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# **Awareness and information seeking behavior of undergraduate students of university in digital environment-A Systematic Review**

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**Abstract:** University library being considered as knowledge hub caters to the information needs of diverse categories of users like students, research scholars, scientists, teachers, etc. by providing access to wide variety of learning resources. Apart from print resources university libraries are increasingly adding electronic resources like E-Books, E-Journals, E-Theses, databases, E-Standards, Institutional repositories, consortia, online public access catalogue and other networked resources to their collections which have been widely used nowadays as primarily for teaching, learning as well as research activities. Since the undergraduate students are not involved in any kind of research work thus presumed to make use mostly of books/notes/e-books to fulfill their academic needs. The present review study is being conducted to ascertain the kind of information resources mostly used by the undergraduate students and further to know their awareness level about resources & services of the library. It is basically a systematic review of studies conducted in the past to know their awareness level, information seeking behavior and attitude towards different resources used in achieving the academic goals. Further study will also try to find out whether the academic level of study has any difference with regard to use of different resources and services.

**Keywords:** Information seeking behavior, Undergraduate students, Online Information Resources, Information Seeking, Digital Information Resources, Awareness Programs, User Education, User Awareness

## **1. Introduction:**

Library being the heart of an academic institution support teaching, research and extension activities by fulfilling the information needs of the users through its diverse resources and services. The main objective of library is to deliver its product i.e. information either through its bricks outlet; Building or through its clicks outlet; electronic access (**Massis, 2006**). Modern libraries are storing the information in different forms and formats which can be retrieved anytime, anywhere. It is not only the metadata but full text information is also available to the users. Information seeking behavior of the users has been greatly influenced by the new emerging technologies. User now want quick information just by the click of button. E-learning movement is picking up especially in higher education and users are interested in accessing the information as per their convenience of place and time. Information communication technologies have helped the librarians not only to manage the library resources but also their promotion in a better way to make library user self reliant in using the library resources. University library aims to fulfill the information needs of the undergraduates, post graduate students, research scholars

and teachers of the university. Besides print resources the electronic information resources have now become integral part of library collection. Faster and easy access to information has greatly influenced the users' behavior towards provision of information. Further technology has enabled the librarians to serve the users at their place if they can't come to the library. It has helped in accessing the library resources from remote locations. Campus wide online access and remote access to information resources is now available to all the users. Furthermore, the technology has placed the libraries in the centre of information revolution and recognizing the power of knowledge National knowledge Commission has emphasized the importance of libraries as powerful information dissemination centre.

**1.1 Information Seeking Behavior:** Information seeking behavior is a broad term which involves set of actions that an individual does to express his/her information needs, select, evaluate and use information to fulfill the information requirements. It is a purposeful attempt to seek information and to satisfy the needs in order to meet the desired objective. It is complex activity which requires access to different information resources. It can be broadly described as manner of gathering information for use, knowledge and development. It involves purposeful searching of information to fulfill the information needs and involve three elements viz. information, systems and people. According to **Krikelas (1983)** information-seeking behavior refers to "any activity of an individual that is undertaken to identify a message that satisfies a perceived need." **Wilson (2000)** has described information seeking behavior as those activities a person may engage in identifying his own needs for the information, searching and using that information. Ranganathan's second law of library science "Every user his/her document/information" cannot be fulfilled until library professionals understand the information needs and information gathering behavior of users. So it is important to know the various factors affecting the information seeking behavior of an individual or group of individuals. Therefore, library professionals must understand the purpose for which the information is required, the environment in which the information operates and users' skills in identifying various channels of needed information.

Awareness about various resources and services helps the users in getting relevant information. User education thus plays significant role in usage of library resources. It means educating the patron whether student, teacher and research scholar as how to use the library and its services. **Flemming (1990)** defined user education as "Various programmes of instruction, education and exploration provided by libraries to the users to enable them to make more effective, efficient and independent use of information sources and services to which their libraries provide access. Promoting/Publicizing library activities has been recognized as one of the major factors affecting the success of e-resources (**Pullinger, 1999**). **Amudhavalli (2008)** emphasized that there is need to design a framework for learning as how to learn by incorporating information literacy across curricula in all programs.

**1.2 Statement of Problem:** A wide variety of electronic resources like e-books, practical manuals, e-journals, e-theses, e-repositories, e-standards etc. are now available to the user.

