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ELECTRONIC RESOURCES: ITS TYPES AND IMPORTANCE TO RESEARCH IN INDIA

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ABSTRACT

The fast progression of Information and Communication Technology (ICT) has acquired a progressive change the data situation offering ascend to various choices to deal with fluctuated data sources helpfully and easily because of which e-assets have gotten the most looked for after present day library's stores in fulfilling differed requirements of understudies, educators and analysts with least risk and time. Electronic assets are viewed as the mines of data that are safeguarded through present day ICT gadgets, refined and overhauled and all the more frequently put away in the internet in the most concrete and minimized shape and can be gotten to at the same time from boundless focuses by an extraordinary number of crowd. Electronic resources on the Internet manifest themselves in many categories. The main categories used for the research purpose in India are includes as Electronic Journals, Electronic Thesis and Dissertation: Shodhganga- A Reservoir of Indian Thesis, Electronic Books, Electronic Library- National Science Digital Library (NSDL) of the National Institute of Science Communication and Information Resources (NISCAIR), Electronic Portal- SAKSHAT: A One Stop Education Portal, Electronic Encyclopedia, Reference Resources, Databases, Data Sets And Collections, Electronic Dictionaries, etc. These e- resources are important in quicker and authentic research in India. The purpose of this research paper is to clearly and successfully reveal the importance and types of E- Resources to research in India.

Keywords: Electronic resources, Research

INTRODUCTION:

The beginning of the twenty first century has witnessed a growing competition to deliver new digital information services to millions of users in India. The knowledge of the technologies of information and communication is especially important in form of e-resources because it refers to an area of knowledge generated by men and that has been produced to make feasible exchange methods and relations; they are ultimate support of the process of the current globalization that leads to the knowledge. The electronic resource has provided many possibilities and opportunities for providing faster and quicker access to information at the national level.

Meaning of Electronic resources:

Electronic assets are viewed as the mines of data that are saved through present day ICT gadgets, refined and updated and all the more frequently put away in the internet in the most concrete and conservative frame and can be gotten to at the same time from boundless focuses by an extraordinary number of crowd. The expression "electronic assets", has extensively been characterized as data got to by a PC, possibly helpful as bibliographic advisers for potential sources be that as it may, starting at yet, they rarely show up as referred to references in their own right (Graham, 2003). Moreover, electronic resources discuss to that kind of documents in digital formats which are made available to library users through a computer based information recovery system. Because of the effective performance with multimedia implements, electronic resources have become the foundation of information. In the words of Saye (2001), “Electronic resources are the resources that are generated through specific electronic medium and made available to a wide range of onlookers both on-site and off-site via some electronic transmitting machine or internet. In this way, electronic assets in its range remember a wide range of advanced assortments for the type of electronic books, electronic databases, electronic diaries, electronic theories and papers (ETDs), electronic principles and patents, electronic reports, etc. Moreover, ICT has enabled the transformation of electronic information services in the forms of e-assignments, e-term papers, e-project reports in many educational institutions

and Universities all across the world which impels the users' community to use electronic resources for the betterment of their academic needs.

Graham (2003) says that, electronic resources are the mines of information that are travelled through modern ICT policies, polished and reshaped and more often stored in the cyber space in the most concrete and conservative from and can be gotten to all the while from limitless focuses by an extraordinary number of crowds. The phrase "electronic resources", has broadly been defined as info accessed by a computer, may be useful as bibliographic guides to possible sources but, as of yet, they occasionally appear as cited references in their own right.

Electronic resources, so, refer to that kind of documents in digital formats which are made available to library users through a computer based information retrieval system. The Internet is supposed to be the right and most widely used channel to fastening hold of the widely held of e- resources through different search engines and web OPAC and, of development, some off-line databases in CD/DVD formats that can even be opened without the help of Internet. In any case, electronic assets have become significant nowadays as they are state-of-the-art, multi- dimensional and directional in nature and furthermore can be gotten to just as utilized anyplace, crossing every land limit. Such assets increase the value of all circles of human exercises. Data innovation has upset the field of library and data science. The assortment of a cutting edge library isn't limited to print media just however libraries are effectively adding e-assets to their current assortments. With the increasing cost of print publications, majority of information seekers are opting for e-resources. Shim et al. has defined e-resources as those electronic information resources and services that user access electronically via a computing network from inside the library or remote to library. The users need not come to the library to meet all informational needs. They may use online catalogue, any web-based database, e-journal etc. which are remote from library.

