

# Information needs, Information seeking Behaviour and use of Electronic resources by Research scholars and Faculties in the University and Research libraries of Odisha

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## ABSTRACT

*This research study state the various aspects relating to information needs, information seeking behaviour and use of electronic resources by research scholars and faculties in the university and research libraries of Odisha. The data were collected from faculties and research scholars of 9 traditional universities and 3 research institutions. A total of 600 questionnaires were distributed randomly in the different departments of universities and research institutions, as well as among the users who visited the library, over a period of eight months during the January to August of the year 2014. Out of 600 questionnaires, 464 questionnaires duly filled up were returned to the researchers resulting to 77.33% response rate. The data collected were properly analysed with different statistical tools and at the end findings have been incorporated.*

**Key words:** Information needs, Information seeking behaviour, University Library, Research Library, E-resources

## Introduction

The university library, as a service centre, has always played an important role in developing collections, services, and organizational structures that facilitate users' needs. According to Bennett (2003) <sup>1</sup> there are two important shifts in education viz. higher education is moving away from a teaching to a learning culture and, the revolution in information technology is changing delivery of education. While planning their services university and research libraries should take these two shifts taken into account. Nowadays, there are multiplicities of sources in use for information-seeking and the modern ways of accessing information and application of ICT have impacted on academic institutions. This means the information needs of the faculty members and research scholars have changed and grown. With new technological developments and innovations come new challenges and new prospects.

## **Statement of Problems**

The number of information resources has increased leaps and bounds over the last several years. Yousefi & Yousefi (2013)<sup>2</sup> have pointed out that, the emergence of new information environments, sources, and channels, especially the World Wide Web, regardless of the advantages, has brought new challenges and problems. On one hand, the retrieval of information in response to users' real needs has become ever more complex; on the other hand, assessing the validity and reliability of retrieved information is a considerable problem. In this situation, the so-called information explosion feels quite real. Hence, it seems necessary to discern the real information needs of all groups of users and to identify efficient information seeking behaviours.

Libraries develop their collections, facilities and services to meet the information needs of their patrons. However, in order to accomplish this task effectively, libraries must have a thorough understanding of the information needs and information-seeking behaviour of their users. Researchers and faculty members are always curious to know what is going in their field of interest and for this they access library documents, attend conferences, seminars, discuss experts of concerned field etc. to remain update in their subject area. But in the present era which we are living have been blessed with electronic resources which seemed to be the best among the all mediums of information seeking for researchers and faculty. A library is supposed to fulfil the faculty members' and researcher's information need(s) and it must recognize the information seeking pattern of the researchers and faculties.

## **Scope**

The scope of this paper is confined to only 9 Central Government or State owned Traditional Universities and 3 Research Institutions which have been taken into consideration omitting the private and technical universities. The lists of Universities and Research Institutions studied are as follows: Berhampur University, Berhampur; Central University of Odisha, Koraput; Fakir Mohan University, Balasore; Jagannatha Sanskrit University, Puri; North Orissa University, Baripada; Orissa University of Agriculture and Technology, Bhubaneswar; Ravenshaw University, Cuttack; Sambalpur University, Sambalpur; Utkal University, Bhubaneswar and Research institutions viz Institute of Physics; Minerals and

Materials Technology (IMMT), National Institute of Science Education and Research (NISER).

## **Definitions of Terms**

### **Information Need**

The term information need being an elusive term is difficult to define, isolate and measure. The information needs; demands and wants have been used interchangeably, although they may not be identical. Information need involves a cognitive process which may operate on different levels of consciousness and, hence, may not be clear even to the inquirer himself / herself. In the sense-making concept, information need is the individual's concept of what information he or she needs to satisfy a more basic need, that is, to achieve a goal (Wilson, 1981)<sup>3</sup>. Information need is often understood in information science as evolving from a vague awareness of something missing and as culminating in locating information that contributes to understanding and meaning (Kuhlthau, 1993)<sup>4</sup>. Wilson (1997)<sup>5</sup> points out that there must be an attendant motive when a person experiences an information need.

