ERIC: EDUCATIONAL RESOURCES INFORMATION CENTER

by
Devinder Kaur*

Makalah ini menghuraikan ERIC atau Educational Resources Information Center yang merupakan suatu sistem maklumat untuk mengumpul dan menyibarkan maklumat dalam bidang pendidikan. Penjelasan diberi berkenaan organisasi dan fungsi jaringan ERIC dengan ibupejabatnya di Washington, D.C., dan sistem pembahagian tugas kepada 16 buah pusat pengumpulan maklumat, tiap-tiap satu bertanggungjawab pada satu jurusan pengkhususan. Karya-karya dalam bentuk laporan dan berkala dimasukkan ke dalam sistem ini dan diterbitkan untuk makluman umum melalui dua buah majalah abstrak ERIC, iaitu *Resources in Education* (*RIE*) dan *Current Index to Journals in Education* (*CIJE*). Sebagai tambahan indeks-indeks kumulatif juga diterbitkan. Semua indeks ini bersama *Thesaurus of ERIC Descriptors* dan ERIC Documents on Microfiche yang baru diperolehi, merupakan database ERIC di Perpustakaan yang kini ditempatkan dalam sebuah karel khusus untuk perkhidmatan ERIC. Juga dijelaskan bagaimana sesuatu pencarian secara manual dapat diuruskan pada database ini.

ERIC as an invaluable source of educational information has yet to be made known to the academic community. This national information database was designed to collect and disseminate documental information on education to teachers, administrators, students, researchers and other interested persons in the field. Educational Resources Information Center, or ERIC, as it is popularly known, is the world's largest and most sophisticated education information system, inaugurated as far back as the mid-sixties. In 1981, the University of Malaya Library agreed with the Faculty of Education to purchase the ERIC collection including ERIC reference tools and some ERIC documents in hardcopy.

The purpose of this paper is twofold:

(i)   to announce ERIC resources in the University of Malaya Library, which now include the recently acquired ERIC documents on microfiche; and

(ii)   how to use it so that its usage will be actively encouraged by library staff.

ERIC as a national information system was developed by the United States Office of Education and is now supported and operated by the National Institute of Education. As an organisation, it consists of a Central ERIC office in Washington D.C. and 16 decentralised information centres called Clearinghouses scattered throughout universities and headquarters of professional organisations in the United States. Central ERIC is run by a body of coordinating staff responsible for developing, managing and coordinating the activities of the Clearinghouses, each of which is concerned with a specific area of education. It collects, processes and disseminates information in its specific field. The 16 areas of education covered by the Clearinghouses are as follows:

1. Adult, Career and Vocational Education.
2. Counseling and Personnel Services.
3. Educational Management.
4. Elementary and Early Childhood Education.
5. Handicapped and Gifted Children.
6. Higher Education.
7. Information Resources.
8. Junior Colleges.
9. Languages and Linguistics.
10. Reading and Communication Skills.
11. Rural Education and Small Schools.
12. Science, Mathematics and Environmental Education.
13. Social Studies/Social Science Education.
14. Teacher Education.
15. Tests, Measurement and Evaluation.
16. Urban Education.

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issues of *RIE* for a particular year. Unlike the monthly *RIE*, this essentially subject-author index provides additional subject headings called Minor Descriptors. The monthly *RIE* carries only Major Descriptors. For conducting an exhaustive search or asking a highly specific question, it is necessary that this index be used. As the index gives the complete title for each ED number, the title alone serves to clarify the content of an article beyond the context of the descriptor. A complete title and ED number is also given with each listing under a descriptor in the subject index. However, if one wants a further clarification or more details of a document title before deciding on the pertinence of a document, one may do so by referring to the Report Resumes of the documents that appear in the monthly issues of *RIE* and in the cumulated volumes called *ERIC Educational Documents Abstracts* in which not only do citations appear but abstracts running to no more than 200 words are included. The resumes are arranged by ED numbers. This index makes it unnecessary to refer to the monthly issues of *RIE*. The Library holds issues from 1969 onwards.

The ED numbers are keys to the microfiche collection. Having noted the numbers, one is able to retrieve the full-text documents from the microfiche collection.

