



## Access, Awareness & Use of Electronic Information Resources by Research Scholars of Berhampur University: A Study

Prangya Das, Librarian, Siksha O Anushandhan, University, Bhubaneswar Odisha, INDIA  
Rabindra K. Maharana, Library Technician, National Institute of Science Education and Research (NISER)

**Abstract:** This paper is an attempt to study the issues of Electronic Information Resources access, awareness and use by science research scholars of Berhampur University, Berhampur, Odisha with a view to survey the exposure of research scholars to Electronic Information Resources. Also it aims to highlight the problems encountered by the users and suggests some remedial measures for its improvement. A structured questionnaire was distributed among Full time and part time science research scholars, out of which eleven Full Time and twelve Part time research scholars responded to this survey. The study confirmed that the science research scholars are aware of the e-resources and various types of e-resources, e-databases and e-journals. It suggests for the improvement in the access facilities and most particularly increases the web resources to support their research activities.

**Keywords:** Electronic Information Resources, Berhampur University, e-database, e-journals

### I. Introduction

In the fast-emerging and ever-growing information explosion it is very difficult to retrieve particular information without wasting time. Recent advances in the field of information technology contribute significantly to improve the services of libraries. Now-a-days libraries are not only seen with printed document and non-print document but also with computers. The impact of technologies such as CD-ROMs, multimedia, computer networks, Internet, etc. have lead to a paperless society. Changes in technology in recent years have dramatically altered how information is accessed, stored and disseminated. Whereas information provision in academic libraries was previously based upon the collection of physical library materials, it is now increasingly the case that academic libraries are moving into the virtual arena. With advances in technology and e-publishing access to information on a local, regional, national and international basis, by overcoming the traditional barriers of time and space has become easy. The electronic resources are systems in which information is stored electronically and made accessible through electronic systems and computer networks. These resources include OPAC, CD-ROMs, Online-Databases, E-journals, E-books, Internet resources etc. Multiple accesses speed, richer in content, reuse, timeliness, anywhere access is some of the features of e-resources.

### II. Objectives

The study was an attempt to find out the access & use of electronic resources and services by the science research scholars of Berhampur University. The study was designed & conducted to achieve the following objectives

- To find out the frequency of research scholars visit the library;
- To find the purpose of visit the library;
- To find out the frequency of access the E-resources;
- To find the level of satisfaction with existing information sources;
- To find the suggestions for development of library resources;
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### III. Methodology

Survey method has been adopted to accomplish the study. In the present study the questionnaire method has been adopted to collect information from the both fulltime and part time research scholars working in various departments in science. The design of questionnaires concerned with the research scholars imitative and interest, research support facilities, library facilities and services, library tests and techniques etc.

### IV. Scope of the Study

The present study focuses on the use of electronic resources by Science research scholars of various Departments of Berhampur University in the state of Orissa. As a case study in general subject fields of science, excluding the engineering, medical and other professional subject, about their different collections. It is also

highlights the present scenario in electronic information resources supporting the research programme in Berhampur University.

