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An Assessment of Educational Resources through ERIC, CORE, PDFdrive and Project Gutenberg

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An Assessment of Educational Resources through ERIC, CORE, PDFdrive and Project Gutenberg

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Abstract

There are so many databases in the world for retrieval of information from e-resources. This research paper analyses ERIC, CORE, PDF Drive and Project Gutenberg for retrieval of e-resources. Here everything was analyzed on the basis of some observation and collected data were tabulated for analysis. This paper includes brief description about ERIC, CORE, PDF Drive and Project Gutenberg and screenshots of normal search, advanced search and use of fuzzy logic. This research reflects that none of the databases under study achieved full score found that ERIC ranked the first position.

Keywords: Educational resources; ERIC; CORE; PDFdrive; Project Gutenberg

1. Introduction

We are living in the information age now. The 21st Century is the time of information explosion and our life is very fast. Each and everyone wants to get anything he requires without sparing time or in some cases by spending a little time. At present most of the work can be done through online. Searching and retrieval of document (Information) is not the exception.

Any type of document may be treated as information source as the document gives the information. It is a record of human knowledge, observation and thoughts available in many forms and formats. It has two components, such as conduit and content**.** Conduit is the physical facilities used for gathering, storing, processing and disseminating information where as Content is the information sources and elements (Mukhopadhyay, 2013).

With the advent of Information Communication Technology (ICT) and also the World Wide Web (www), maximum of the information are available by a single click, i.e. by online search (In which process interactive searching and retrieval of requested information is available via computer from online database, is called Online Search) (Wiki, 2018).

My study based on the following four online databases which provides electronic resources freely to the users:

i. ERIC (Education Resource Information Center)
ii. CORE (COnnecting REpository)
iii. PDF Drive
iv. Project Gutenberg.

2. Scope

There are so many databases which provide online resources freely, such as, Avalon Project, The BookHive, Council of Foreign Relations, Discovery School, ERIC, CORE, PDF Drive, Fodor's, Indeed, Maps of War, DOAJ, DOAB, DOAR, Wikipedia, etc. Only three of the online databases are selected and analyzed in this study. It is thought that there is a large scope of learning by going through the study.

3. Objectives

The objective of the study reflects subject matters of the study. The present study has the following objectives:

i. To ascertain the year of origin, Type of databases, URL and the Country Head Quarter (HQ), the Sponsoring Authority, Mission, Target Audience, Time of Updating, Key Collection, Accessibility, Type of Collection and Controlled Vocabulary of ERIC, CORE, PDF Drive and Project Gutenberg and how to search e-resources through ERIC, CORE, PDF Drive and Project Gutenberg;

ii. To determine the different types of Searching Elements, search types of ERIC, CORE, PDF Drive and Project Gutenberg;

iii. To ascertain the available facilities from ERIC, CORE, PDF Drive and Project Gutenberg;

iv. To consider the Searching Parameters of ERIC, CORE, PDF Drive and Project Gutenberg ; and finally

v. To decide the rank of ERIC, CORE, PDF Drive and Project Gutenberg.

4. Methodology

The databases, ERIC, CORE, PDF Drive and Project Gutenberg were read through web and then the various parameters were taken into account. A questionnaire was framed and filled it up carefully. Here the observation method of research study was followed. Where the information is available, "1" mark is assigned against it and otherwise marked as "0". In the Searching parameters part, the class note of MLIS under the University of Burdwan in the year 2007-08 by Dr Parthasarathi Mukhopadhyay was followed. The data are represented here in tabular form.

