Electronic Resources at Technical University Libraries: A Study

Dr. Dharmender Singh [1], Dr. Rajiender Kumar [2]

[1] Library Restorer, Govt. College, Nalwa
[2] Assistant Librarian, Nehru Library, CCS Haryana Agricultural University
Hisar, Haryana, India

Abstract

Given we are in the Internet Era, now it is commonplace to find electronic information resources at university libraries. Because the use of external storage devices like floppy discs and CD-ROMs is being rapidly replaced by the internet, particularly the World Wide Web in particular. The value of information has changed, and digital libraries are expanding globally. The necessity for electronic resources among users is growing daily in accordance with their academic needs the emphasis of its study is on internet-based resources. Additionally, this assessment is restricted to sites affiliated with reputable academics or organizations that offer information not seen in regular media. Some articles address the benefits of using electronic resources toward the fullest extent possible and offer a few suggestions for enhancing their services in light of anticipated future demands.

Keywords: E-resources, Digital Libraries, Online Journal

Introduction

Information playing an important part to a development for all human being, or technical university libraries in the crucial function in evolution science and application to Engineering India (Satpathy2009)[1]. Software also had the major influence in the collection and services of the libraries and libraries now are providing both the printed through the database so such in their digital data services. They electronic documents can be processed, obtained or distributed as and when necessary, therefore library resources also aren't limited inside all city corners and incorporated across national or international systems (Kaur and Verma, 2009)[2]. Majority of the information sources, especially the journals are now available online as electronic media, CD-ROM, Internet (Mahajan, 2007)[3]. Libraries have also not deprived of its great impact since the amount of digital collection is increasing day by day in their collection. Currently, electronic resources have become the leading and best ever growing phenomenon of the digital collections foremost of all the libraries. Internet and consortium facilities provided through the networking in the libraries have been proved boon to the library users. In all the libraries, the scholarly research articles are being provided through consortium of electronic resources. Hence holding to mind increasing prices through the media including budgets all over the world is forcing to resort to alternatives like consortia. Electronic resources are very much helpful in scholarly communication and being popular gradually due to their advanced features as these can be used through remote access, and they can be used concurrently by more than one user, offer speedy entry, but conserve available location could be electronically stored and could aid to digital

knowledge per se the utilization for side problems to the digital form for academic papers increasing rising, suggesting quickly the change to device's preference in digital capital (Gowda and Shivalingaih, 2009)[4]. The scientific information is now being published both on the World Wide Web (WWW) and in print format (Mohamad, 2009)[5]. In other words, it can be said that almost all the scientific information are available on the electronic media, i.e. on CD-ROM and online also. The full text of scientific information is available on internet as well as in the form of print journals. These days, most of the journals are available only online not in the print format or dual format. Bear to mind their importance to digital database Services users this research authorized usage Online Tools to University Technical Library Haryana.

Digital services play the major function for about every field, whether government and private educational or governmental. Technology commercial fields is little different of a rule that persons operating throughout a private field require knowledge in the quite limited periods in time or is engaged to production processes throughout a very suitable manner due for the active period research or relevant practices through a construction phase to a product marketing.

Review of Literature

Pushpa Sharma (2018)[6] analysed the citation and subjects related with reference and analyzed various aspects of the study of technology university databases in their usage for online journals using techniques for screening surveys. These also several network connected devices and services, such as CD-ROMs, digital servers or e-journals that is never widely shown in library users for technology, digital servers or e-journals that is never widely shown in that the 60% student has over e-journals under 50 CD-ROMs, 40% student. Library users for technology, except to usage, certain services are never often used, so database experts also need pay care.

Suresh Balutagi (2018)[7] attempted to explain the large percentage in personnel leaders is fully informed to computer-based facilities, electronic servers, digital tools is known to 78.66% for staff representatives, 63.79% of participants is informed to digital outlets, while 83.69% faculty member purpose of using electronic resources for teaching 80.82% respondents use for research publication. It found that majority of the respondents face of problems because while network access, 47% face utilize for awareness in whether can utilize tools to digital books, majority 45.08% of participants believes or consider a percentage for researchers involved publication. Its use of online data services has improved, 18.49% strongly agree with that, about 20.14% feeling confused or 5.28% to participants thought that we disagreed or even fewer persons infected their disagreed.

D. Vankati Phad (2019)[8] analyses the citation and subjects related with reference and analyses various aspects of increasing implementation for online sources shows relevant for a traditional theory of knowledge can be accessed in each moment by the certain author. The providing economical facilities, library staff now want combine different factors, requests, frequent changes. Digital resources are a present, and in centuries on follow, this could provide the event problem to collections. Including databases so often with all members for community that is starving for have different knowledge through a globe, digital resources is helpful.