So far, the various ERIC reference tools to the ERIC document literature that the Library holds in microfiche has been discussed. ERIC publishes another principal monthly indexing journal called *Current Index to Journals in Education* (*CIJE*) that provides bibliographic access to periodical literature covered by over 700 education and education-related journals of which the library has a good collection. The Library subscribes to the monthly issues of *CIJE*. Each issue contains a subject index, an author index, a journal contents index and a source journal index to the main entry section that arranges citations to articles by EJ accession numbers. The citations are classified into 52 descriptor groups taken from the *Thesaurus of ERIC Descriptors*. Therefore, as in the case of an ERIC document literature search, the use of a thesaurus is necessary for an effective periodical literature search using *CIJE*. The articles cited are provided with full bibliographic information including annotations of interpretive summaries (and **not** abstracts as in the case of ERIC documents). In addition to a broad coverage, a unique characteristics of *CIJE* is its overall timeliness; quick announcement of the journal literature is a firm policy of *CIJE*. Unlike it's sister publication, *RIE*, journal articles in *CIJE* are not reproduced in hardcopy or in microfiche for reasons of copyright; in any case being commercially published the various journals are easily accessible. Like *RIE*, the subject and author indexes are cumulated annually and semi-annually. The main entry section in the monthly *CIJE* is also cumulated annually and semi-annually.

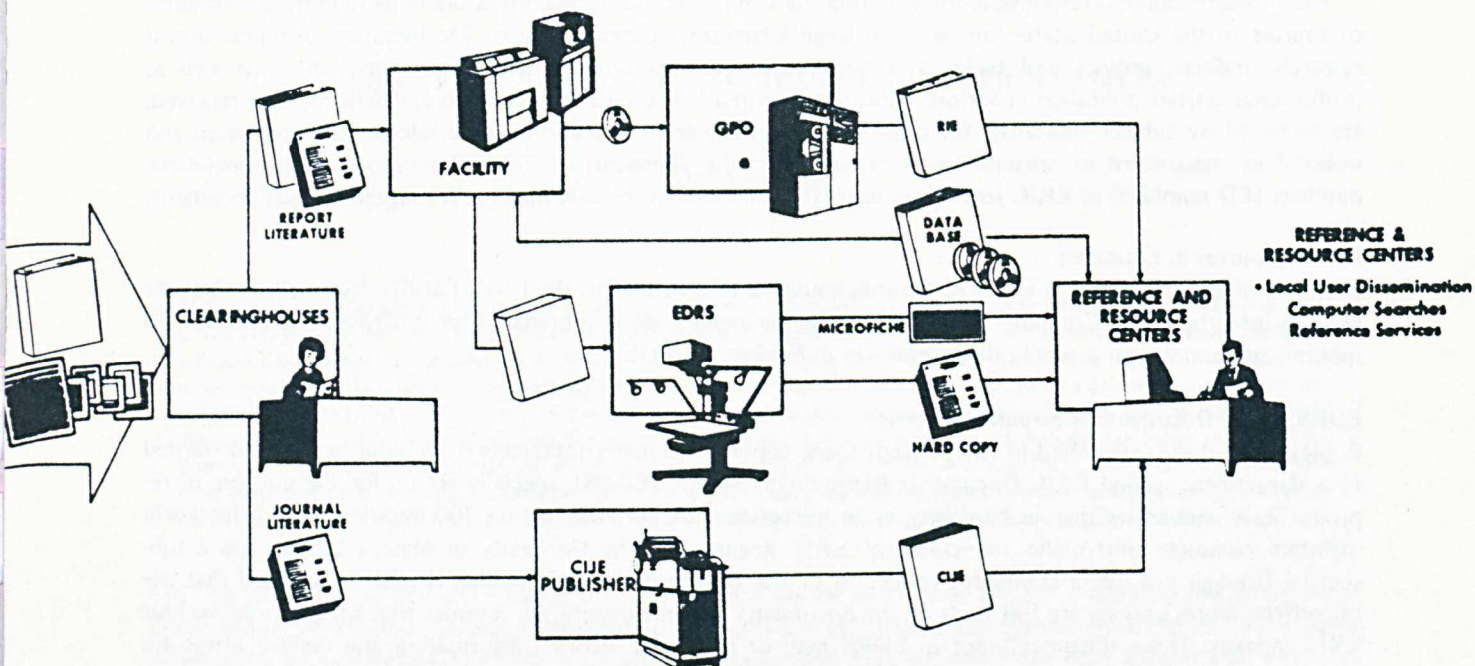**The ERIC Documents-on-Microfiche Collection in the University of Malaya Library**
The Library has recently acquired this most invaluable collection. The documents cited in various ERIC indexes are reproduced in full-text on microfiche which are 4 inch by 6 inch sheets with the pages of the documents photographed and highly reduced in size. Each microfiche carries up to 98 pages of document. The Library has received documents from January 1979 to September 1981 and is awaiting consignments for the years 1976, 1977 and 1978. These would amount to an estimated 90,000 documents titles. The documents are arranged by ED numbers which means simply that they are not in a subject or author sequence. Subject and author access to the collection are provided through the various ERIC indexes.