### **Information Seeking**

The phrases “information-seeking” and “Information-seeking behaviours” have been defined by many authors. The term ‘information-seeking’, is defined by Marchionini (1995)<sup>6</sup> as “...a process in which humans purposefully engage in order to change their state of knowledge”. The information-seeking process allows people to identify their own needs for information, to search and to use or transfer that information. It is a key skill for people who are working in higher education. It can be conducted in many different activities in which people participate, and manifest through particular behaviours. Case (2002, p. 5)<sup>7</sup> described “information-seeking” as “... a conscious effort to acquire information in response to a need or gap in your knowledge”. Kuhlthau (2004)<sup>8</sup> states “... the process of construction within information seeking involves fitting information in with what one already knows and extending this knowledge to create new perspectives”. Most importantly, she suggested that the library is an important part of the information-seeking process because the information-seeking process pushes users to discover and use the library information services more. Kari (1996)<sup>9</sup> defines information seeking as a purposeful process in which the individual attempts to find information through information sources in order to satisfy his information

need (Krikelas, 1983)<sup>10</sup>. Information seeking includes the accidental discovery of information, as well. Information seeking is a basic activity indulged in by all people and manifested through a particular way of behaviour. It is also an aspect of scholarly work most interesting to academic librarians who strive to develop collections, services, and organizational structures that facilitate seeking of information (Wiberley, 1989)<sup>11</sup>.

### **Information Seeking Behaviour**

Information seeking behaviour is a broad term which involves a set of actions that an individual takes to express information needs, seek information, evaluate and select information, and finally uses this information to satisfy his/her information needs. Various factors may determine the information seeking behaviour of an individual or a group of Individuals. It is, therefore, desirable to understand the purpose for which information is required, the environment in which the user operates users' skills in identifying the needed information, channels and sources preferred for acquiring information, and barriers to information.

According to Krikelas (1983)<sup>10</sup>, information-seeking behaviour refers to "...any activity of an individual that is undertaken to identify a message that satisfies a perceived need." T. D. Wilson, 1999)<sup>12</sup> defines it, "...those activities a person may engage in when identifying their own needs for information, searching for such information in any way, and using or transferring that information". Case (2002)<sup>7</sup> states "...information seeking behaviour encompasses information behaviour but the totality of unintended or passive behaviour....as well as purposive behaviour that do not involve seeking."

In nutshell, information-seeking is about the user's need for information and how users process their needs. Information-seeking behaviour refers to individual characteristics and actions in the information-seeking process. It usually involves personal reasons, methods and knowledge of information searching, information-seeking education and the effective use of information. Most times academic's information-seeking behaviours involve active or purposeful information-seeking as a result of the need to enhance their teaching and research, career development and so on.

### **Faculty and Research Scholars**

Faculty and research scholars are termed as academics that we can define as one who is currently working in an academic area at different universities and research institutions in Odisha, such as professors, lectures, research assistants, tutors and research scholars.

### **Electronic Information Resources**

All those publications which are in electronic or digital media are usually known as Electronic Information Resources. In early 70s, most of the electronic resources were available on magnetic tapes and some were online. These were of course, mostly secondary sources (bibliographical databases). Since then many developments have taken place. Today, electronic resources are available on CD-ROMs or on the Net. In the present day context, resources which are available on the Net are often referred to as online resources. These resources consist of reference documents (dictionaries, encyclopaedias, directories, handbook, atlas, etc), data, research publications, journals etc. These developments have a great impact on libraries, changing user expectations. They force librarians to re-think:

- i) the collection they have to develop
- ii) the services that they provide
- iii) the electronic resources that they have to acquire/subscribe.

These changes lead us to alter the way we work at present. (Ravichandra Rao, 2000) <sup>13</sup>.