### V. Literature Review

Thanuskodi, S. and Ravi, S. (2011) in their paper titled “Use of Digital Resources by Faculty and Research Scholars of Manonmaniam Sundaranar University, Tirunelveli discusses utilisation of digital resources by faculty and research scholars of Manonmaniam Sundaranar University, Tirunelveli. Results show that 67.14% of the faculty is familiar with the use of digital resources, and majority of these members are using digital resources for research purpose. Study also reveals that majority of the faculty members are learning the required skills for the usage of digital resources through self-study. Majority of the faculty members and research scholars (55.71 %) felt that the information available in the digital resources is always ‘adequate’. Madhusudan (2010) in his article titled “Use of electronic resources by Research scholars of Kurukshetra University” concluded that electronic resources had become an integral part of information needs of research scholars there. Further, he found that e-resources can be good substitute for conventional resources, if the access is fast, and more computer terminals are installed to provide fast access to e-resources. Kaur and Verma (2009) on use of electronic information sources in Thapar University shows that maximum number of user accessing E-resources for their purpose. The impact of E-resources is visible from the decrease in number of printed journals in comparison to increase in number of electronic journals. Patterson (2009) in his study titled “Research support through resource sharing: challenges and opportunities for Irish academic libraries” Even though the literature has indicated that academic libraries play a significant role on facilitating research, the overall support of academic libraries for research was not strategic. Instead of developing an extensive research collection, the libraries relied heavily on inter-library loans to support research. Pushpalatha and Mallaiah (2009) found that Online Public Access Catalogue and assistance of library staff were the primary means to locate needed documents. About 58.92% post graduate students rated library collection as adequate to meet their information needs, whereas 40% research scholars and 83.33% of the teachers considered at partially adequate. Bansode and Pujar(2008) in their study on “Use of Internet by Research Scholars at Shivaji University, Kolhapur” found that the research scholars of Shivaji University, Kolhapur use the Internet for their research and communication purposes and more awareness about Internet resources and training in use of the some needs to be provided by library professionals . Khan (2008) in his article entitled “Use of e-journals by research scholars at Aligarh Muslim University and Banaras Hindu University” reveals that most of the research scholars are aware of the availability of e-journals and largely use them for reference purpose in their research work. They fully agree that with the usage of e-journals the quality of research work improves with enrichment of appurtenant contents and materials leading to high-quality manuscripts. It is however found that lack of training is the obstacle in proper and full utilization of e-journals. Verma (2008) in their study on “Use & impact of electronic journals in the Indian Institute of Technology, Delhi” found that the usage of e-journals is increasing; this is due to awareness among the users about the library e-resources and services. Owing to an easy access available at various places in the institute, users are accessing these resources at hostels and departments more as compared to the library. The users coming to library decreased. Islam and Panda (2007) in their article entitled “Web based Information Retrieval Trends of Researchers” explains that in Indian University, traditional library and printed materials were still more effective to research scholars than web-based Information and resources. Madhusudan (2007) conducted a survey on Internet use by research scholars at Delhi University, which reveals that most respondent used search engines more than subject gateways or web directories to locate information. Webb (2007) in his book “Providing effective library services for research” highlighted that the effective academic library are gateways to academic knowledge through their own collection and by facilitating access to material. In the line with its core purpose, providing effective library services could support the research activities of researchers. Rajeswari (2005)on “Use of information sources in digital environment-A Case Study” reveals that majority of the user including faculty members, research scholars and students are using OPAC system in the library and also using INFLIBNET services for accessing thousands of e-journals.

### VI. Data Analysis

**Table 1: Distribution of scholars by full Time/part time**

Scholars	Research Scholars	
Berhampur University	Regular	Part Time
	11	14
Respondent Scholars	11	12

The response from the above table shows that the questionnaire has been distributed to 11 full time research scholars of various science dept. from which all the research scholars responds, incase of part time research scholars the questionnaire has been distributed to 14 research scholars , from which 12 research scholars responds.

**Table No. 2 Distribution of Scholars in discipline wise**

Sl. No	User in Discipline wise	Universities	
		B.U	Total (%)
1	Botany	06	26%
2	Chemistry	05	22%
3	Geology		-
4	Life Science	--	-
5	Mathematics	05	22%
6	Physics	03	13%
7	Zoology	04	17%
	Total	23	100%

The table which shows that in B.U the major response 26% from Botany, followed by Chemistry & Mathematics 22%, Zoology 17% and Physics 13% where as in case of Geology and Life Science there is no research scholars.

**Table No. 3 Year –Wise Distribution of Research Scholars**

University	Research Scholars						Total (%)
	Year wise						
	2007	2008	2009	2010	2011	2012	
Berhampur University	Nil	07 (30%)	01 (5%)	07 (30%)	07 (30%)	01 (5%)	23(100%)

The above table shows that the research scholars vary from years of registration from 2007 to 2012, which means all the scholars are taking a minimum average period of 5 years. In Berhampur University maximum 07(30%) scholars are in 2010, 2009 and 2007, followed by 01(5%) each in 2012 and 2009.

**Table No. 4 Frequency of Electronic Information Resources use**

Use of Library	Universities	
	Berhampur University	Total (%)
Daily	12	53%
Once in a week	09	39%
Fortnightly	01	4%
Once in a month	Nil	Nil
Rarely	01	4%
Total	23	(100%)

The above table indicates that 12(53%) research scholars use e-resources daily, 09(39%) once in a week, 01(4%) each in fortnightly and rarely. Maximum number of scholars uses e- resources daily as compared to other timings.

