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Research On E- Resources: A Literature Analysis

Abstract

The study is a literature analysis of Ph.D theses on e resources published from 2016-2019 selected randomly from Shodhganga, an open source digital repository of INFLIBNET. It is an attempt to create a generalization on the awareness, use pattern and problems faced by the users of e resources. The acquisition and management of e resources are also studied. Most of the studies concentrate on the use of e resources by the focus groups and majority of the studies are done on university libraries. Lack of awareness in using e resources is identified as a major problem and suggestions include library orientation program and e resources management systems.

Key words: Ph.D Theses, e-resources, research, literature analysis

The electronic resources are the cornerstone of all research activities. The internet has paved the way to access scholarly literature readily and effortlessly. The e resources encompasses all information sources such as e-journals, e-books, CD ROMS, OPACs, online databases, institutional repositories, library web page etc, i.e. every resource that can be acquired electronically comes under its purview. Now many research theses are concentrating on various facets of e resources and a wide variety of inferences has been made. The study tries to probe into 20 Ph.D theses on e resources published from 2016-2019 selected randomly from Shodhganga, an open source digital repository of INFLIBNET. It is an attempt to summarize the findings of researches done on e-resources and to create a generalization on the awareness, use pattern and problems faced by the focus groups. The acquisition and management of e-resources observed by few researches are also included.

Objectives

To highlight the features such as scope and coverage, facets of e resources, type of user groups, librarian's opinion, acquisition and management of e resources, barriers in using e resources . Discuss the common factors studied in the theses and come out with suggestions and points for further investigation.

Analysis

The theses for literature survey have been downloaded from the website of shodhganga (<http://shodhganga.inflibnet.ac.in>). The analysis and findings chapters of the theses were perused and key points were noted down. Percentage analysis has been carried out on the facets/ scope / users under which more research are conducted.

Scope and coverage

The research studies are done on the e resources available in different institutions. Majority of the theses are done on university libraries, specialized institutions and research centre are also taken as the area for study. The table No.1 below shows that 35% of the studies (7Nos) have been conducted on e resources of University libraries. 10% of the studies (2Nos) have been done on e resources of medical college libraries and Arts and science colleges. Only 5% study (1 No) has been conducted on special libraries, Speech and hearing library, IIM, Engineering college libraries, IITs, Ophthalmology institutes, fashion technology institutes, CSIR libraries and Agriculture libraries.

Table No 1:- Scope and coverage of theses

TYPE OF LIBRARIES / SUBJECTS	Num of THESES	%
University Library	7	35%
Special Library	1	5%
Speech & Hearing Institutes	1	5%
IIMs	1	5%
Engineering Colleges	1	5%
College Libraries	2	10%
Medical Colleges	2	10%
IITs	1	5%
Ophthalmology Institutes	1	5%
Fashion Technology Institutes	1	5%
CSIR Laboratory Library	1	5%
Agriculture Institutes	1	5%
TOTAL	20	100%

Facets of e resources studied

Highest proportion of studies concentrates on use of e resources. Data presented in Table No 2 reveals that 70% of the studies (14 No.) are done on use of e resources. 20% of the studies (4No) are done on use and management of e resources. Only very few, i.e., 10% of the studies (2No) focus on acquisition, management and use of e resources.

Table No 2:- Facets of e resources studied

FACETS OF E RESOURCES STUDIED	Num of THESES	%
Use of e resources	14	70%
Use and Management of e resources	4	20%
Acquisition, management and use of e resources	2	10%
TOTAL	20	100%

Type of users analyzed

The theses available on e- resources are focusing on various categories of user groups. Highest numbers of research (7 No) are done on students, Research scholars and faculties (35%) followed by theses on research scholars and faculties (5 No, 25%). Only two theses are done on students and faculties and faculties alone (10%). Other research studies are centered on professionals, students and research scholars, research scholars only and scientists. No research study has been done on use of e resources by students only. (Table No 3).