The database is ready for use by conducting a manual search that the Library staff is trained to assist and instruct users. The microfiche collection is housed in a special carel, carel No. 8 in the Library, in which all the ERIC tools including the thesaurus will be kept handy for use. Hardware in the form of a microfiche reader is placed permanently in the carel for convenient reading. The machine enlarges the image printed on the fiche and projects it onto a screen permitting the document to be read page by page. The monthly *CIJE* indexes and its cumulated issues are also kept in the carel thus completing the ERIC database.

HOW TO CONDUCT A MANUAL SEARCH OF PRINTED ERIC INDEXES AND LOCATE RESOURCES IN THE ERIC COLLECTION
First, phrase your question as precisely as possible in words and phrases. Then consult the *Thesaurus of ERIC Descriptors* that enables you to determine what subject terms are used to index your topic in *RIE*. If you do not find your subject listed in the thesaurus, try looking under synonymous terms. It should be kept in mind that there are many concepts for which there is no single adequate descriptor. A person wanting material on higher education in the developing countries will have to consult terms relating to both "Higher Education" and "Developing Nations".

Source: US National Institute of Education. *How to use ERIC*, Washington, D.C., GPO, 1978.

CLEARINGHOUSES	FACILITY	GPO	EDRS	CIJE PUBLISHER

• Subject Oriented
   Acquisition
   Selection
• Abstracting
• Indexing
• Information Analysis
• Inquiry Processing
	• Editing/Validation
	• Data Input
	• Lexicography
	• Computer Systems
	• Publication Preparation
	• Data Base Management
		• Photocomposition
		• Abstract/Index Journal
		   Publication (R/E)
		• Subscr. Management
			• Microfilming
			• Dissemination
			   Microfiche
			   Hard Copy
				• Commercial Publishing
				   CIJE Journal
				   Other Spinoffs

ERIC DATABASE IN THE UNIVERSITY OF MALAYA LIBRARY

The ERIC Database in the Library consists of the documents on microfiche, the various indexes and abstracts, issues of *CIJE* and a handful of ERIC documents in hardcopy. For a manual search of the database various ERIC reference tools are used:

The Thesaurus of ERIC Descriptors is the first tool to refer to in an ERIC search. Its usage in phrasing a reference query, before using the indexes is pertinent to searching the ERIC files. The thesaurus is a controlled vocabulary of alphabetically arranged educational terms called descriptors that are used to index and enter documents into the ERIC system as well as to assist users in searching the system. It is an authority list of the descriptor terms used in *RIE* and *CIJE*. The indexing follows the rule of a controlled vocabulary, that is, only the selected and established terms are accepted for use. New editions of the thesaurus are issued every several years, and new descriptors are listed in the back of each issue of *RIE* and *CIJE*. The thesaurus consists of a main body of descriptors with a related series of indexes (to the main body) comprising of Rotated Descriptor Display (essentially a Keyword-in-Context index); a synopsis of the Descriptor Groups; and a Descriptor Display showing every term appearing in each of the Descriptor Group.