**Table No.5 Time spent by the Research Scholars in the library**

Time Spent	Universities	
	Berhampur University	Total (%)
Less than one hour	02	9%
One hour	05	22%
Two to three hours	09	39%
More than three hours	07	30%
Total	23	100%

From the Table No.5 it has been revealed that 02(9%) research scholars spend less than one hour time in the library. The (22%) scholars who spends one hour in the library. Similarly (39%) research scholars who spend two to three hours in the library. The 07(30%) of research scholars spend more than three hours in the library.

**Table No.6 Satisfaction of Existing Functioning of the Library**

University	Satisfaction		Total (%)
	Yes	No	
Berhampur University	3(13%)	20(87%)	23(100%)

The Table No.6 shows that out of total response 3 research scholars was positive and those of the remaining 20 was negative. 13% research scholars satisfy with the existing functioning of the Library , where as 87% research scholars was not satisfy.

**Table No. 7 Purpose of use of the library**

Purpose of use	Response	
	Berhampur University	Total (%)
To gain current awareness and keep up to date	14	60%
To find specific information in the field of interest	19	83%
To study course materials	11	48%
To consult Journals/Periodicals	14	61%
To photocopy materials	12	53 %
To use Internet	10	44%
To use web resources	03	14%
To meet/support research work	18	77%

The library provided different facilities and services to its research scholars. It is important to know from the research scholars that for what purpose they are using the library. It has been found from the Table No.7 that for the purpose to gain current awareness and keep up to date the response are 14(60%) , for the purpose to find specific information in the field of interest the response rate is 19(83%) , Similarly to study course materials the response rates is 11(48%) ,To consult journals & periodicals the response rates is 14(61%) , where as to photocopy materials the response rates 12(53%) , For the purpose of using internet response is 10(44%), For the purpose to support research work the response rates is 18(77%) ,To use web resources the response rates are very less i.e. 03(14%) . It reveals from the table that most of the respondents use the library for the purpose of find specific information in the field of interest to consult journals and periodicals use the library to meet & support the research work and use internet.

**Table No.8 Awareness about the Electronic Information Resources and services**

Facilities and Services	Berhampur University	
	Yes	No
Facilities	11(48%)	12(52%)
Services	12(52%)	11(48%)
Total	23(100%)	23(100%)

The Table No.8 shows about the awareness about the library facilities and services by the users, the scholars of B.U 11(48%) are aware about the facilities and services,12(52%) are not aware about the facilities similarly 12(52%) research scholars aware about the services , 11(48%) research scholars are not aware about the facilities given by library.

**Table No. 9 Type of Electronic Information Resources frequently used**

Sl. No.	E-Resources available in the library	Response	
		B.U	Total (%)
1	E-books	15	65%
2	E-journals	23	100%
3	ETD	03	14%
4	Online Databases	21	91%
5	WWW	18	78%
6	Internet	22	96%
7	Intranet	03	14%
8	OPAC/Web-OPAC	Nil	Nil
9	Digital Library/Information	Nil	Nil
10	Digital Copies	08	35%
11	E-DDS	Nil	Nil
12	CD-ROM Databases	07	31%
13	Network Based Information Services	03	14%
14	E-Newspapers	17	60%

From the Table No.9 it has been found that the E-books are used 15(65%), E -Journals used 23(100%), ETD is used 3(14%), 21(91%) uses the online databases, Internet is used 22(96%), WWW is used 18(78%) , intranet is used 03(14%), The digital copies are availed 08(35%), CD-Rom databases used 07(31%) ,Network based Information Services used 03 (14%), E-News papers used 17(60%) by the research scholars. Where as OPAC/Web OPAC, Digital Library/Information, E-DDS are not used by the research scholars.

**Table No.10 Use of Electronic Information Resources**

Electronic Information Resources	Berhampur University	Total
Adequately	8	35%
Not Adequately	15	65%
Total	23	100%

From the Table No.10 the users are asked about how much they used electronic information resources available in the library, two options adequately and not adequately were given where 8(35%) research scholar adequately using the Electronic Information Resources and 15(65%) are not adequately using the electronic information resources .

**Table No. 11 Access of information through Network/Consortia**

Sl.No	Types of Network/Consortia	Respondent's Access
1	OCLC	Nil
2	FORSA	Nil
3	HELINET	Nil
4	CURL	Nil
5	AARLIN	Nil
6	Ohio Link	Nil
7	Janet	Nil
8	M25-Consortium	Nil
9	UGC-INFLIBNET	85(97%)
10	DELNET	Nil
11	CSIR	65(74%)
12	ERNET	13(15%)
13	ADINET	Nil
14	CALIBNET	Nil
15	NICNET	Nil
16	INDEST	Nil

It is found from the above Table the respondents mostly access few Network and consortia i.e. UGC-INFLIBNET 85(97%), CSIR65 (74%) and ERNET13 (15%).