Table No 3:- Type of users analyzed

TYPES OF USERS ANALYZED	Num of THESES	%
Students, Research Scholars and faculties	7	35%
Research Scholars and faculties	5	25%
Students and faculties	2	10%
Faculties	2	10%
Professionals	1	5%
Students and Research scholars	1	5%
Research Scholars	1	5%

Scientist	1	5%
Students	0	0
TOTAL	20	100%

Librarian's opinion survey

Librarians are facilitators who help in accessing right information in no time. Hence their outlook on use, acquisition and management of e resources are noteworthy. Table No 4 represents the number of researches in which the librarian's opinion survey is also conducted. It is revealed that majority of the theses (55%, 11Nos) has taken librarian opinion survey for analysis and findings.

Table No 4:- Librarian's opinion survey

Details of Opinion survey	Num of THESES	%
Librarians opinion survey done	11	55%
Librarians opinion survey not done	9	45%
TOTAL	20	100%

Awareness of e- resources

Adequate knowledge about the resources which can fulfill the information needs lead to their optimum utilization. Many e- resources are available in each discipline and sufficient awareness should be provided for enhancing its usage. Here the researchers have enquired into the level of awareness and sources which help in acquainting the e- resources. They have come out with a variety of inferences and some of them are replicated below.

Lack of awareness obstructs fullest utilization of e resources

Bhattacharjee, Sucheta (2016, p151)¹ has statistically derived that the respondents who are faculties and research scholars in Universities are not making the fullest utilization of the various types of e resources in their information

seeking pattern due to limited awareness. Bajpai, Prem Narayan (2017,)² revealed that 87.1% of the respondents are aware of the search engines like Google but 62.1% of them are not aware of the consortium through which e- resources can be accessed, (Bajpai, 2017, p105)³. He has also revealed that lack of awareness is the second barrier to usage of e resources. (Bajpai, 2017, p108)⁴. Ashok Kumar A (2016, p190.)⁵ has identified lack of awareness as the main reason behind Ophthalmologist using e resources at an average level, further ,Ophthalmologist belonging to Government institutions have comparatively more awareness but they face problems while using e- resources due to inadequate information competency.(Ashok kumar, 2016,p192.)⁶

Various sources of awareness

Human sources like friends, colleagues, self-taught method and social Medias are the major source of awareness. Reghuveer Singh, Meena (2017, p124.)⁷ have identified friends as the preliminary source of awareness to e-resources among the agricultural research scholars. Chauhan, Vasantray (2016, p206-7)⁸ observed that majority of the respondents are unaware of UGC Infonet E-journal consortia and friends and colleagues are the first source for guidance. Ramamani, B, (2017, p139)⁹ have analyzed that majority of the respondents who are faculties and research scholars in speech and hearing institutes has pointed out that colleagues assist them to access e resources. Deivanai, T R, (2017, p.138)¹⁰, also stated that majority of the respondents from the two universities under study agreed that they learned to use e resources by getting guidance from colleagues. Bajpai, Prem Narayan (2017, p108)¹¹ and Das, Rumi (2018,p128.)¹² noticed that majority of the respondents use e resources by self taught method. Mashruwala, Kadam (2018, No23 &No28)¹³ pointed out that the faculties in IITs under study learned about e resources through self instruction and trial and error method. Both faculties and students do not participate in user education programs due to

negligence. Majority of the students from these two IITs has recorded that they used social media to get information about e- resources while faculties use online rating, blogging, forums and social media to get information about various types of e resources.

Library as source of awareness

The respondents at the Central University has opined that library training / workshop on e-resources and University web site as major source of awareness observes Bhimrao, Vijayakumar (2017, p269)¹⁴. Manjunatha (2017, p93.)¹⁵ has recorded that majority of the respondents in the fashion technology institute are not aware of OPAC and library professionals act as source of awareness. Library staff stands first in helping the Engineering faculties in accessing to e -resources reveals Ashok Kumar V (2018, p127)¹⁶. Kaushal, Shivani (2017, p175)¹⁷ interprets that the awareness of N List consortium among the faculties of colleges under Punjab University are primarily from the Institute's website and secondly from friends and colleagues. But in the case of students, library staff is chief source of awareness and Institute's prospectus also provides awareness. She also observes that library notice boards and N-LIST Facebook page were not properly utilized for seeking awareness. Ramamani, B, (2017, p192)¹⁸ has statistically proved that library staff at the speech and hearing institutes are highly competent in accessing and retrieving e resources relevant for the use of faculties and research scholars. Majority of the scientists in the CSIR laboratories learned about e journal consortium by the 'email from the librarian' says Agarwal, Neera (2017, p.135)¹⁹. Shah,Tariq Ahmad (2016, p140.)²⁰ conducted a study among those faculties and researchers who have published their works in the *Web of Science* or *Sciverse Scopus* indexed journals and he have statistically proved that there is a positive relation between computer literacy and efficiency to search and

retrieve information from the web. According to him the official web site of the University is the major source of awareness. (Shah,Tariq Ahmad,2016,p142).²¹