### **Needs to Study Academics**

Academics are a key user group and have played an important role in academic libraries. It has been said that “...an academic library’s most powerful constituents are faculty and administrators” (Stebelman, 1999)<sup>14</sup> because higher education courses are offered and controlled by academics. The library has strong roles in supporting learning, teaching and research, and the library collection must mainly focus on what academic staffs are teaching and on research (T. D. Wilson, 2000)<sup>15</sup>. Academics also are the priority for librarians to study because they are “...the primary foundation of knowledge and education for students at institution of higher learning” (Ocak, 2011)<sup>16</sup>. Academics are the leaders in using information resources and systems because of their role in teaching and research in higher education (Martinez-Urbe & Macdonald, 2009)<sup>17</sup>. Mohsenzadeh (2009)<sup>18</sup> claimed that an academic library is a component of education systems which has an important role in providing better services and access to electronic information sources, helping academics in using the latest

technology in their teaching and research, and helping academics to increase their skills in using the latest information systems. Librarians have a strong role in understanding, managing and taking responsibility for the key user information needs within a complex dynamic environment. Therefore, it is important to report current academics' information seeking behaviour and their use of the library in order to keep up with the latest teaching and research needs.

Due to the needs of faculty for high-quality information, libraries have been early adopters of electronic resources to provide information services tailored to their needs. Electronic resources have exploded in popularity and use. They can and do enable innovation in teaching, and they increase timeliness in research as well as increase discovery and creation of new fields of inquiry (Henderson and Machewan, 1997)<sup>19</sup>. Other reasons for faculty to use e-resources include relating to increasingly computer-literate students and keeping up to date in their fields (Ahmad and Panda, 2013)<sup>20</sup>.

The benefits of information revolution are centered on the convenience of the user. Faculty members and research scholars are responsible for teaching and are expected to do research and publish the results throughout their careers. When a need is felt for something, action is taken in order to satisfy that need by resorting to various strategies. The same is the case for the satisfaction of information needs. The needs results in the demand of formal and informal sources of information. Studying the needs and the seeking behaviour helps the librarians and library professionals to come forward and satisfy their needs.

### **Purpose and objectives**

The main focus of the paper was to outline the discovery of faculties and research scholars' information needs, the level of these needs, and the extent to which they were being met in relation to accessing and utilizing electronic information in an academic environment. The study also aimed to discover some of the barriers faculty members and researchers encounter in the process of fulfilling their information needs. The other purpose of the study is to explore the nature and types of information needs and seeking behaviour of these users. According to Devadason and Lingam (1997)<sup>21</sup>, "the understanding of information needs and information-seeking behaviour of various professional groups is essential as it helps in the

planning, implementation and operation of information system and services in the given work settings”.

## **Research questions**

Specifically, the study focused on the following research questions:

- a) What are the most-used devices, methods and resources by university faculties and research scholars in information seeking?
- b) How do university faculties and research scholars get the latest information in their field?
- c) What is the satisfaction level of academics in using University Library services and collections?
- d) Which information sources do Faculty members and researchers utilise?
- e) In what ways do Faculty members and researchers use the acquired information?
- f) How is information technology used by faculty members and research scholars?
- g) What type of Electronic resources is used by faculty members and research scholars?
- h) What are the problems of seeking information and how it can be solved?
- i) For what purpose academics need information?
- j) What are the hurdles they are facing while searching and seeking information and suggestions put forth by them to tackle the situation?

## **Methodology**

The Methodology adopted in this study, was the survey method and questionnaire was used as the tool for data collection. The technique used by the authors is the random sampling technique. A total of 600 questionnaires were distributed randomly in the different departments of universities and research institutions as well as among the users who visited the library, over a period of eight months during the year 2014, (January to August). Out of 600 questionnaires, 464 questionnaires duly filled up were returned, resulting to 77.33% response rate. The samples were selected basing upon their frequent use of library, which was noted from the library attendance records. Their addresses and departments have been collected from the library records and personally met them to handover the questionnaires.

## **Limitations**

This research study has its own limitations as described below:

- i. This study information is collected from 9 traditional universities and 3 research institutions of Odisha (India) and therefore the results of this study may be used for recommendation at similar institutions.
- ii. The study will only focus on academic staff of 9 universities and 3 research institutions stated earlier.
- iii. The study imposes some research questions with a time period (within the last eight months). This ensures that only recent behaviour is considered. The results of these questions could be applied to speculate on future use because of the rapidity of technological changes.