Mridula Singh (2019)[9] analyses the citation and subjects related with reference and analyses various aspects of collection participants are observed to be happy to an access for different categories for services, such as digital journals, online books, e-theses and other electronic resources. A collection includes an influence of a seminars, data collection services, technical operates provided, competency. Participants are conscious to digital tools or often find decent using a similar. An under the report, Amity University has the numerous e-resources for various university programs needed to its student society.

Pranjal Deka (2020)[10] analyses the citation and subjects related with reference and various aspects of very large element for scholar correspondence around a world is made use by free source digital services. An open access system meets its knowledge criteria for that same various users groups. This thesis was carried out by the Dibrugarh university researcher fellow that demonstrates a academic usage freely accessible tools. It research indicates that electronic resources are used by both research scholars in the study purposes. This research paper demonstrates that these research scholars are knowledgeable to digital resource. Academics do never utilize certain free source services due to certain issues. The possible data analysis area is developed by full need for regular freely accessible electronic resources. Libraries or information center's providing the significant responsibility for support knowledge for every professional institution between faculty members.

E-Resources

John H. Barnes (1997)[11]: World Wide Web (WWW) has the widest information sources and the finest access coverage. For global communication and data exchange, the availability of data on the internet is considered a strong instrument. It converts individuals in a position to access data. It has introduced fresh dimensions in the field of data dissemination in digital libraries, education, trade, leisure, government, and health care, the World Wide Web has a prominent position to carry out study operations that are undertaken in many subjects. Electronic resources and digital service is defined at another needing tool computer connection to other type of device which collects data if the content refers in total digital data sources newspaper, e-collection and multimedia items and numerical, graphical or time-based titles released for marketing purposes. These can be produced to the CD-ROMs, web but instead thereafter in. A number of associated standards methods have been developed over the previous few years to enable papers being produced or circulated through digital edition. An electronic or electrical networks e-resource includes one huge effect at collecting academic archives. Editing electronics have resulted at a fresh age of communication and sharing of data. It gives individuals and employees writers or vendors possibilities. Most if their e-books and websites of the openly available online publication allow or promoting authors to give Input about operates, almost always effectively to a reader and not in the publication. Nonetheless, consumers can set up their own accounts, charge credit card services or pay by pre-arranged techniques, and have demanded content supplied Through the indirectly, via paper, e-mail, etc. databases now all types has spent bigger the plan sharing adopting and gaining connection by authors or providers for the electronic resources. That's it because electronic recourse has allowed library of enhance as the network a multitude methods. Second, the majority of e-resources begin from the quest for or recovery instruments that's it. Enable using for conduct literature searches more efficiently or effectively. In addition some important e-resources are also published to an internet and accessible by usage 24 hour per day on the desktop. Web enables many ways or form of

digital services any among those are common others gaining ground is digital newspapers, norms, technology, requirements, copyright studies, complete document, posts, export or hosting documents from some factors include of data. Its published version versions to the academic journal can also be found on the internet. Journal publisher provides services such as content, articles abstracts, complete book front of real released education has been placed in variation. Most to the kind of network operators is authors with the range of journals published by all publication houses like Elsevier, Academic Press and others. It facilities is accessible free of charge to anyone who has access to RSS feed. Sure to a newspapers were possible through also a product placement foundation for paying or using a sum needed, but of such newspapers using must paying of that viewpoint or when necessary as a scanning as well. Consortium is increase significant reform efforts for save university library in order to meet academic requirements with a sensible membership level. Organizing electronic resources it some among a essential or critical tasks in providing access for libraries access control members. With the traditional public libraries knowledge network, its practitioners will be programming, server technology, connectivity or similar IT-related strategic techniques. The database knowledge experts can also bear to view the key steps when organizing an E-Resource:

- Only provide certain tools through online databases and to render searching differences collection.
- Ordered allowing availability in e-services including alphabetically and through unique searching topics.
- We set up e-resources portal for allow quick connectivity.
- Establish digital libraries to a publication or procedural documents of academic publishers.
- For search a way to accessing e-resources, descriptive if complete, because many readers mainly find for tools within an object title, electronic resource organization must operate designed so the form which clients can access various collection in documents for knowledge.