Experience in teaching can improve the awareness of e resources among faculties

Ashok Kumar V (2018, p253),²² argue that years of experience in teaching is one of the influencing factors for the awareness and use of e-sources recommended by the AICTE among the Engineering college faculties. Puttamadappa,K.B (2018,p182)²³ has proved in his thesis that the awareness and usage of e resources are low among faculties¹⁹ and courses, training, workshops and seminars are main sources of awareness for highest percentage of faculties in colleges under the University of Mysuru (Puttamadappa,K.B ,2018,p102).²⁴

Preference, purpose and usage

Highest proportion of students and teachers in fashion technology institute prefer print resources than electronic sources. (Manjunatha, S R, 2017, p103)²⁵. Bhattacharjee, Sucheta, (2016, p153)²⁶ has found that science, technology and management students use e journals and e books to the maximum extend than students belonging to literature, humanities and social sciences. Ashok Kumar V (2018,133)²⁷, has found that educational qualification has a significant relation with accessing e-resource for preparing conference & paper publication and R & D works among the faculty members of engineering colleges. Kandasamy S (2017,p173)²⁸ has noted down in his findings that research scholars use e journals often, M Phil scholars use it sometimes while PG students do not use e journals and UGC Infonet is the most preferred source for accessing e resources. Highest number of respondents at Medical library prefers e journals followed by databases

from Medline and Pubmed, (Das,Rumi, 2018, p130)²⁹ . Majority of the faculties use N List e- resource once in a month and the percentage of faculties who never use N List are very high. (Puttamadappa, 2018, p105)³⁰. According to him majority of the faculties of first grade colleges of Mysuru have reacted negatively to all the advantages of e resources. (Puttamadappa,2018,p194)³¹. In the comparative study of use of e resources among faculties and students of two IITs ,Mashruwala (2018,p.)³² has revealed that young students are highly aware about use of e- resources. The findings of Shah, Tariq Ahmed (2016, p141)³³ and Agarwal, Neera (2017, p151)³⁴ reveals that search engines like google and google scholar are most popularly used by respondents. Ashok Kumar, A (2016, 191)³⁵ has revealed that age of the respondents have significant influence with usage level of e resources. In his words youngsters access e resources daily and keenly for various academic purposes such as teaching, research, publication and presentation.

Problems / Barriers in using e resources

The researchers have identified a number discouraging factors that obstruct the use of e-resources. It ranges from slow speed of accessing internet, insufficient e-resources in their subject area, inadequate training on how to use e resources. Besides these Chand,Subhash (2017, p132.)³⁶ have also identified preference to print resources and unorganized information as barriers in accessing to e resources. Vijayakumar Bhimrao (2017,p271)³⁷ have identified some technical problems such as library website has no opening links to e resources , non friendly user interfaces and difficulty in downloading full text of documents. Chauhan, Vasantray A.

(2016, p208)³⁸ and Deivanai T.R. (2017, p.143)³⁹ has identified difficulty in accessing relevant information as a major drawback in using e resources. The faculties and students at colleges who use N list consortium find lack of database literacy as a major hindrance and they find difficulty in formulating search strategy and suggested practical hands on training to overcome these problems. (Kaushal, Shivani, 2017, p181-182)⁴⁰. Faculties of colleges under University of Mysuru are highly dissatisfied with improper guidance, in sufficient e resources, charges for acquiring e resources as well as technical, hardware and software problems. (Puttamadappa, K B, 2018,p 203)⁴¹. There is lack of trained and qualified library professional to provide service in the present scenario. This has been proved by Taviyad, Ramanbhai (2016, p258)⁴² in his thesis on use of e resources in Medical College libraries of Gujarat. Shah,Tariq Ahmad (2016,p159)⁴³ have perceived that the slow speed of internet connectivity as the first obstacle and lack of well organized home page of library with link to e-journals and lack of awareness about e journals as the second and third obstacle. Ashok Kumar, A, (2016, p193-200)⁴⁴ narrates that economic hindrances , high subscription cost, lack of awareness on mobile applications, lack of proper training in database search and usage impedes the use of e resources.

