Understanding the Challenges and Utilization of Web Resources in Higher Education and Libraries in India

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***Abstract*-The fast-paced nature of contemporary life calls for innovative methods to attain a higher standard of learning and guarantee an individual's all-around growth and development. Graduates nowadays are held to higher standards in terms of their education and personal growth, necessitating efficient absorption of the educational programme they have completed. As a result, it's crucial to train students to acquire, analyse, and use vast amounts of data in a variety of contexts. Recent years have seen explosive growth in tertiary education across all fields of study, including the sciences, the arts, and business. The Indian higher education system has undergone dramatic transformation as a result of the widespread use of electronic resources and other forms of information technology. The use of electronic materials in the classroom and the library has several benefits. The success of higher education depends on it as a foundational pillar. When it comes to supporting and achieving the goals of higher education, electronic resources play a key role. It does, however, cause some friction between home life and the classroom. E-resources' relevance in higher education has grown exponentially as the world has shifted toward digital media and information, and this trend will only accelerate in the 21st century. The Research Study provides an overview of the problems and uses of online library and academic resources in India.**

Keywords: Web resources, Libraries, Higher Education, Challenges, Utilization, India, etc.

I. INTRODUCTION

As a commercially available title that has been published with the intention of being marketed, an e-resource is defined as a resource that requires computer acces or any electronic product that delivers a collection of data, whether textual, as in full text bases, e-journals, or other multimedia products, or numeric, graphical, or time-based. These may be sent via the internet, on a tape, or a flash drive. It has become more common to generate and disseminate documents electronically thanks to the widespread adoption of a variety of methods and associated standards in recent years. Therefore, librarians are turning to novel approaches, such as the incorporation of electronic resources into collection expansions, in order to meet the demands of their users.

II. HIGHER EDUCATION IN INDIA

The library is sometimes referred to be the ‘beat’ of a university. "Academic libraries are housed in the same buildings as the universities they serve." Its primary audience is the institution's teaching and non-teaching personnel as well as the students who do the majority of the research. Institutional courses have access to the library's resources. Institutional libraries house a wide variety of print and digital resources, including textbooks, encyclopaedias, dictionaries, journals, theses, dissertations, project reports, maps, atlases, drawings, and periodicals. Additionally, academic libraries subscribe to online journals, e-books, and databases for the use of its patrons, including students and researchers. Providing resources for students, faculty, and staff to use in studying for and completing examinations, seminars, conferences, symposia, projects, and research is the academic library's primary mission. Therefore, it is crucial to provide users with orientation programmes since this will strengthen the knowledge base. Users may get assistance with their information-gathering efforts from academic libraries by consulting either print materials or electronic databases.

There is no better place to get reliable knowledge than in a scholarly library. The relevance of university libraries in today's academic world cannot be overstated. It enhances the user experience and fosters a productive classroom setting. Any school would be incomplete without a library, since they are crucial for the dissemination of knowledge. The important feature

of academic library is based on some academic activities;

- Academic library has to involve the academic study activities such as workshop and conference.
- Academic library is a part and partial of the any educational system.
- The study programme of the institution depends on the academic library. To create the learning environment is depends on the use of library resources.
- The users of academic library are students, teachers, researchers, and administration staff.
- Nowadays the academic library environment is changed with the development of online and e-resources. The online resources are help to save the time of users and also to libraries.

Each student may tailor his or her academic library experience based on his or her prior knowledge, current skill level, and long-term professional and personal aspirations. "The library's physical and digital learning resources are part of the information that pertains to the needs of the users; the information distribution channels." Resources available in an academic library are sometimes used as a proxy for the calibre of a certain institution. Institutional information systems must have adequate information resources and services to facilitate research by both students and faculty.

2.1 Higher Education Going Online: The Challenges in India

The global spread of the EV-D19 virus has had devastating effects on schools everywhere. The majority of classes are now taken online. All academic institutions have been closed for the semester, and because it is unclear when they may safely return, the lockdown of education is likely to continue long until 2020. Higher education has gone digital everywhere feasible, and has been put on hold when it cannot, such as in hands-on experiences. As a result of the epidemic, other nations' reactions to online schooling have been divided. British and American universities have both declared that they would focus on online education during the next academic year. However, educators and policymakers urge caution, saying that online learning has not yet reached its full potential. No, not at this time. Given the wide variety of higher education institutions in India (including public and private schools, research centres, specialised schools, State and Central universities, and so on), the country's reaction to the epidemic has been very variable. The responses also reveal the disparity between the availability of resources in urban and rural areas, the wide range of teacher quality, and the wide range of topics covered in the classroom. The magnitude of the social, political, and economic shifts that have occurred over the last six months means that there will be lasting consequences.

