropriate code, SF068750, was entered, and the system responded with an indication of 70 references. The operator chose to have these printed off-line in Santa Monica, California and mailed to her at the OISE library, where a copy of the complete bibliography arrived three days after the search was completed. The operator concluded by disconnecting the computer terminal (STOP), the system confirmed this command, and bade farewell.

THIS TERMINAL IS CONNECTED TO THE ERIC RETRIEVAL FILE SET

HELLO FROM THE ERIC. ERIC OPERATES MON THRU FRI, 7:30 AM - 12:30 PM
(WEST COAST TIME). WOULD YOU LIKE THE NEW-USER OR THE EXPERIENCED-
USER FORMAT TYPE N OR E AND STRIKE THE CARRIAGE RETURN KEY.

USER:
E

PRG:

1 1 OF

USER:
STUDENT EVALUATION

PRG:

PRTG 1151
1 2 OF

USER:
PRIMARY GRADES

PRG:

PRTG 1635
1 3 OF

USER:
STUDENT RECORDS

PRG:

PRTG 199
1 4 OF

USER:
1 AND 2 AND 3

PRG:

PRTG 1
1 5 OF

USER:
"PRINT FULL"

PRG.

ED- ED026115
 YF- 68
 OH- P1001350
 AU- HEDGECOCK, WILLIAM L.
 AU- HANE, ELMER F.
 TI- DEVELOPMENT AND IMPLEMENTATION OF A COMPREHENSIVE EVALUATION AND REPORTING SYSTEM FOR KINDERGARTEN AND PRIMARY GRADE SCHOOLS. FINAL REPORT.
 RD- JUN 68
 IC- R12JUN68
 IC- OH019174
 IN- CLAYTON SCHOOL DISTRICT, MO.
 IC- RM026104
 ON- OFFICE OF EDUCATION, WASH., D.C. INSPER. OF RESEARCH.
 RP- ERIC PRICE MF01.65 NO NOT AVAIL
 CG- D56-3-7-065553-2835
 IN- BX-6-9566
 NO- 79P.
 DE- FACILITY IDENTIFICATION
 DE- ACHIEVEMENT
 DE- ATTITUDE
 DE- CHILD ISOLATION
 DE- EVALUATION
 DE- GRADING
 DE- GROWTH PATTERNS
 DE- KINDERGARTEN
 DE- MEASUREMENT
 DE- MEASUREMENT SCALE
 DE- PRIMARY GRADES
 DE- STUDENT EVALUATION
 DE- STUDENT RECORDS
 DE- SYSTEM DEVELOPMENT
 ID- CLAYTON SCHOOLS
 ID- CLAYTON SCHOOL DISTRICT
 AB- THE PROJECT DESCRIBED IN THIS REPORT ATTEMPTED TO ESTABLISH, WITHIN A REAL SCHOOL SETTING, A COMPREHENSIVE AND VIABLE WAY OF DETERMINING AND REPORTING THE GROWTH AND DEVELOPMENT OF KINDERGARTEN AND PRIMARY GRADE CHILDREN IN THE PUBLIC SCHOOLS. THE PROJECT WAS DEVELOPED BY A STEERING COMMITTEE OF FACULTY MEMBERS FROM THE CLAYTON SCHOOL DISTRICT OF CLAYTON, MISSOURI. ONE OF THE CLAYTON SCHOOLS WAS CHOSEN TO IMPLEMENT THE FIRST AND SECOND OF THE PROGRAM AS IT WAS DEVELOPED. FULL-SCALE IMPLEMENTATION OF THE SYSTEM IS TO OCCUR IN THAT PILOT SCHOOL IN THE 1968-69 ACADEMIC YEAR. THE COMPREHENSIVE EVALUATION AND REPORTING SYSTEM CONSISTS OF TWO MAJOR PARTS: (1) A COMPREHENSIVE STUDENT FOLDER TO FOLLOW THE STUDENT FROM KINDERGARTEN THROUGH GRADE 11 AND (2) REPORTS TO PARENTS, INCLUDING (A) TWO WRITTEN REPORTS PER YEAR AND (B) TWO PARENT CONFERENCES PER YEAR. THE SPECIFIC TYPES OF INFORMATION TO BE KEPT IN THE STUDENT FOLDER ARE INDICATED IN APPENDIX A THROUGH I OF THIS REPORT. ALSO DETACHED IN THIS REPORT ARE EIGHT RECOMMENDATIONS AND 26 ITEMS CONSIDERED IN DEVELOPING THE EVALUATION AND REPORTING SYSTEM AND NINE AREAS OF INFORMATION ABOUT EACH CHILD TO BE INVESTIGATED AND REPORTED IN THE FOLDER. (MD)

U.S. GOVERNMENT PRINTING OFFICE: 1967 O 474-001

[illegible]

1994

101-109 111-117 118-125 126-133

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific information required.

STREET LIGHTS, SOL. TP. ONE-SPEED 1000 OF 100000, ALL OF 100000

1991

1199

THE UNIVERSITY OF CHICAGO

SECRET

1117

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1

111

1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99

L.

1941

REF ID: A77077

11-

1. The first group of people who are not in the labor force are those who are not in the labor force for any reason. This group is the largest and is made up of people who are not in the labor force for any reason.

11-12-13

THIS CASE IS BEING HANDLED BY THE ATTORNEY GENERAL'S OFFICE.

11 12 13 14 15

[illegible]

11

IF THERE IS A DIFFERENCE BETWEEN THE FOUNDATION'S METHOD OF DETERMINING OR THE TYPE AND

• 41 •

10 11 12

1991.

THESE DOCUMENTS ARE THE PROPERTY OF THE NATIONAL ARCHIVES OF THE UNITED STATES

1991.

THESE DOCUMENTS ARE THE PROPERTY OF THE NATIONAL ARCHIVES OF THE UNITED STATES

1991.

THESE DOCUMENTS ARE THE PROPERTY OF THE NATIONAL ARCHIVES OF THE UNITED STATES

1991.

OR

1991.

THESE DOCUMENTS ARE THE PROPERTY OF THE NATIONAL ARCHIVES OF THE UNITED STATES

THESE DOCUMENTS ARE THE PROPERTY OF THE NATIONAL ARCHIVES OF THE UNITED STATES

1991.

OR

1991.

THESE DOCUMENTS ARE THE PROPERTY OF THE NATIONAL ARCHIVES OF THE UNITED STATES

1991.

OR

1991.

THESE DOCUMENTS ARE THE PROPERTY OF THE NATIONAL ARCHIVES OF THE UNITED STATES