### **Data analysis**

A total number of 600 questionnaires were personally distributed among the faculties, and research scholars of 09 Universities and 03 research institutions of Orissa at an average of 50 questionnaires per each institution randomly selected keeping in view their usage of library as obtained from the library records. Out of which, 464 (77.33%) faculties and research scholars effectively responded to the survey. Concurrently, more than  $\frac{3}{4}$  (three fourth, 77.33%) of the total samples have responded to this endeavour without any hesitation. The data thus collected through questionnaires from faculties and research scholars were scrutinized, tabulated and analyzed with immaculate interpretations using various statistical tools.

### **Major Findings**

*The major findings of this research study* were as follows:

- Out of 464 respondents, 241 (51.94%) number of respondents belong to male and rest 223 (48.06%) are females. The gender wise distribution, although male percentage is more than the female percentage but there is no significance difference between them.
- Out of 464 respondents, highest number of respondents belongs to Reader/Associate Professors 83 (17.89%) followed by Lecturers 81 (17.46%), 76 numbers of Professors (16.38%) and 72 numbers of scientists whose percentage is 15.52% over total population.



- Out of 464 respondents, 71 number of respondents have teaching experience of 21-25 years and 69 respondents have teaching experience of 26 years and above whose percentage is 15.30 and 14.87% respectively. Rest of the respondents has less than 20 years experience.
- Faculty wise respondents have been distributed as 123 numbers of faculties belong to science and technology whose percentage over total respondents is 26.51%. Likewise, there are 107 numbers of faculties belongs to management studies, 114 number of agricultural technology and 120 numbers of science and humanities disciplines whose percentages are 23.06%, 24.57 % and 25.86% respectively.
- Majority need information relating to university and its faculties and followed by different programme of studies offered by the universities and research institutions.
- It is found that maximum number of respondents uses University libraries, followed by research libraries. However, very less users prefers to use other libraries than their parent institutions' libraries.
- The frequency of library visit has not any impact on information need of library professionals.
- It is evident from this research study that respondents have used more than one information sources.
- Maximum numbers of respondents have stated more than one reason for visit of libraries. Hence the response rate was higher.
- Respondents were asked to mention the name of the tool used by them in the library to access to different documents they need. It was evident from data analysis that users are almost using more than one library tools to access information from various sources of information.
- Data collected from the respondents regarding "facing of any sort of problems in library when meeting their information need", to this effect, the analysis of data reveals that majority (42.14%) face problems viz Inability to seek, obtain and evaluation of information.
- Almost all have computer efficacy. However the degree of proficiency differs.
- The respondents were asked about the type of services received by them from the library and the data so collected from the respondents revealed that majority have

stated two services viz “Help in locality the documents and information”( 37.38%) and “Issue and return of books and journals”(33.89%).

- Almost all the services provided by the libraries help users to fulfill their information needs.
- How to locate or identify the information in libraries used by the respondents and accordingly the data was collected from them .It is revealed from the data analysis that majority 360(39.14%) have said they are’ Locating or identifying information’ with the help of library staff.
- Regarding internet proficiency, it was found that majority have internet proficiency, whereas, very less percentage have expressed they have limited knowledge in retrieving relevant information from internet.
- It is found that majority of the respondents preferred to use internet and followed by other electronic resources in libraries.
- Data was collected from the respondents to know about their information seeking behaviour or in general, the type of information they seek from library. To this effect data reveals that for current information and research articles users seek information. Mostly users prefer electronic resources, there after text books and reference books.
- Why you prefer information from your library? To this question, the respondents have replied for Current information, Easy availability, Information relevant to their needs are the reasons.
- Majority (26.64%) of the respondents adopted Methods for seeking information by using internet/online resources, followed by using the library catalogue (25.74%) number of users.
- The different purposes for seeking information as mentioned by the samples were “For preparing class lecturers (21.11%)”. For updating knowledge (20.59%). Observation and experiment (20.38%).
- Majority have opined that they had encountered Problems in seeking information from the libraries.
- Majority uses e-resources viz E-books, E-journals, Online databases and internet respectively.
- Majority users (37.63%) preferred to use internet for entertainment purposes, followed by browsing e-mail (23.88%) and e-journals (20.68%).