III. WEB RESOURCES IN THE LEARNING PROCESS

As computing and Internet technology continue to advance rapidly, it is inevitable that these tools will be incorporated into a wide variety of classroom settings. It is imperative that the information and educational space be developed through the introduction and use of the Internet and Web technologies (Web services, educational Web resources, network), software (Microsoft Word, Microsoft Internet Explorer, Microsoft Power Point, Windows Movie Maker, online resource Prezi). It will allow for the organisation of the learning process in such a way that students not only work actively and with interest and excitement in the classroom but also study alone, can see the outcomes of their efforts, and provide feedback. Blending conventional classroom techniques with modern media tools like computers and online resources might help address this issue. "Learning may be made more flexible, rigorously differentiated, personalised, and interactive via the use of computers in the classroom. It's safe to say that a computer of today is one of the most useful tools around." It may mimic a wide range of linguistic contexts, reacting rapidly and effectively to the learner's input and actions.

Learning a new language with the use of online materials may be quite productive. In particular, it facilitates the formation and development of students' language and communication abilities, tailoring instruction to each person's unique requirements and personality traits. The information and topic environment, education and self-education for students, and the satisfaction of their individual and professional interests and demands may all be greatly enhanced by tapping into the wealth of information available on the Internet. Yet, just having access to online materials does not ensure efficient and effective

language learning. It is important for these assets to grow and mature:

- Communicative and cognitive abilities to carry out search and selection, to generalize, classify, analyze and synthesize the information received.
- Communicative competence (linguistic, sociolinguistic, socio-cultural, strategic, discourse, learning and cognitive).
- Skills to use Web resources for self-education to explore knowledge in the field of the cultural and historical heritage of different countries and peoples, as well as to act as a representative of the native culture, country, city.
- Communication skills to present and discuss the results of the work done using the Internet.
- Ability to use Web resources to satisfy their informational and educational interests and needs.
- Skills to use Web resources for self-education to explore knowledge in the field of the cultural and historical heritage of different countries and peoples, as well as to act as a representative of the native culture, country, city.

And they should also be analyzed by the lecturer, because most of them are not education - aimed. It is possible to analyze such resources on the basis of:

- the linguistic complexity of the material
- relevance of the information
- the historical complexity of the text (references to historical facts, which affect understanding the text)
- source of information (credibility, reliability, validity, etc.)
- psycho-physiological characteristics of the information (matching the age and psychological characteristics, importance for education and development).

3.1 Types of E-Resources

When it comes to information, the Internet is a diverse medium that provides access to a wealth of useful resources. "E-books, e-journals, e-mail, linked hypertext papers, online help centres, expert opinions, file transfer protocol, and so on are all examples of such resources." Different rules apply to each of these resources, but there are also many connections between them (Monereo et al., 2000). The sections that follow will go through a few of these options.

E-thesis: - E-theses, or electronic theses, are theses that may be found online. It refers to the author's original thought processes or findings. It's a cutting-edge way to communicate ideas, offering low production costs, little physical footprint, user-friendliness, and extended shelf life. Open access repositories such as the UCC (Uniform Commercial Code) institutional repository, CORA, and others make it easy to access and save electronic theses (Cork Open Research Archive). In order to distribute effectively the postgraduate research done at UCC, the university is creating an e-thesis project. It has been more common in recent years for nations to accept electronic theses submissions alongside traditional physical copies, making theses more accessible and easier to find in internet databases. CORA, the UCC institutional repository, is where theses and dissertations submitted in electronic format are kept. This repository uses the free and open-source DSpace system. Digital theses submitted to CORA are not limited in terms of file size.

E-books: - E-books, or electronic books, are digital reproductions of printed books that include all of the material from the original edition (text, tables, diagrams, illustrations, etc.). In most cases, a library of electronic books will be organised as an electronic database that allows for extensive searching capabilities, bookmarking, and full-text searches both inside and between individual titles. Online readers may access the whole text of e-books in either HTML or PDF format. Digital books are read on e-readers, which might be a handheld device or a tablet computer running a special reader programme. E-books may be read on a variety of devices, including personal computers and smart phones.