Historical Development of Electronic Resources

John H. Barnes (1997)[12]: First in an early 1970s, abstracting and indexing services were produced accessible as internet databases by whose material description offered Link for a show point publisher. Records are they more commonly accessible in electronic form. We have certain sources of entry as this is faster to search from a printed edition. While such written database or inference subscriptions were withdrawn by archives, some small repositories completely substitute materials from main hard copy sources. The early online systems were later added a reasonable quantity of complete text content. Whereas it was good besides browsing, that couldn't substitute a initial articles powerfully designed and explained. Second, first one significant shift has been 1980s and early 1990s CD-ROM revaluation. The CD-ROM function and equipment, such as the graphical user interface, enabled more sophisticated implementation of the database. Despite the restriction which can carry on disc 650 MB of information, CD-ROM was able to provide a substantial quantity of fully formatted page pictures. And due to low cost manufacturing, a lower database explosion occurred in the complete text electronic reference works. CD-ROM disks were, in reality, primarily secondary sources such as tiny scale bibliographic primary sources. Third the next significant shift has been brought about because web could be said of by network changes all and much better appropriately could even also stated to have carried this to complete potential lots and commitments of previous techniques. Ultimately innovations such as affordable digital device system home device or community of information literacy given their atmosphere in order to comprehensive study and users. For the utility consequence, data becomes widespread and inexpensive.

With the decrease in the amount of Internet users, academic newspaper editors could often justify the installation of lengthy runs of main content with the facility. These innovations compelled lots of library professionals going digital replacing large parts from paper print digital databases versions always.

"N. Selvaganapathi 2013[13] with the introduction of computers in the 1950s, data in electronic format was produced it was not until the early 1960s that the first appropriate search database was developed."

"Meadow, 1988[14] the non-book materials began to appear in the 1960s."

"Taher and Davis 1994 like T.P. Sexena and Saifuddin's Problems of Cataloging Microfilms in 1962 the Atomic Energy Establishment Microforms Bulletin based in Bombay in 1963 there are few instances of M.S. Hussain's Audiovisual Librarianship."

"S.P. Singh's[15] automation in 1975 libraries Sodak and Schwarz were the first (1973) to design the scholarly journal's digital form; their vision was to distribute microfiche software output to individual subscribers."

"Lancaster 1995[16] at Medla was the first computer-based information recovery service on demand and it was primarily developed for the medical profession. MEDLINE, MEDLARS' internet version, was the first significant online dial-up search service for databases in 1971. The first government internet business database was available from DIALOG. Electronic resources started to have a significant effect on selection procedures in libraries with the advent of CD-ROM in mid-1980."

"Meadow, 1988[17] The advent of multiple electronic journal distribution technologies from CD-ROM was the first step towards local data loading, where publishers directly supplied picture and text information to libraries."

International E- Resources and E-Resources Consortia

A urge for communicate a expertise or knowledge among consortia to international stage were identified, and subsequently, Including Yale University Library in a coordinate hub, an International Consortium of Library Consortia (ICOLC) is created. In 1997, a Consortium of Consortia (COC) meets in a same time and an informal way. After very long time, it partnership persisted in the open or personality community consisting of 2000 database consortia as its effective world participants. The whole international consortium (ICOLC) provided the facilities to member organizations besides providing the others with a facility needed to discuss issues with normally utilized benefit. Many libraries consortia of general agreement for an ICOLC Statement around a world have been invited can meet ICOLC or accept him with participant consortia. Those participants of ICOLC are currently INDEST or UGC INFONET consortia working in India. (Seema)[18].

Research Methodology

Study is a highly systematic, rather structured advanced way for working a research analytical methodology. This requires a structured investigative process, which typically results to some kind for structured database for processes resulting in short a structured database for activities including the outcome statement of findings. The survey method for research will be uses in carry out a study. Taking

into fund their research goals and a questionnaire comprising of some questions based on the objectives will be using during this analysis for obtain respective information. Moreover, observation and interview techniques will also be used collecting everything so primary information since a research.

An authentic data would become collected from the users personally or through e-mail. The study will be limited to the undergraduate learners, Master's degree Learners, research scholars and staff members therefore, applied the random sampling technique will be followed for selecting users from each category in each library on the basis of size of the sample. The data will be statistically analyzed by using the SPSS package and some other statistical techniques also. The data will be in tabular from through graph and charts as and when required this article documents processes, procedures or instruments use for obtain information throughout the participant survey in a research framework. This even discusses a design for a research including analysis for information from a report.

Hypothesis

Hypothesis is necessary or inevitable tool by technical studies. The theory was a spurious assertion for a relationship among certain factors and further. "Dewey, research usually starts with a problem, with a problematic situation. He also said that there is an indeterminate situation in which ideas are vague, doubts are raised, and the thinker is perplexed. Dewey further pointed out that the problems is not enunciated indeed cannot be enunciated, until one experienced such an indeterminate situation."