University libraries are also increasingly adding these resources to their collections. Students gradually developed their screen-based behavior and used different strategies to deal with diffusion of information in the digital environment (**Liu & Huang, 2008**). Even though the online resources are readily available and quick to search yet they are underutilized which can be attributed to lack of awareness and skills regarding the use of online resources. Use of electronic information resources largely depends on the ability of user to navigate through the maze of online resources available via technology-based terminals (**Watts & Ibegbulam, 2006**). Therefore, competencies related to use of online resources are essential to accomplish the academic and research needs. So making the users aware about the resources and their usage is one of the prime duties of the librarians. Further, librarians should also try to know the problems encountered during use of online information services which may enable them to deliver better services to their users by rectifying such problems. Large number of studies has been conducted in the past regarding the awareness and use of electronic resources by the library users especially of postgraduate students, researchers and teachers of the university. Relatively very little or less studies have been carried out at undergraduate level with regard to use of electronic resources and services due to assumption that their academic needs are limited to text books only. The present work has been undertaken to review literature published in the past to know about the kinds of resources used, awareness level, purpose and extent of use of different electronic resources by the undergraduate students. Further study will also attempt to find out whether course discipline and academic class status makes any difference with regard to use of electronic resources and services.

**1.3 Objectives of study:** The present study aims to achieve following objectives

- To study the purpose of using information resources by undergraduate students
- To study the extent of use of various resources
- To study awareness about various resources and services
- To know the difference in use of different kind of resources with regard to level of study

**1.4 Research Methodology:** The present study is systematical review of the related studies carried out in the past. The relevant articles from various sources have been analyzed keeping in view the objectives of the study and logical inference has been drawn.

**Usefulness of Study:** Since the present study is review of related studies carried out in past will be useful to have conceptual understanding of the concept information seeking behavior and user education. The study will provide framework to further carry out empirical study which will add new knowledge to the existing body of literature.

**1.5 Limitations of study:** The present study is useful to all those who need basic understanding of the concept information seeking behavior and user education. Since it has included only those studies which are only related to undergraduate students thus can be beneficial to those who further want to carry out quantitative studies at undergraduate level.

**2. Review of Literature:** Information providers in the library can provide better services to their users if they are well aware of information requirements and information gathering methods of their users. Users' Information behaviors vary across different disciplines (**Covi, 1999**). It is therefore necessary to understand pattern of use of library resources among varied categories of users in order to provide effective library services to meet their information needs. It is imperative for the librarians to know the information seeking behavior of students, and their searching skills which will help to understand factors affecting users' attitude towards various resources.

*At International Level:* Relevant users' studies at undergraduate level have been carried outside India are presented as under

**Fidzani (1998)** revealed in his study that graduate students heavily rely on library books and textbooks as source of information used for their course study. **Dilevko and Gottlieb (2002)** in their study of undergraduate students at University of Toronto conducted web based survey to examine the use of print resources in an electronic age. He found that print books were most preferred as compared to e-books and journals. **Majid and Ali (2002)** in their study of use of information resources by the undergraduate students of computer engineering at Singapore found that books were the most preferred information source. **Urquhart et al. (2003)** also concluded that books are still considered to be reliable, basic source of information by the undergraduate students for their academic work despite of the apparent predominance of the search engine and e-mail as part of sources of information. **Kim (2006)** in his study about use of library databases found that convenient access was an important determinant of database use and recommended that libraries should increase the convenience of access as well as awareness of databases. Factors like awareness of library resources and availability are the most important factors in student's library information seeking behaviour for which librarian can play a key role (**Sookhtanlo, Mohammadi & Rezvanfar, 2009**). **Baro, Onyenania and Osaheni (2010)** studied the information seeking behaviour of undergraduate students in humanities of three universities of Nigeria. They tried to know their information needs and search strategies adopted in finding the information. The study found that they rely mostly on textbooks, internet and human resources to fulfill their information requirements. **Odeh (2012)** conducted study of undergraduate students of third semester at Zarqa private university, Jordan to find relationship of academic achievements with use of information resources. The study found that their academic achievement has significant relationship with use of books whereas no relationship was found with use of other resources like journals, electronic resources and other information resources which implies undergraduate mostly use books to fulfill their needs during early years of study. **Collin and Stone (2014)** conducted study of undergraduate students at University of Huddersfield to understand their library use pattern across different disciplines. The study found significant difference on various dimensions of usage between different disciplinary groupings. **Jara et al (2017)** tried to explore the pattern of use of print and digital resources by the undergraduate students' year of study and discipline. The study found that disciplinary differences and level of study affect the use pattern of resources. **Ugwu and Orsu (2017)** conducted study of undergraduate students at Nigeria to see direct and indirect factors affecting the usage of electronic resources. It was found that lack of proper infrastructure facilities, inadequate skills and knowledge has direct effect on the usage. **Wijetunge and Peiris (2017)** in their descriptive study of final year engineering students at University of Peradeniya, Sri Lanka