E-resources provide access to important portion of world's literature expeditiously, comprehensively, professionally, pin-pointedly, current and truly at a simple touch of key. Related literature for past ten years consider that electronic resources like CD-ROM, databases, online databases and e-journals are important

for research and allied activities. Introduction of e- resources has exposed the researchers to much more resources of information and have become an invaluable resource of present information. In the current days, receptions of data innovation have constrained the library to be needy upon computerized materials which could be gathered through Web on a WWW stage. Electronic assets on the Web show themselves in various flavors and classifications. Albeit the vast majority of them copy the customary distributing while others are progressive in their plan and approach. While the current pattern to copy and imitate the conventional models of insightful correspondence may proceed for quite a while, in the long run the capacities included by the new means would be used in more advanced methods.

TYPES OF ELECTRONIC RESOURCES

There are many e-resources in India used for research purpose. Some of them are identifies and explain as following:

- **Electronic Conferences**

Technological developments on the Internet in the early 1990s created an environment which was suitable for holding an electronic conference. In 1994, the electronic means for meeting was all in place. The World-Wide Web (WWW) provided a healthy environment for giving scientific information. The web certifications a document to cover text, statistics and links to other materials. In November 1994, the first Electronic Computational Chemistry Conference (ECCC- 1) was held. Electronic Gatherings, dynamically known as electronic discussions, electronic client gathering and conversation bunch are significant assets for scientists and researchers in each control. New scholars in particular get an opportunity to discover what topics are being discussed in their field, to learn who are involved in these discussions, and to make them known within their discipline by their own contributions.

- **Electronic Diaries**

Electronic diaries or "e-diaries" are utilized for those diaries and pamphlets that are arranged and appropriated electronically. Electronic Diaries might be characterized extensively as any diary, magazine, e-zine, webzine, pamphlet or sort of electronic sequential distribution which is accessible over the web and can be accessed using altered machineries such as www, Gopher, ftp, telnet, email or listserv. A few conventional diaries are presently being distributed both on the web and in print. Current issues or substance records for the greater part of the diaries are accessible on the web or conveyed to endorsers as email instant messages.

Web based electronic diaries began to show up in the start of 1990. These diaries were for the most part conveyed as a connection to email while their back issues were mounted on mysterious ftp destinations and clients were required to download them from these ftp locales. The Public library and info hubs made them available through their gopher site. With the arrival of World Wide Web technology in 1993, electronic publishing became more than originality. The web as a method for conveyance of electronic data has developed consistently from that point forward. As distributers try different things with various production modes and models, the very meaning of a diary is experiencing change in the electronic condition. New diaries have advanced dependent on the realistic abilities of the web that are accessible just in electronic structure.

- **Electronic Patents**

E-Patents are specifications concerning the design or manufacture of products and processes that are protected and secured for the exclusive profit of the designer or inventor for a limited number of years that fluctuates in various nations from fifteen to twenty years.

The term patent typically alludes to an elite right conceded to any individual who creates any new, helpful and non-clear procedure, machine, article of assembling or piece of issue or any new and valuable improvement thereof, and claims that directly in a conventional patent application. The method for giving

authorizations, the prerequisites established on the patentee, and the degree of the elite privileges vary broadly between states as indicated by national laws and universal understandings. Important patent-related sites are listed below:

- Canadian Patent Database http://patents.ic.gc.ca/intro-e.html
- IBM Intellectual Property Network http://www.patents.ibm.com/
- US Patents & Trademark Office http://www.uspto.gov/main/patents.htm
- World Intellectual Property Organization http://www.wipo.org/

- **Electronic Theses and Dissertations**

Theses submitted to the universities as requirement for the award of PhD degree constitute a useful source of information for the new and ongoing research. A thesis covers accounts of an original involvement to knowledge. However a bulky number of doctoral theses are submitted to every university each year, they are not being used to their completest potential because most libraries keep them in closed-access groups.