Acquisition and management of e- resources

Both IIMs and Central universities have adopted good collection development policy for e resources. This is enumerated in the studies conducted by Vijaykumar Bhimrao, (2017, p262)⁴⁵ and Bajpai, Ekta, (2019, p175)⁴⁶. The selection criteria for e resources inculcate basic requirements such as user needs, subject coverage, subscription cost, currency, archival backup and relevance. Licensing agreement is also done based on maximum benefits given by the service provider. A small draw back found by both the researchers is that opinions from students are not taken for selection of e resources. Bajpai, Prem Narayan (2017, p145)⁴⁷ have mentioned that none of the special libraries in Delhi is using any standard Electronic Resources Management Software (ERMS). The possible reason according to him is may be that no ERMS is completely suitable for doing all tasks/ workflow management hence libraries are managing e resources using various technologies and methods. Rumi Das,(2018, p137.)⁴⁸ has found that majority of the medical libraries in Assam give first priority to user requirements in selecting e-resources and they follow consortium method to acquire e resources.. Other factors considered are publisher's status; authenticity of information provided and license agreement. She has also found that medical libraries in Assam have not maintained any preservation strategy for the management of e-resources and no proper training is given to library staff for managing e resources. Common

problems identified in managing e resources are retro conversion, file organization system problems, network/server down problems, backup storage retention, copyright and security problems.

Findings

1. The scope and coverage of the Ph.D theses taken for study shows that highest proportion of the studies are done on university libraries
2. Highest proportion of studies concentrates on use of e resources
3. Majority of the studies are done on students, research scholars and faculties taken together
4. Librarian's opinion survey is conducted in majority of the theses
5. The research theses proves that lack of awareness in using e resources obstructs its fullest utilization
6. Libraries and library staff form major source of awareness, besides this friends, colleagues, self-taught method and social medias are other major source of awareness
7. Respondents are more aware of search engines and less aware of consortiums.
8. Preference, purpose and usage of e resources are influenced by the type of focus groups and educational qualifications.
9. The barriers in using e resources are slow speed of internet, insufficient e resources, inadequate training, preference to print resources, unorganized information; library website has no opening links to e resources, non user

friendly interfaces, difficulty in downloading full text, lack of database literacy and difficulty formulating search strategy.

10. The libraries have a good collection development policy for acquiring e resources but none of the libraries have standard e resources management software.

Suggestions

1. Training Programs: - The libraries should organize sufficient orientation and information literacy programs on use of e resources. Email alerts and links of new arrivals should be provided. The website of the libraries should provide opening links to e resources. Social Medias like twitter and face book should be used to provide awareness on e resources. Smart phone applications should be generated for accessing e resources. User education programs should include topics on computers literacy to enhance the use of e resources. New techniques should be incorporated by all libraries and library staff to create awareness among the user community. The library staff should be given training on short intervals about new technologies to be incorporated.
2. Electronic Resource Management Systems:- The advent of electronic resources has brought a paradigm shift in the role of libraries from content owners of resources to access point of resources. ERMS incorporates all library activities starting from acquisition, licensing, management, public display functions, collection evaluation, usage statistics and customer servicing. A standard ERMS integrates with other library system modules and facilitates inter library loan. It avoids duplication of work and resources and provides efficient use of library budget. A standard system

for electronic resource management helps in organizing consortiums and open access resources. It maintains full text links efficiently and supports all international standards on metadata. A standard ERMS can solve all the problems put forward by users in the effective use of e resources.

Conclusion

It can be inferred that awareness and management of e resources are not done in a standardized pattern. Hence libraries should concentrate more in these two areas. Majority of the studies concentrates in university libraries, the reason behind this may be university libraries have access to e -resources consortiums and variety of users such as students; faculties and research scholars are available there. More studies concentrating on specialized subject areas should be done. Studies concentrating on the implementation of electronic resource management systems in libraries and type of ERMS suitable for specific type of libraries are highly essential for the present situation.

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