5. Brief discussion on ERIC, CORE, PDF Drive & Project Gutenberg

5.1 ERIC:

Federally funded research was increasing rapidly during the period 1957-1958. It was urgent to establish a repository for managing the educational materials. In the year 1959, Office of Education (OE) Commission studied the feasibility for the establishment of an Educational Media Research Information Service. And in the year 1961 the OE coined the word "ERIC" as an acronym of Education Resource Information Center and finally on 15th May, 1964 the ERIC was established with the sponsorship of Institute of Education Science, United States Department of Education. Harold Hawell was the first director of ERIC. At that time there was no fund and no programs for ERIC but had big plans. And in the same year Ford Mustang signed the Economic Opportunity Act and began its fruitful journey. In the year 1965 "Elementary and Secondary Education Act"was signed by President Johnson. The Thesaurus of ERIC Descriptors was created by ERIC in the year 1966. And in the same year "Research in Education", an abstracting journal was published and the title was changed from Research in Education to "Resources in Education" in the year 1977. In the year 1992 ERIC debuts on the Internet and in the Syracuse University, AskERIC was launched and Gateway to Educational Materials and Virtual Reference Desk was launched and Bob Stonehill was the Director then. In the year 1993, ERIC adds the books to its database and National Library of Education (NLE) was established. ERIC transferred to NLE in the year 1995. In the year 2002 ERIC joins Institute of Education Science (IES). In the year 2004 became an all-electronic service which replaced 20 separate sites under the directorship of Luna Levinson to enhance the usability and to simplify the searching ERIC, released the website http://eric.ed.gov and the database and the thesaurus made free and open for downloading without license (ERIC, 2018).

5.2 CORE

CORE stands for COnnecting REpository. It started its journey from the year 2011 and it was created by Petr Knoth with the aim to aggregate all open access contents across different system, such as repositories and open access journals. It is sponsored by Knowledge Media Institute of The Open University, United Kingdom. It is repository shared service like Sherpa Services, OpenDOAR, etc. All the outputs can be accessed without paying any cost. It offers six applications, such as CORE Portal, CORE Mobile, CORE Plugin, CORE API, CORE Data Dumps and CORE Repository Analytics (Wiki, 2018).

5.3 PDF Drive

PDF Drive started its journey from March, 2017 by the sponsorship of Asaha Inc., San Diego, United States. PDF Drive provides two types of services, i.e., free services and paid services. For paid services, depending on the payment mode, i.e. one time or regular basis, payments can be

made. It respects the intellectual property rights (Digital Millennium Copyright Act of 1998). One can visit other websites from PDF Drive by following hyperlinks (PDF Drive, 2017).

5.4 Project Gutenberg

Project Gutenberg, the oldest digital library was started by Michael S. Hart in the year 1971. It was created with the motto to digitize and archive cultural works and to encourage the creation and distribution of eBooks. It has collections of novels, poetry, short stories, drama and also includes cookbooks, reference work and issues of periodicals of English, French, German, Finnish, Dutch, Italian and Portuguese language. From 1st January, 2019, the items published in 1923 will be added to the Project Gutenberg database (Wikis, n.d.).

6. Analysis and Interpretation:

Table – 1: General Information which includes year of origin, type of databases, Head Quarter (HQ) and their respective URL.

Name of the Database	Year of origin	Type	URL	Country (Head Quarter)
ERIC	1964	Online Digital Library	https://eric.ed.gov	U.S.
Project Gutenberg	1971	Oldest Digital Library	http://www.gutenberg.org	U.S.
CORE	2011	Repository	https://core.ac.uk	U.K.
PDF Drive	2017	Learning Resources	https://www.pdfdrive.net	U.S.

Table – 1: General Information

From the above Table-1, it is seen that project Gutenberg is the oldest digital library which was established in the year 1971 though ERIC was established in the year 1964 followed by CORE (2011) and PdfDrive (2017).

Table – 2: The following Table – 2 is focusing about the Sponsoring Authority, Mission, Target Audience, Time of Updating, Key Collection, Accessibility, Type of Collection and Controlled Vocabulary.

Particulars	ERIC	CORE	PDF Drive	Project Gutenberg
Sponsoring Authority	Institute of Education Science, United States	Knowledge Media Institute, The Open University, UK	Asaha Inc., Sandiego, United States	Michael S. Hart