Online databases: - Subscribing to online databases that can be accessed over the internet is the most efficient option for university libraries to give access to electronic books/journals. Online databases are aggregations of scholarly articles and books published by publishers in a variety of academic departments and subject areas (Afolabi, 2007). "Some of these databases' publishers or distributors provide copies to libraries in poor nations at no cost." It is imperative that students develop and hone the skills required to fully use the expanding variety of technological resources available to them (Okello-Obura, 2010).

E-journals: - With the introduction of the internet, scholars and researchers have realised the potential of

information and communication technology as a fast and easy way to disseminate findings and overcome obstacles by transferring complete ownership of intellectual property rights from the author to the publisher (Correia and Neto, 2006). An electronic journal is a peer-reviewed journal that is made available only online. E-journals are periodicals that may be accessed either physically or digitally and which include articles such as research papers, reviews, academic communications, etc. It serves a purpose at the tertiary level of education. When compared to conventional print journals, electronic journals are more cost-effective and convenient for libraries to deliver to their customers. This is especially true in today's financially constrained higher education system (Ellis and Oldman, 2005). Rowley (2006) distinguishes between two types of electronic journals: those that are published in print and made accessible online, and those that may be controlled by an editor and the academic community without the assistance of a publisher. Both may significantly alter the processes of academic discourse and the dissemination of new knowledge.

Electronic Mail (e-mail): - This is an immediate electronic communication between a sender and a receiver. It's the programme that people all around the world use the most online. E-mail may also take the form of a list, wherein subscribers can join and take part in an electronic discussion forum. Messages are sent to users at the addresses they have specified in their mailboxes (Griffith, 2002; UCB Library; 2004c&d, University Libraries, 2003). Communication between educators (teachers, students) and between themselves (students) is facilitated through email, as is interaction with parents.

CD-ROM databases: - Without reliable Internet connection in libraries, patrons may still access important databases via CD-ROM. Since information may be viewed off-line without incurring telecommunications costs, this method is more economical than online databases (Afolabi, 2007). When the system is networked, users don't even need to visit the library to get the information they need; instead, they may do it from the convenience of their own computers and CD-ROM databases. Universities and colleges all across the globe have been able to benefit from the information revolution brought about by improvements in information and communication technologies. Because of the Internet and the World Wide Web, new methods of education and knowledge acquisition have developed (Darkwa et al., 2007). CD-ROM databases are beneficial for locating the bibliographic information of possibly relevant papers and providing quick and simple access to enormous amounts of material for study.

Remote Login: - This permits a computer user to log on to another computer and use it as if the user were there. Through remote login, lecturers can access to their university's computer from any other computer connected to the internet anywhere in the world. Files can be downloaded, even common computer operation like rebooting can be accomplished (UCB Library, 2004c & d). To remote login to a computer, you must know its address which can be words (mail.yahoo.com) or numbers (216.109.127.28).

File Transfer Protocol (FTP): - File Transfer Protocol (FTP) is a standard internet protocol for transmitting files between computers on the internet. It allows a computer to rapidly retrieve complex files intact from a remote computer and view and save such files on your computer (UCB Library, 2004d).

The World Wide Web (WWW): - The World Wide Web (www, W3) is a network of computer-accessible hypertext texts that may be navigated by a series of hypertext links. "As time has progressed, the term 'the Web' has evolved to be used interchangeably." There are many of internet protocols, yet the WWW uses them all (e-mail, FTP, Telnet, Usenet, etc.). If a user has the necessary hardware and software installed on their computer, they may use the Internet to get text documents, see photos, animations, and videos, listen to sound, and even talk and hear voices (UCB library, 2004a & d; University Libraries, 2003). Hypertext is important to how information is found on the web. The ability for one document to link to another is known as hypertext, and it's what makes it possible for one set of web pages to lead to another set of web pages or another set of files being downloaded onto the user's computer. HyperText Transfer Protocol (HTTP) is a protocol that facilitates the retrieval and searching of hypertext files through the internet by standardising the writing of addresses (Griffith, 2002; UCB Library, 2004d; University Libraries, 2003). The World Wide Web may be seen by downloading and running a browser application. Microsoft Internet Explorer (IE), the most common browser in use today, is only one example; others include Netscape, Lynx (for reading text-only files), Mosaic, Macweb, NetCruiser, and so

on. They take HTML-encoded files and convert them into audio, video, and visual elements of the web (UCB Library, 2003d).