Resources in Education (RIE). The Library holds in its collection issues from 1969 onwards of this principal monthly abstracting journal. The twelve issues of a year are bound annually in one volume by the Library. Each issue of *RIE* carries a main entry index (i.e. the report resumes/abstracts) arranged by ED number, a subject index, an author idex and an institution index. These indexes are cumulated annually and semi-annually and published as companion volumes to the individual issues of *RIE*. They are called *ERIC Educational Documents Index*. The Library holds some earlier issues and has subscribed for follow-up issues. What this index does is, essentially, cumulate the titles and ED numbers to the documents that are announced in the monthly

issues of *RIE* for a particular year. Unlike the monthly *RIE*, this essentially subject-author index provides additional subject headings called Minor Descriptors. The monthly *RIE* carries only Major Descriptors. For conducting an exhaustive search or asking a highly specific question, it is necessary that this index be used. As the index gives the complete title for each ED number, the title alone serves to clarify the content of an article beyond the context of the descriptor. A complete title and ED number is also given with each listing under a descriptor in the subject index. However, if one wants a further clarification or more details of a document title before deciding on the pertinence of a document, one may do so by referring to the Report Resumes of the documents that appear in the monthly issues of *RIE* and in the cumulated volumes called *ERIC Educational Documents Abstracts* in which not only do citations appear but abstracts running to no more than 200 words are included. The resumes are arranged by ED numbers. This index makes it unnecessary to refer to the monthly issues of *RIE*. The Library holds issues from 1969 onwards.

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Having identified a descriptor in the thesaurus, e.g. 'Curriculum Evaluation,' you will find that it is cross-refered to other descriptors, classified as narrower terms (NT), broader terms (BT), and related terms (RT) which are worth referring to:

CURRICULUM EVALUATION 180
BT Evaluation
RT Course Evaluation
    Curriculum
    Faculty Evaluation
    Program Evaluation
    Summative Evaluation

If you want to be very thorough, you should check all key words relating to your topic in the 'Rotated Descriptor Display' and you should scan the terms in the 'Descriptor Group Display' category under which your topic falls.

ROTATED DESCRIPTOR DISPLAY

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                        CURIOSITY
                        CURRENT EVENTS
                        CURRICULUM
             ARITHMETIC CURRICULUM
                COLLEGE CURRICULUM
                   CORE CURRICULUM
                        CURRICULUM DESIGN
                        CURRICULUM DEVELOPMENT
      ELEMENTARY SCHOOL CURRICULUM
                ENGLISH CURRICULUM
                        CURRICULUM ENRICHMENT
                        CURRICULUM EVALUATION
           EXPERIMENTAL CURRICULUM
                  FUSED CURRICULUM
                        CURRICULUM GUIDES
                  STATE CURRICULUM GUIDES
            HIGH SCHOOL CURRICULUM
                 HONORS CURRICULUM
         INDIVIDUALIZED CURRICULUM
             INTEGRATED CURRICULUM
            MATHEMATICS CURRICULUM
        MODERN LANGUAGE CURRICULUM
                PHYSICS CURRICULUM
                        CURRICULUM PLANNING
              PRESCHOOL CURRICULUM
                        CURRICULUM PROBLEMS
                        CURRICULUM RESEARCH
                SCIENCE CURRICULUM
                   SHOP CURRICULUM
                 SPEECH CURRICULUM
                 SPIRAL CURRICULUM
       STUDENT CENTERED CURRICULUM
                        CURRICULUM STUDY CENTERS
      TEACHER EDUCATION CURRICULUM
             TELEVISION CURRICULUM
               UNGRADED CURRICULUM
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The 'Rotated Descriptor Display' arranges the ERIC descriptors so that each word of each term is entered separately in alphabetical order.

DESCRIPTOR GROUP DISPLAY

180   Evaluation
    ACHIEVEMENT GAINS
    ACHIEVEMENT RATING
    ADMINISTRATOR EVALUATION.
    AUDITORY EVALUATION
    BEHAVIOR RATING SCALES
    CLINICAL DIAGNOSIS
    COGNITIVE MEASUREMENT
    COLLEGE CREDITS
    COMMUNITY SURVEYS
    COUNSELING EFFECTIVENESS
    COUNSELOR EVALUATION
    COURSE EVALUATION
    CREDIT NO CREDIT GRADING
    CREDITS
    CRITICAL INCIDENTS METHOD
    CURRICULUM EVALUATION
    DATA ANALYSIS
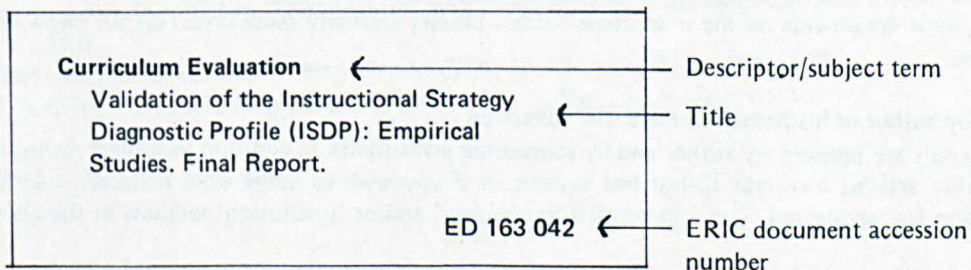   DENTAL EVALUATION
    EDUCATIONAL DIAGNOSIS

The 'Descriptor Group Display' divides terms into 52 general categories, listing the specific descriptors which apply to each.