Doctoral theses submitted to universities and academic institutions are originally created in digital format using word processing software packages like MSWord, Latex, Word Perfect, word Pro, etc. These papers are undisputedly extremely valuable gatherings especially in digital arrangement that succeed to be an important component of a digital library. Some universities and institutions have previously realized electronic submission of doctoral dissertations under the overall umbrella of an international digital library initiative called Networked Digital Library of Theses and Dissertations (NDLTD). Some of the important sites for electronic theses and dissertations are:

- Networked Digital Library of Theses and Dissertations http://www.theses.org/
- Academic Dissertation Publishers http://www.dissertation.com/
- Theses and Dissertations http://www.umi.com/
- UMI Digital Dissertations http://wwwlib.umi.com/dissertations/

- **E-Zine**

The online magazines disseminated through World Wide Web are called E-Zine, which means electronic magazine and it is also describe web-Zine. This kind of articles is stored in server and it will be accessed through computer network. Through bulletin board systems or other public network may publish this online magazine via internet. The user can get the magazines through online at any time, at anywhere, they can also download and the main advantage is that the user can give comment to the authors for the particular article.

Example: www.indiatoday.com
www.musicindia.com etc.

- **E-News Papers**

An electronic paper is an independent, reusable, and invigorates capable release of a traditional paper that acquires and holds data electronically. The e-newspapers is refreshed everyday by the concern editorial boards, it may be video, audio and text news. In previous days today's news may come in the next day by paper but at present the technology has changed the entire world, the e-newspaper is very convenient to all those who have computer with internet facility. This kind of newspaper is refreshable, every significant bulletin may upload in the e-papers by the editor, and the researcher can read and download the news at any period. The e-newspaper is alternative of normal printed papers, through this e-newspaper user can receive the instant news at any time, it is available in all languages, the user can also get previous newspapers from the internet by date wise, so the readers need not to wait for the newspapers, it is available in the internet at any time.

Example: India Today.com
USA today.com Los Angeles
Time
Mid-Day

- **E-Reference books**

The number of reference books are liberally available in the internet, the information is planned to be originate quickly when needed. Reference works are typically referred to for scrupulous portion of information, relatively than read opening to end. The engraving strategy utilized in these works is educational. Many reference works are aggregating by a board of benefactor whose work is synchronized by at least one editor as opposed to by an element creator.

Examples: Atlas, Dictionary, handbook thesaurus, encyclopedia http://www.britannica.com/ http://dictionary.cambridge.org/

➢ **CD-ROMs**

CD- ROMs is a compact disk- read only memory; it is one of the sequences of devices. It is used to store huge amount of prearranged data, bibliographic information full text information and images etc.

➢ **Data bases**

A prearranged set of information seized in a PC, especially one that is anything but difficult to get in different manners. Database is computerized documentation maintenance system. The imperative thing is that a database permits accumulate data and receiving it or modifying.

The data base is of eight types, such as

1. Abstracting and Indexing Databases (Bibliographic Databases)
2. Citation Databases
3. Digital Collections (Images, Audio, Video)
4. Equipment/Product Catalogues
5. Scientific Data sets (Numeric, Property and Structural Databases)
6. Library Catalogues (including Union Catalogues)
7. Museum and Archives
8. Virtual Libraries

Educational E-Resources Provided By Selected Academic Institutions in India The Open Instructive Assets (OIA) and Open Courseware (OCW) are portions of the ongoing developments that are particularly important for accomplishing fair access to quality training. Open educational resources (OER) are open content that are freely accessible worldwide from a common portal or gateway. Indian institutions have also recognized the importance and impact of Open educational resources to bridge the learning divide in the country. Naturally, India's National Information Bonus (NKC) has named for a "national e-substance and educational program activity" to empower the creation, variety and use of Open instructive assets by Indian organizations. In addition to NKC, University Grants Commission, National association of Software and Services Companies and many other advocacy, advisory and policy making bodies in India are supporting the cause and bridging knowledge and skill gaps (Ghosh, S.B & Das, 2007; Das, 2011) India has been experiencing the incremental growth of Open educational resources, where a number of national institutions have established Open educational resources gateways for providing nationwide contact to their educational resources. By way of the mainstream of higher education and professional education programmes in India are educated in English language, worldwide addressees, particularly who are placed in developing countries, are promoting from the Open educational resources produced and hosted in India.

Indian initiatives of open educational resources- Indian OER can be broadly categorized as audio-visual and textual OER.