**Table No. 12 Reason for Access to Institutional Repositories (E-Resources)**

Sl.No.	Types of Institutional Repositories	Access	
		University Wise	
		B.U	Total (%)
1	Theses/Dissertations(M.Phil./Doctoral/Post-Doctoral	20	86%
2	Research Article	21	91%
3	Conference/Seminar Proceedings	17	73%
4	Reviews/Previews	17	73%
5	Patents	04	18%
6	Standards	03	14%
7	Specifications	03	14%
8	State of the Art Reports	03	14%
9	Intellectual Properties	05	22%

Table No.12 highlights the response of respondents regarding the use of different institutional repositories provided by the university library. The data from the table reveals that the theses/Dissertations are used 20(86%), Research articles 21(91%), conference and seminar proceedings 17(73%), reviews/previews17 (73%), Patents 4(18%), standards 3(14%), specifications 3(14%), State of the Art Reports 3(14%), Intellectual properties 5(22%) used by the research scholars.

**Table No. 13 Problems & Constraints in seeking Information**

Sl.No.	Types of problems & constraints	Response	
		Berhampur University	Total (%)
1	Materials are not available	14	61%
2	Incomplete information materials	19	82%
3	Difficult in finding relevant information	11	47%
4	Slow internet access	14	61%
5	Overload of information on Internet	12	53%
6	Long time to download information	10	43%
7	Conversation of information	03	14%
8	Lack of attitudes of library staffs	18	78%

The users are making use of Electronic Information Resources provided by the university libraries. So they are asked about various types of problems they face while using e-resources. From Table No.13 it is evident that 14(61%) research scholars feels that materials are not available in library. 19(82%) research scholars admitted that maximum information materials are incomplete. From the data it has been found that 11(47%) are facing difficulty while finding relevant information. 14(61%) admitted that accessing information from internet is very slow. It reveals from the table that 12(53%) scholars are facing problems due to overload of information on internet. 10(43%) research scholars expressed that it has been taken long time to download relevant information through internet. It has been found that 3(14%) very less percentage of research scholars are facing difficulty in conversation of information. 18(78%) research scholars admitted that they are facing lots of problems while seeking information due to lack of attitudes of library staff members.

## VII. Suggestions:

- It is suggested that the library should provide more internet services and most particularly increase the web resources to support their research activities.
- It is observed, that the library should create their OPAC and increase further reference tools and develop content lists which are more dependent tools by research scholars particularly at the age of information society OPAC/Web OPAC played a measure role in searching of information by the users.
- It is suggested that although the research scholars use the E-resources to update their knowledge mostly but they are lacking proper instant communication, quick access and database search. So the research scholar should be encourage for the use of electronic information resources and how it could be make fruitful in different purposes.
- Almost all the users agree, perceive and acknowledged and the importance and use of internet in the today ICT environments and more particularly in their research activities. The library should facilitate with high bandwidth WI-FI, LAN & WAN to exploit the internet facilities by the research scholars.
- The appropriate measures should be taken to increase the satisfaction level on e-resources. Particularly on Digital Library, OPAC/Web-OPAC; Network based Information services, CD-ROM Databases.
- The Library needs to arrange various orientation and training programmes for faculty members for the optimum use of available e-resources. In this context the Library may arrange orientation programmes, on subscribe databases.
- The library should organize training program for the library professionals so that they are able to assist users and they can work with comfort in the technical environment.

## VIII. Conclusion

In the changing information environment electronic era, ICT and its electronic information resources are claiming its importance in the research activities. The library should provide more facilities of CAS to keep up to date of the research scholar, study materials to support their academic pursuit, more internet services and most particularly increase the web resources to support their research activities. Library should subscribe to e-resources keeping in view the priorities and preferences of users. Announcements should be done by the library about the availability of new e-resources or additions of new databases for user of the library. Library should provide the facilities for the user to get familiar with e-resources subscribed by the library; this can be done by the presentations organized by the concerned publishers or vendors. Special training programs should be organized for scholars for the maximum use of e-resources so that users can adequately trace relevant information. The library should also organize orientation programs every year.

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