	Department of Education			
Mission	To provide a comprehensive, easy to use, searchable, Internet based bibliographic and full-text database	To accumulate all research outputs from the repositories and Journals worldwide and make them available to the public	To search, preview and download millions of PDF files	To digitize and archive cultural works and to encourage the creation and distribution of eBooks
Target Audience	Educators, Researcher and general people	Researchers and general users	Researchers and other Educators	Researcher and advanced readers of the entire world
Time of Updating	Every week	Automatic update	Everyday	Nightly
Key Collection	Grey Literature, available in full-text in Adobe PDF Format	It harvests openly accessible metadata and full text outputs form both UK Publishers, database as well as institutional and subject repositories	Scan copy of valuable books, Articles, independent sounds and videos and database export	Older great works whose copyright has expired
Accessibility	One Quarter of ERIC Collection is in full-text and materials without full text can be accessed by using the links of the publishers' website and / or library holdings	All available electronic contents in PDF Format, metadata and full text are also available	All can be accessed through valid download links	Over 56000 eBooks and issues of periodicals
Type of collection	Journal Articles, Books, Research	Journal Articles (Open Access). As on 28.02.2018, it	Books, tutorials, manuals covering the area of Science,	Novels, poetry, short stories, drama, cookbooks,

	Synthesis, Conference Papers, Technical	contains 125700569 Open Access Articles Over ten thousand journals collected from 3673 repositories around the world	Engineering, technology, Academy, Business & Career, Most Popular, Politics and Laws, Environment, Children and Youth, Biography, Atrs, Health and Fitness, etc.	reference work and issues of periodicals
Controlled Vocabulary	The Thesaurus of ERIC Descriptors	NA	NA	Follows LCSH
Score(Maximum = 8)	**8**	**7**	**7**	**8**

Table – 2: Information about sponsoring authority, Mission, Target audience, Time of updating, Key Collection, Accessibility, Type of collection and Controlled vocabulary

From the above Table – 2, it is seen that ERIC and Project Gutenberg scored maximum 8 marks each where as CORE and PdfDrive scored 7 marks each.

The followings are the some **screenshots** of ERIC, CORE and PDF Drive of searching interfaces of individual databases and are shown how to get materials from the coated databases.

General View

Normal Search: by "Information Seeking Behaviour"

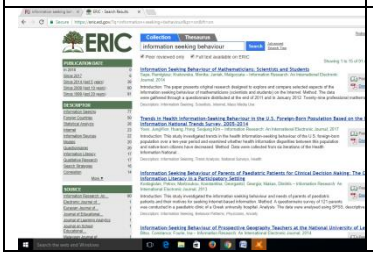
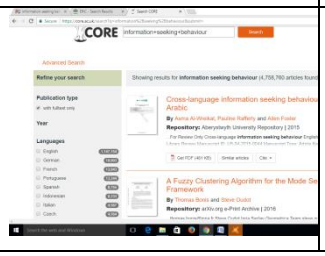
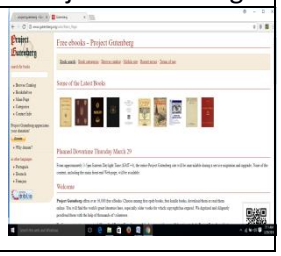
ERIC	CORE	PDF Drive	Project Gutenberg
			

Figure – 1: Normal Search

Advanced Search:

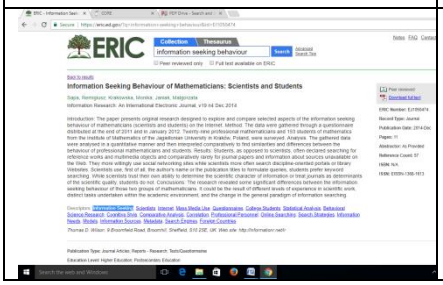
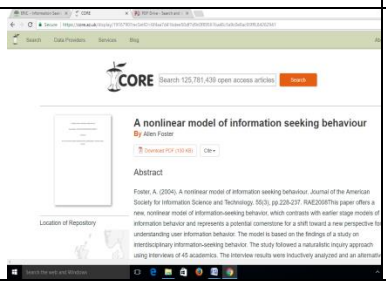
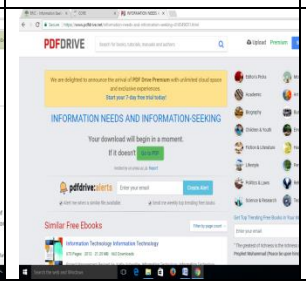
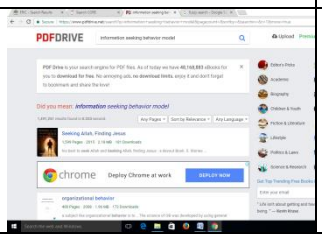
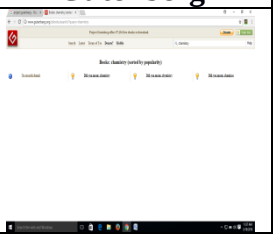
ERIC	CORE	PDF Drive	Project Gutenberg
			There is no option of Advanced search