Some of the OERs are as follows:

- **Shodhganga**: A Reservoir of Indian Theses (http://shodhganga.inflibnet.ac.in/)

Theses and dissertations are identified to be the annoying and exclusive source of information, regularly the only source for research work that does not discovery its way into various publication channels. Theses and dissertations stay an undiscovered and under-used resource, prompting superfluous duplication and reiteration that, in actuality, is the counter proposals of research and wastage of gigantic assets, both human and monetary. A proposition reflects nature of

research work led by an understudy and the capacity of an organization to lead and bolster unique work of research in a given order.

"Shodhganga" is the name instituted to mean advanced store of Indian Electronic Postulations and Theses set-up by the INFLIBNET Center. Shodhganga represents the supply of Indian scholarly yield put away in a store facilitated and kept up by the INFLIBNET Center. The

Shodhganga @ INFLIBNET is set-up utilizing open source advanced vault programming called DSpace created by MIT (Massachusetts Organization of Innovation) in association between Hewlett Packard (HP).The DSpace uses internationally recognized protocols and interoperability standards. Shodhganga gives a stage to inquire about researchers to store their PhD theories and make it accessible to the whole insightful network in open access. The storehouse can catch, file, and store, spread and save ETDs put together by the analysts. Online accessibility of electronic proposals through midway kept up digital stores won't just guarantee simple access and documenting of Indian doctoral theories, however will likewise help in increasing the expectation and nature of research.

- **Vidyanidhi**: Digital Library and E-Scholarship Portal (http://www.vidyanidhi.org.in/)

Vidyanidhi (signifying 'Fortune of information' in Sanskrit) is India's chief Advanced Library Activity to encourage the creation, documenting and getting to of doctoral proposals. Vidyanidhi is a data foundation, an advanced library, an entryway of assets, instruments and offices for doctoral research in India. Vidyanidhi is a direct consequence of government policy initiatives and is intended to demonstrate the utility of digital library technologies in maintaining and enhancing access to and visibility of Indian academic research.

Vidyanidhi is imagined to advance as a national store and a consortium for e-theories through interest and association with colleges, scholarly foundations and other partners. The vision of Vidyanidhi is to involve into an information infrastructure to strengthen the research capacities of Indian Universities by developing accessible digital libraries of theses and dissertations, sensitizing and

training doctoral research students in scholarly writing, e-publishing and ETDs, developing appropriate policies and developing and making available requisite tools and resources.

- **E-GyanKosh** of Indira Gandhi National Open University (IGNOU) (http://www.egyankosh.ac.in/)

E-GyanKosh is a National Digital Repository set up by Indira Gandhi National Open University in 1985. E-GyanKosh store, record, save, disperse and share the computerized learning assets created by the Open and Separation Learning establishments in the nation. E-GyanKosh is an initiative of IGNOU to provide open access to Self-Learning materials (SLMs) developed for different academic programmes of IGNOU. These SLMs are in text and video formats. These are being widely used by curricula designers and course writers of State Open Universities and other distance learning providers. These materials are additionally profoundly utilized by long lasting student networks for different purposes, for example, readiness of serious assessments, planning of assessments. E-GyanKosh is accessible to registered users only, however registration is free of charge.

Education Broadcast is a webcasting facility accessible in E-GyanKosh providing a link to IGNOU channels like GyanDarshan, GyanVani and EDUSAT. Virtual class also provides links to all the online programmes of the University.

- **SAKSHAT**: A One Stop Education Portal (www.sakshat.ac.in)

A one stop instruction gateway propelled on October 30, 2006 by his Excellency, the then President of India to encourage deep rooted learning for understudies, instructors and those in business or in quest for information liberated from cost to them. The substance advancement task for 'SAKSHAT' was taken care of by the Content Advisory Committee (CAC) for the particular subject, which comprised of delegates from instructive foundations like IGNOU, Delhi University, Kendriya Vidyalaya Sangthan (KVS), National Institute of Open Schooling (NIOS) and National Council for Educational Research and Training

(NCERT) and the conspicuous academicians in the field. What's more, a few NGOs had additionally given the substance created by them liberated from cost for this entryway.

The vision is proportional up this pilot venture 'SAKSHAT' to oblige the adapting needs of in excess of 50 crore individuals through a proposed plan of 'National Mission in Education through Information and Communication innovation (ICT)'. The plan is to give network to all establishments of higher figuring out how to universe of information in the Cyber space, to use the capability of ICT, in furnishing top notch information modules with right e-substance, to deliver to the customized needs of students, so as to deal with their yearnings. These modules are to be conveyed through 'SAKSHAT'.