    TESTING
    TEXTBOOK EVALUATION
    USE STUDIES
190   Evaluation Techniques
    ACADEMIC PROBATION
    CHECK LISTS

Next, refer to the subject indexes (monthly, semi-annual and annual) in *RIE* and *ERIC Educational Documents Index* and read the titles listed under the descriptor terms you have chosen. Note the titles and ED numbers of those documents that seem appropriate. Abstracts for the titles on your list may be found in several sources and you may wish to review them before actually looking up the reports themselves. They can be found in the monthly issues of *RIE* where the documents were first listed and in the cumulated volumes, i.e. *ERIC Educational Documents Abstracts*.

Sample (with explanation) of an entry from the Subject Indexes of *RIE*:

Curriculum Evaluation ←——————————— Descriptor/subject term
Validation of the Instructional Strategy ←—— Title
Diagnostic Profile (ISDP): Empirical
Studies. Final Report.

ED 163 042 ←——— ERIC document accession number

27

Sample (with explanation) of a citation with an abstract from *ERIC Educational Document Abstracts/RIE:*

ERIC Accession·Number- identification number sequentially assigned to documents as they are processed.

Authors

Title

Organisation where document originated

Date published

EDRS Price-price through ERIC Document Reproduction Service. 'MF' means microfiche; 'HC' means hard copy. When listed 'not available from EDRS' other sources are cited above.

ED 163 042   TM 008 060 →

Merrill, M. David   Wood, Norman D.
Validation of the Instructional Strategy Diagnostic Profile (ISDP): Empirical Studies. Final Report.
Navy Personnel Research and Development Center, San Diego, Calif.
Report No.—NPRDC-TR-77-25
Pub Date—Apr 77
Contract—N00123-76-C-0458
Note—65p. ◄
. **EDRS Price MF-$0.83 HC-$3.50 Plus Postage.**
Descriptors—*College Curriculum, *Curriculum Development, *Curriculum Evaluation, Evaluation Criteria, *Evaluation Methods, Higher Education, *Instructional Improvement, *Instructional Materials, Performance Factors, Physics Curriculum, Statistics, Teaching Methods

The Instructional Strategy Diagnostic Profile (ISDP) was designed to enable instructional developers and evaluators to predict the effectiveness of, and prescribe improvements for existing instructional materials. Experimental studies were conducted in introductory college statistics and physics classes to validate the ISDP and its accompanying design prescriptions. Two methodologies were used: (1) existing instructional materials were modified, based on a selected prescription resulting from ISDP analysis of those materials, and two or more versions of the materials were compared; and (2) a weak unit of an existing course was identified and modified via several prescriptions resulting from an ISDP analysis. Test performance, affect, confidence, and time were compared for students using the revised materials and students using the original materials. When used to revise existing materials, the ISDP prescriptions produced significant differences only in the second study. Failure to obtain predicted results may have been due to confounding factors in the experimental situations. Other studies have demonstrated that existing materials revised according to ISDP prescriptions can significantly improve student performance, especially if the interaction with the materials can be controlled and the tests can be revised to more adequately measure concept classification and rule-using behavior. (Author/JAC) ◄

→ Clearinghouse accession number (in numerical order)

Descriptive note

Descriptors — subject terms which characterize substantive content. Only the major terms, preceded by an asterisk, are printed in the subject index.

Informative Abstract

Abstractor's initials.

Next, locate the desired reports in the microfiche collection. Many of the longer reports are continued on two or more microfiche. If the note on the upper left hand corner of the fiche indicates 1 of 2, it is a two part microfiche sheet document, 1 of 3, three parts, etc. Some documents in *RIE* are not available on ERIC microfiche. If you do not find the report you are looking for in the microfiche collection, locate its abstract in the appropriate monthly issues of *RIE*. If the document was not reproduced on ERIC microfiche, the abstract will include the note "Not available from EDRS", or marked with a double slash (//) after the ED number.