tried to know their preference for electronic resources and the criteria used by them for evaluating the resources. It was found that search engines and Wikipedia are the most used resources by the respondents. Lack of training, user education programs and computer skills considerably affect the usage of online resources. **Rathnayake and Dilnika (2017)** conducted study to know digital reading behavior of undergraduate students of university in Sri Lanka. It was found that majority of students search information for their academic purpose and leisure activities. E-books and social media were found famous for digital reading. **Lavanya and Santharooban( 2018)** in their study of undergraduate students of Agriculture at Eastren University, Sri Lanka regarding use of online resources revealed that purpose of using electronic resources is associated with academic year. It was found in the study that awareness also plays important role in use of library resources and services. **Idiegbeyan-Ose et al. (2019)** tried to know the preference of undergraduate students for print or electronic resources and its usage in private university at Nigeria. It was found that both print and electronic resources were important for them to fulfill their information requirements. The study pointed out that students in higher level of study tend to use online resources more as compared to others. Library print books and WWW was found to be the first preferred source of information in lower level group of undergraduate students. **Howlader and Islam (2019)** found in their study about information seeking behaviour of under graduate students at Dhaka University, Bangladesh that they heavily depend upon class lectures for academic work and their awareness level and information skills were found to be low.

*At National Level:* Various studies related to information seeking behavior of undergraduate students carried out in India have been described in this section.

**Mahajan (2009)** in her study regarding information seeking behavior of undergraduate, postgraduate students and research scholars at Punjab University, Chandigarh found that undergraduate students seek information mostly for reading and preparing class notes. It was also found that they mostly rely on books as compared to other sources of information to fulfill their academic needs. **Kandpal, Rawat and Vithal (2013)** assessed and evaluated the exposure of ICT and use of electronic resources by the undergraduate students of NCR College of veterinary science, Andhra Pradesh. The study investigated the awareness level, use of various e-resources and attitude of undergraduate towards it. **Gupta and Sharma (2015)** revealed in their study on use of digital information resources and services by students of central library, IIT Mumbai that respondents preferred to use both print as well as digital resources .They found that majority of research scholars were using digital information resources with the purpose to get the literature for research whereas most of the undergraduate and postgraduate respondents were using the digital information resources with the purpose to collect the study material. Further majority of undergraduate students use digital information services to know the availability of the reading material. **Parvathamma and Shinde (2015)** in their study about use of information resources and library services by undergraduate students at University of Horticultural Sciences, Karnataka revealed that majority of the students' never accessed databases and web resources. They visited the library to borrow books to fulfill their information needs. **Gupta and Sharma (2016)** conducted user survey regarding Satisfaction in use of Digital Information Resources and Services among the Students of IIT, Madras. They found that majority of undergraduate students visit library to collect material for class assignments and e-books & subject gateways were the most widely used digital resources. **Kaladhar, Doraswamy and Rao (2018)** conducted study

on awareness and use of digital resources and services by the users of Jawaharlal Nehru Technological University, Kakinada. They found that majority of undergraduate students visit library only for issue return of the library books or to avail photocopy facility of the library. Majority of undergraduate respondents prefer to use e-books followed by subject specific portals most frequently and consider them as very important digital resource for the purpose of collecting study materials and preparing notes.

### **3. Conclusions and Suggestions:** It is clear from the above studies that books

whether printed or electronic is the most preferred source of information for undergraduate students to fulfill their information requirements. It is also revealed that undergraduate students make use of books to complete their assignments and notes. Further most of the students visit the library to get the books issued from the library. They mostly use online catalogue to know the availability of books. E-books seem to be the most preferred digital resource as compared to online journals and databases. Some of the studies highlighted that level of academic study has influence on the usage of resources. In order to complete the project work undergraduate students tend to use other resources like e-journals, databases in addition to books. So involvement in projects and assignments has influence on the use of resources. Teacher and instructor should develop course material in such a way that necessitates students to make use of different types of resources. Search engines and Wikipedia are also considered to be the good source of information by undergraduate students. Almost all the studies stressed upon user education program and considered it to play significant role in awareness of undergraduate students about the resources and services of library. It is also revealed in most of the studies that student don't make use of resources as they are not aware about it and/or lack the required skills of using it. It is therefore necessary to make the user lifelong learner so that they can get the required information from different resources of their own. Teachers can play key role in motivating the students to use other resources apart from books. Since in the networked environment all the libraries are interconnected and resources are campus wide available online so in addition to user education programs of the central library the departmental /book bank libraries can play vital role in promoting the use of resources. Students can be motivated to make use wide variety of resources available to them. Students can be assigned work in such a way that they are compelled to make use of different resources so that their interest can be created for those resources.

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