Figure – 2: Advance Search

Use of fuzzy logic

ERIC	CORE	PDF Drive	**Project Gutenberg**
			

Screenshot – 3: Use of Fuzzy logic

Table – 3: The following table is focusing the searching elements which includes Title, Author, Source, Abstract, descriptors, Accession No. / Record no., ISBN, ISSN, Boolean Search, etc.

Searching elements	**ERIC**	**CORE**	**PDF Drive**	Project Gutenberg
Title	1	1	1	1
Author	1	1	1	1
Source	1	1	0	0
Abstract	1	0	0	0
Descriptors	1	0	0	1
Accession No. / Record ID	1	1	0	0
ISBN/ISSN	1	0	0	0
Boolean (AND / OR)	1	0	0	0
“+”	1	0	0	0
“-“	1	0	0	0
Useful links	1	1	1	1
Score(Maximum = 11)	**11**	**5**	**3**	**4**

Table – 3: Searching Elements

From the above Table – 3, it is reflected that ERIC got the 100% scores followed by CORE, Project Gutenberg and PDF Drive in this category.

The following Table – 4 reflects the Searching Types which includes Normal Search, Advanced Search, Selection of pages, Selection of materials in time of searching, Sort by relevance, Selection of language.

Search Type	**ERIC**	**CORE**	**PDF Drive**	**Project Gutenberg**
Normal Search	1	1	1	1
Advanced Search	1	0	0	0
Selection of pages	0	0	1	0
Selection of materials in time of searching	1	0	0	1
Sort by relevance				
Popularity	0	0	1	1
Page count	0	0	1	0
Year	0	0	1	0
Size	0	0	1	0
Selection of language	0	0	1	1
Score(Maximum = 9)	**3**	**1**	**7**	**4**

Table – 4: Search Types

From the above Table – 4, it is seen that PDF Drive achieved the highest score (7) and CORE scored the lowest (1) and the score of Project Gutenberg and ERIC is 4 and 3 respectively.

In the following Table – 5, the facilities are shown. The facilities include Downloading Facilities, Printing Facilities, Export Facilities, Sign in, Upload, Premium and News about top trending materials by email.

Facilities	**ERIC**	**CORE**	**PDF Drive**	**Project Gutenberg**
Download	1	1	1	1
Print	1	1	1	1
Export	1	0	0	1
Sign in	0	0	1	0
Upload	0	0	1	1
Premium	0	0	1	1
News about top trending materials by email /facebook / Twitter	0	0	1	1
Score(Maximum = 7)	**3**	**2**	**6**	**6**

Table -5: Facilities

Table – 5 reflects that Project Gutenberg & PDF Drive scored equal (6) where as ERIC and CORE got 3 and 2 respectively.

The following Table – 6 reflects the Searching Parameters which includes Index Related Factors, Search Structure Related Factors, Search Features and Search Profile.

Searching Parameters	ERIC	CORE	PDF Drive	Project Gutenberg
A. **Index related Factor**				
a. Browse index	1	0	0	1
b. Number of posting	1	1	1	1
c. Cross-reference	1	1	0	0
d. Thesaurus(integrated)	1	0	0	1
Score : (Maximum 4)	**4**	**2**	**1**	**3**
B. **Search Structure Related Factor**				
a. Item selection form index	1	0	0	1
b. Term selection from record	1	1	0	1
c. Case sensitivity	0	1	0	1
d. Search types	1	0	0	0
e. Combine search facility	1	1	0	0
Score : (Maximum 5)	**4**	**3**	**0**	**3**
C. **Search Features**				
a. Availability of Boolean operator	1	0	0	0
b. Availability of relational operator	0	0	0	0
c. Positional search operator	0	0	0	0
d. Truncation facility	1	0	0	0
e. Proximity operators	0	0	0	0
f. Range search	1	0	1	0
g. Field level search	1	0	0	1
h. Use of Fuzzy logic	1	0	1	1
Score : (Maximum 8)	**5**	**0**	**2**	**2**
D. **Search Profile**				
i. Speed of performance	0	0	1	1
ii. Facility of saved search	1	0	1	1
iii. Search status	1	1	1	1
iv. Search set management	0	0	0	0
v. Availability of display formats	1	1	1	1
vi. Display control	0	0	0	0
vii. Search history display	1	1	1	1
viii. Search modification facility	1	0	1	1
ix. Search statistics facility	1	1	0	1