Finally, view documents on the microfiche reader. Library staff will assist if you do not know how to operate the machine.

Searching by author or institution in the ERIC collection

ERIC materials are indexed by author and by sponsoring institutions, in addition to subject terms. If you wish to discover what articles a certain author has written, or if you wish to know what materials a certain university or institution has sponsored, you can consult the 'author' and/or 'institution' sections in the above-mentioned indexes.

Searching by topic in 'Current Index to Journals in Education' for periodical literature.

Like a search in *RIE*, utilise the terms listed in the *Thesaurus of ERIC Descriptors* and check them against the subject section in *CIJE*. Consult the annual cumulations for those years which are complete and the monthly and/or semi-annual issues for the current year.
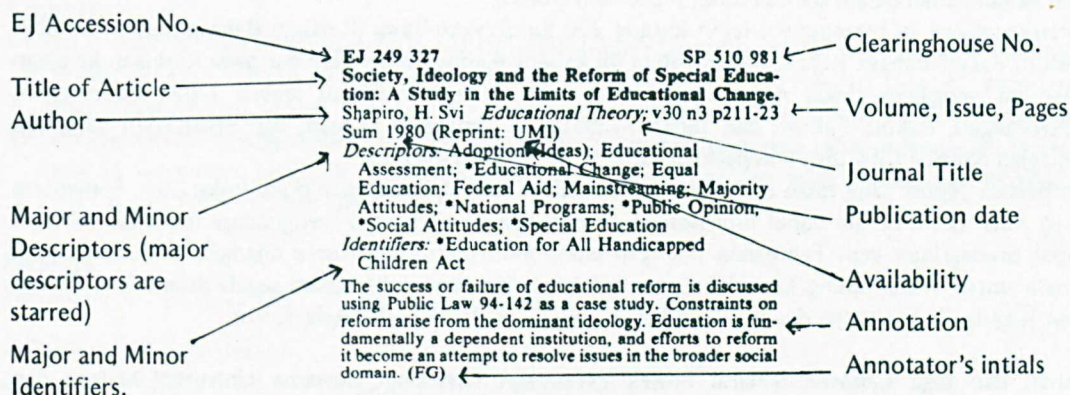
Select the articles which apply to your search, recording all the information needed for locating and citing the articles. If you desire more information about an article before actually locating it, look it up in the main entry section as it provides complete bibliographic information, a list of subjects and annotations. Trace the main entry through the EJ numbers. Once articles have been selected and complete bibliographic information noted, consult the periodical records of the library to determine if the desired items are available. Note: articles indexed in *CIJE* are not included in the ERIC microfiche database.

Searching by author or journal in *CIJE* for periodical literature

You also may search *CIJE* by author or by journal title. If you want to see what a particular author has written, or if you wish to see what articles a certain journal has printed, simply consult the appropriate index in the back of each monthly *CIJE*.

Sample of an article cited in *CIJE*:

EJ Accession No. ——→ **EJ 249 327**   SP 510 981 ←—— Clearinghouse No.

Title of Article ——→ **Society, Ideology and the Reform of Special Education: A Study in the Limits of Educational Change.**

Author ——→ Shapiro, H. Svi *Educational Theory*; v30 n3 p211-23 ←—— Volume, Issue, Pages
Sum 1980 (Reprint: UMI)

Descriptors: Adoption (Ideas); Educational Assessment; *Educational Change; Equal Education; Federal Aid; Mainstreaming; Majority Attitudes; *National Programs; *Public Opinion; *Social Attitudes; *Special Education —— Journal Title

Major and Minor Descriptors (major descriptors are starred) —— *Identifiers:* *Education for All Handicapped Children Act —— Publication date

The success or failure of educational reform is discussed using Public Law 94-142 as a case study. Constraints on reform arise from the dominant ideology. Education is fundamentally a dependent institution, and efforts to reform it become an attempt to resolve issues in the broader social domain. (FG) ←—— Availability / Annotation / Annotator's intials

Major and Minor Identifiers.

With computerisation the library may **in future** be able to subscribe to ERICTAPES so that on-line retrieval of the ERIC database may be possible.

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