Gopher: - It was created in 1993, making it a very old internet archive. All other forms of evaluating online content fail. Although certain gopher texts may still be accessible through a page's linked content, the technology behind them has been mostly absorbed by the World Wide Web (Griffith, 2002; UCB Library, 2004d).

A student's educational growth is facilitated by the availability of these resources, which include study and research aids, methods of interaction with instructors and classmates, and more.

3.2 Advantages

Medical education, higher education, engineering education, and other disciplines of study have all been the focus of several research on the benefits of e-resources. "Studies (like Day and Bartle, 1998) have looked at how students' usage of technology influences their productivity and success in the classroom." The studies all agree that when utilised correctly, electronic tools may improve students' academic outcomes. Most research found that using e-resources is excellent for learning, since it provides many helpful possibilities to discover various materials. Following are some of the benefits of electronic resources that have been found in studies:

- Helpful in conducting research.
- Accessing information through electronic Libraries.
- Data/ File storage through Cloud Computing.
- Submission of assignment through e-mail.
- Plagiarism.
- Concerns.
- Quality control issues with online information.
- Lack of reliability and quality of information.
- Changes in work habits.
- Financial constraints
- Overload of information.

IV. WEB RESOURCES IN HIGHER EDUCATION: CHALLENGES AND USE

Challenges faced by the teacher and student in case of teaching and learning are as follows:

- Technical infrastructure: In digital information era, infrastructure is hugely important such as software, hardware, internet facilities and other physical equipment's and many more are required to provide easier and faster access to information. Due to unstable technical network infrastructures in terms of servers, physical cabling and wireless access points are challenges for the higher education institution.
- Shortage of funds: ICT needs more funding to build and maintain infrastructure and continuing services. Most of the academic institutes and libraries have insufficient fund for containing e-resources and so the users do not get their information at the right time.
- Privacy: Maintaining privacy and confidentiality is another problem in accessing online information. To control pirating of software, copying or downloading all the contents of any e-resource at a time, right to obtain information and right to withhold or ban the access is essential and so there is a delicate challenge between privacy and rights to information. Protecting one's network from another to maintain confidentiality of information is another problem in securing databases on Internet and Intranet.
- Lack of professional skill: For handling software, hardware, internet and other physical equipment, proper trained professional is needed. Their work will be to store and retrieve e-resource. Therefore, shortage of the professional skilled personnel who can establish or run higher education institute and library are challenges for them.
- Limited access to computer terminals.
- Control of e-resource: Collecting the materials and making it available to all current and future users. The challenge is for the higher educational institute to contribute to establish realistic collection development policies covering acquisition of and provision of access to electronic resources for users now and in the future.

The manner that universities teach students today is evolving as a result of technological advancements. "Education on ICT usage is integrated into subject-

specific curricula and the research process as a whole." Some worried observers have noted that pupils who utilise technology as a tool may improve in areas like as information management, communication, and concept presentation. There are a variety of commercial databases offered digitally, covering a wide range of subject areas. User may get pin pointed useful information through e-learning. Bringing the library's many services up to date is a wise investment. It is not the technology itself that determines the impact of e-resources on education and research, but rather the choices made by individual users. Exactly here, at the intersection of faculties and the most efficient use of electronic resources, is where the future of scholarship will be conducted. E-resources may be used more efficiently and effectively, as shown by this research, if there is sufficient availability of computer systems and Internet bandwidth. From the perspective of library science, informing library patrons of the significant role that electronic resources play in today's academic pursuits is crucial to laying the groundwork for a successful transition to a fully digital learning environment and realising the library's primary mission of providing its patrons with as many resources as possible in order to meet their needs. Therefore, it is important for educational institutions and libraries to provide support for students to make full use of these e-resources.

V. CONCLUSION

Scholars and students now have fast and simple access to electronic information resources from all over the world, thanks to libraries and the internet. Academic libraries can only maintain their central position in the university by learning more about the information needs of the academic communities they serve and then meeting those needs with high-quality services and ready access to the information, training, and resources they need. One method to get insight into this is to create search behaviour modules based on the research habits of students and academics. Libraries serve as a crucial part of the institution of higher learning. Due to a combination of a stagnant budget and the exponential cost increase of library collections, academic libraries in India are experiencing serious difficulties. There is a quick and dynamic shift happening in the library environment right now, and it's leading to a new generation of libraries that put more of a focus on electronic resources. Over the last several years, many initiatives have been launched to alleviate the financial strain on university libraries by pooling their resources via consortia.

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