- INFLIBNET (26.99%) and DELNET (22.16%) are two preferred consortia used by the respondents.
- Most preferred search engines by the respondents are Google, followed by Yahoo and MSN. However, it was found from the study, none uses AltaVista.
- Regarding IT infrastructures available in the libraries, majority respondents 252 (54.31%) are not satisfied with existing infrastructures, whereas 212 (45.69%) have shown satisfaction.
- Respondents are using e-resources because; these are informative, time saving and easy to use.

The *implications of this research study* would provide insights into university and research institutions' library users' information needs and information seeking behaviours and could be used to improve the library services of Odisha especially in planning library instruction programme that would respond to the needs of other library users.

## **Suggestions**

Suggestions from the users are always welcome as it is necessary to improve the resources and services of the library and sort out the possible constraints and difficulties faced by them. In this research study research scholars and faculties are the users of university and research institutions' libraries. Keeping in view their status/designations and different information seeking behaviours, nature of problems faced by them are different. Hence their suggestions are also placed here separately. Analysis of the questionnaire shown that the users faced problems in collecting information in their field of study due to multiple factors, which deserve consideration and probable solution. The *suggestions* provided by them are summarized as follows:

### **A. Suggestions from research scholars**

- The University Library timing should be extended and kept open during holidays so that users can extensively use the library sources and services.
- Latest editions and multiple copies of textbooks should be purchased regularly and so that users can access them.
- Due to the incomplete card catalogues and absence of online public access catalogues users face great difficulty in locating documents. Hence almost all respondents have

suggested for catalogues either in the card form or online. Library automation is thus the need of the hour which is also suggested by many users.

- To start a back volume section of the journals so that retrospective search is possible. Almost all the users are dissatisfied with the Internet service of the library and suggested high speed internet connectivity.
- To solve the problem of power cut the respondents have suggested for procuring a generator for the library.
- To provide the e-resources and service facility efficiently and effectively the number of PCs and printers should be increased in the departmental computer labs, computer center and university library of all the universities.
- The Computer centers, Departmental labs and the Central library should acquire high-speed internet connectivity to overcome the problem of slow downloading.
- The University Library professionals should conduct user orientation/training programme for proper exploitation of e-resources.
- Number of e-journals available electronically should be increased for researchers in their fields of specialization.
- More high speeds computer terminals should be installed in the Department Computer Laboratories, Department Library, University Library, etc. of all the universities and research institutions
- The University library should introduce Electronic Document Delivery Services (EDDS) for the benefit of the users.
- The staff of the library, computer labs and university computer centers must be skilled to assist the researchers when they face any problem in accessing e-resources.
- Research scholars' requirements and opinions should be taken into consideration on priority basis while subscribing to the e-resources.

#### **B. Suggestions from faculties**

- Awareness and training programs regarding use of information sources, library services and e-resources should be conducted from time to time. The users should be made aware of the e-journals available so that maximum utilization is possible.
- E-resources playing an important role in research institutions and universities' teaching and research activities as most of the teachers and research scholars are using them. Students and research scholars are facing the problems of limited numbers of

terminals while accessing the journals through this programme so university and research institutions need to increase the number of terminals to further enhance the usage.

- University as well as research institution users should be sensitized to the importance and type of materials in the library during library orientation and how they can use the materials to improve their studying and research.
- The university library management should make the library environment conducive and minimize all challenges faced in accessing these materials.
- The university library management should make sure that there is uninterrupted power supply in the library so as to have more access to electronic resources in the library.
- Infrastructural problem such as inadequate information technology to access e-information, power supply, obsolete equipment, bandwidth, etc., can be addressed through adequate funding, and development of IT policy to ensure sustainable access to the technology.
- Wide publicity of the libraries resources and services.

## **Conclusion**

Understanding the actual needs of information users and taking steps to satisfy them is the first step towards effective service provision. This can best be achieved through formal in-depth studies. Librarians could redesign strategies intended to improve the provision of library services especially towards information skills development and information resource awareness. More professional and skilled staffs should be recruited to handle the day to day problems of the library and to provide efficient and smooth library services to the users. Internet facility should be improved along with increase in computer terminals so that more users can access the e-resources effectively.

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