Score : (Maximum 9)	**6**	**4**	**6**	**7**
Total Score (Maximum 26)	**19**	**9**	**9**	**15**

Table – 6: Searching Parameters

Table – 6 shows that ERIC achieved maximum score (19) and Project Gutenberg got 15 scores and CORE & PDF Drive scored equal (9).

Table – 7: This table shows the comparative statement of ERIC, CORE and PDF Drive.

Table No.	Particulars	**ERIC**	**CORE**	**PDf Drive**	**Project Gutenberg**
2	Information in details	8	7	7	8
3	Searching element	11	5	3	4
4	Search type	3	1	7	4
5	Available facilities	3	2	6	6
6	Searching parameters	19	9	9	15
	Score (Maximum = 61)	**44**	**24**	**32**	**37**

Table -7: Comparative Statement

From the above Table – 7, it is found that ERIC achieved the maximum (44) followed by Project Gutenberg (37), PDF Drive (32)

Table – 8: This table reveals the comparative Statement of the different components:

Table No.	Particulars	Total Score	Percentage
2	Information in details	30/32	93.75 %
3	Searching element	23/44	52.27 %
4	Search type	15/36	41.67 %
5	Available facilities	17/28	60.71 %
6	Searching parameters	52/104	50.00 %
	Score (Maximum = 61*4)	**137/244**	**56.15** %

Table – 8: Comparative statements of different statements

Name of Databases	Total Score	Percentage	Rank
ERIC	44/61	72.13 %	1
CORE	24/61	39.34 %	4
PDF Drive	32/61	52.46 %	3
Project Gutenberg	37/61	60.66 %	2

Table – 9: Statement of Rank

The maximum score of each database could have been achieved 61 (100%). But the above table shows that the four databases on an average scored 56.15 %. The best ERIC obtained 72.13 % and ranked as 1st (first) and CORE obtained the lowest score 39.34 % ranked as 4th in position. Project Gutenberg 60.66% and ranked as 2nd and PDF Drive scored 52.46 % and ranked as 3rd in position.

None of the databases received the maximum scores. The ranks clearly indicate the requirement of further development of databases.

7. Findings

i. 75% of the databases under my research study are from U.S. and only CORE is from U.K. ;

ii. The 'target audiences' are almost same for each database where as mission differs from each others ;

iii. All the databases have their own key collection and type of collections are almost equal for every database ;

iv. ERIC and project Gutenberg use respectively "The thesaurus for ERIC descriptors and LCSH as controlled vocabulary ;

v. All the databases under study follow Fuzzy Logic ;

vi. In respect of 'searching element', ERIC Scored 100% ;

vii. In 'search type' category PDF Drive achieved highest score where as CORE got lowest score;

viii. In regards of 'Facilities' from databases under studty, PDF Drive 7 Project Gutenberg got equal scores(6) ;

ix. In 'searching parameters' category ERIC scored maximum 19 followed by Projectberg, PDF Drive & CORE respectively;

8. Conclusion

After finishing the research work, it can be concluded that the four databases ERIC, CORE, PDF Drive and Project Gutenberg originated mostly from U.S. Country. It was found that ERIC was established in the year 1964 followed by Project Gutenberg (1971), CORE (2011) and PDF Drive (2017) and they are updated regularly. Details information about all databases are shown

clearly here. In ‘Searching elements’ part the maximum score could have been achieved 11 and ERIC got the cent percent where as others failed to achieve the full score. That is why further development is necessary in this regard. In respect of ‘search type, the maximum score could have been achieved 9 but no one got the full score. In regards of ‘facilities’ maximum score could have been achieved 7 but no one got that position. The ‘searching parameters’ reflects that optimum score could have been achieved 26 and none of the databases got the full score here too and the rank clearly indicates that further development is necessary for each database.

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