- National Science Computerized Library (NSCL) or National Science Digital Library (NSDL) of the National Foundation of Science Correspondence and Data Assets (NISCAIR) (http://nsdl.niscair.res.in/)

The open source movement is driving the emerging knowledge society that is aimed at making information resources being freely available and such freely available information resources are being stored and managed on open source technology oriented platforms. NSDL envisages making available high quality contents through the open source technology platforms.

National Science Digital Library (NSDL) is envisaged as first of its kind to benefit the students at undergraduate level in Indian universities and colleges by providing Internet access to digital resources of curriculum related material in science and technology.

As curriculum based focused content is not easily available to the students leaving a gap in the information needs of the student community. To bridge this gap, NSDL embarked upon to create original and targeted contents by identified panels of experts for selected science disciplines.

Keeping the open source philosophy in view, DSpace the open source software had been selected for the digital library. The content creation and development of NSDL has gone through rigorous procedures to make available quality content for the students. Authored by eminent teachers and validated by renowned faculty in Indian universities and colleges, NSDL envisages bringing finest content to the students.

The significance of the study is that it happens to be one of the leading libraries to provide e- resources services to its clienteles. Moreover, the work aims at evaluating the flexibility of this library in this fluid environment as well as their capabilities in developing a process to integrate the changes in to a standard library practice to meet the current and update demands of the users' communities. Further, the technology has changed the expectations of faculty members, their patience and their willingness to accept services that are available on demand. Electronic resources are making a significant growth as part of library collection. But without conducting a study, there is no way of knowing whether the e-resources are reliable or useful. Keeping these in view, the present study has been taken up to ascertain the current use of e-resources by the faculty members and its impact on the academic and research work and the problems encountered while accessing these e-resources.

IMPORTANCE OF E-RESOURCES

The E-Resources has importance in research in India. Some are discuss as below:

1. Easy Access

The e- resources are easier to access in academic institutions in research by users in India. They can access the large collections of desired material within minutes, or even seconds, on their desktops, provided equipment is available. There is an active dissemination of information by alerting the readers at their desktops about the new electronic resource that are accepted into the database. In other words, e-resources allow intelligent full-text retrieval based on past use and interests.

2. Speed

E-resources play a vital role in high speed publishing and distributing electronically. Authoring and publishing systems can be integrated easily by computer-readable text. Also, electronic transmission, especially in the review process, saves valuable time.

3. Linkages

Linkages can be enabled by hypertext and hypermedia formats among sections within an electronic resources. E-mail contacts would be easier among users, publishers and suppliers. Users have more creative ways to have their information queries answered.

4. Costs

The e-resources are cost friendly. The e-resources are published electronically rather than in paper and no new costs are introduced.

5. Multimedia

Innovative ways of presenting research results can be supported by electronic page layout. Interactive three-dimensional models, motion video and sound are a few possibilities through the e-resources.

6. Searchable

The E-Resources are enabled by the full-text searching. Each and every direct linking with text or image of one document or resource to the text or image of the other document can be search easily and quickly. Organize and display search results allowing users to customize the display.

7. Value-Added Services

Allow value-added services to users through internet, i.e.

(a) CAS
(b) Continuous revision

(c) E-mail list

(d) Option for creating personal profile online.

CONCLUSION

This paper has discussed the importance and types of e-resources; it is very familiar among the various fields of peoples. In fact, it is now hard to imagine a world without e-resources. The requirement and use of e-resources is element of the complete system, to both the students, institutions and information professionals in India. The e-resources assist to deliver the sources to their user very fast, so the user time was saved. Nowadays e-resources have totally reduced the usage of paper material. These e-resources are convenient to use, reachable at a reasonable cost and can be accessed from anywhere and by many users concurrently, these databases are most advantageous utilize to put in to the academic excellence and achievement of its user community. The e-resources available in different formats help and support the faculty to carry out the teaching and research in an efficient manner and quickly, as the e-copies are available anytime and anywhere in India. The present era is rightly characterized as the era of information. The fact that information is a key resource for the economic, socio-cultural and political development of a nation is gaining increasing acceptance.

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