His research objectives are supported by the following research hypothesis:

- There is significant different in Use of electronic resources in Technical University Libraries of Haryana a study.
- There is no significant different in Use of electronic resources in Technical University Libraries of Haryana a study.
- The Electronic Resources are more important for library and user satisfactions.

Objectives of the Study

Study's prime goals is structured the following:

- From known awareness among users about the electronic services through technical academic libraries of Haryana.
- In respect of identify the frequency uses electronic services technical academic libraries.
- To examine a purpose to electronic resources, use in technical university libraries.
- Knowing reader satisfaction levels about a use of electronic resources.
- For observe out what difficulties subscribers confront though they are using electronic resources in technical universities in Haryana.
- To suggest the suitable measures to improve the facilities and services linked with a usage in online tools.

Indian Scenario of Electronic Resources and Electronic Consortia

Computerized libraries is fitted to digital installations for a deployment to appropriate technology, we also built the original servers or is technology or manage these effectively. An addition for providing paper papers, these have mostly switched towards electronic resources provided through registration,

Electronic Resources, e-journals e-books, bibliographic and full-text CD-ROM databases. These kinds in e-resources could be reached mostly on internet by authenticating an IP address of the device. "Therefore, a few efforts have been made in different levels to provide shared web-based electronic resources amongst the research, academic, and technical libraries in India" (Pal and Das 2008)[19].

Table 1: E-Resources Consortia in India with URL

Sr. No.	Consortia in India	URL
1	UGC INFONET (INFLIBNET)	http://www.inflibnet.ac.in
2	INDEST (MHRD	http://www.paniit.iitd.ac.in/indest/
3	DAE	http://www.tifr.res.in
4	National Knowledge Resource Consortium	http://nkrc.niscair.res.in
5	IIM	http://www.iima.ac.in
6	RGUHS – HELINET	http://www.rguhs.ac.in/hn/newhell.htm
7	DRDO Consortium	https://www.drdo.gov.in/e-journals/e-journal-services
8	ICMR	https://main.icmr.nic.in/
9	CeRA	https://www.icar.org.in/content/ consortium-e-resources-agriculture-cera

Table 2: Electronic Resources with URL [20]

Sr. No.	E- Resources	URL Link
1	Oxford University Press	http://www.oxfortjournal.org
2	ISD	http://isid.org.in
3	JSTOR	http://www.jstor.org
4	Project Euclid	http://projecteuclid.org
5	Royal Society of Chemistry	http://rsc.org
6	SIAM	http://epubs.siam.org
7	MathSciNet	https://mathscinet.ams.org
8	Springer Link	http://www.springerlink.com
9	Taylor & Francis	http://www.informaworld.com
10	Directory Open Access Journals (DOAJ)	https://www.doaj.org
11	Open Courseware Mexico	http://tec.mx
12	Berkely University	http://ocw.uci.edu
13	Carnegie Mellon University	http://oli.cmu.edu
14	e-PG Pathshala	http://epgp.inflibnet.ac.in
15	GOI web of Dictionary	http://ocw.jhsph.edu

16	The Judgment Inf. System	http://judis.nic.in
17	Lecture Fox	http://www.lecturefox.com
18	NDL India	http://ndl.iitkgp.ac.in
19	National Repository of Open Education Resources	http://nroer.gov.in/home/
20	New Zealand OER Project	http://www.repository.ac.nz
21	NPTEL	https://www.youtube.com/nptelhrd
22	OER Commons	https://www.oercommons.org
23	Online College Courses	https://www.onlinecourses.com
24	Open Courseware consortium	http://www.ocwconsortium.org
25	Open Culture	https://www.openculture.com/freeonlinecourses
26	Open Learn	https://www.open.ac.uk/about/open-educational-resources/openlearn
27	Open Michigan	http://open.umich.edu
28	Open Textbooks for K12:Siyavula	http://www.siyavul.com
29	Open Text Books	http://cnx.org
30	Open University of Netherlands	http://ocw.tudelft.nl
31	Paris tech Graduate school	http://graduatesschool.paristech.org
32	Princeton University	https://www.princeton.edu/~webmedia/about/
33	Rai Open Courseware	http://www.rocw.raifoundation.org
34	OpenStax CNX, Rice University	http://cnx.org
35	Spoken Tutorial	http://www.spoken-tutorial.org
36	SWAYAM	http://swayam.org.in
37	Teacher Portal	http://www.teachersofindia.org/en
38	Tufts Open Courseware	http://ocw.tufts.edu
39	United Nations University	http://www.merit.unu.edu
40	University of Notre Dame	http://ocw.nd.edu
41	University of Southern Queensland	http://ocw.usq.edu.au
42	Utah State University	http://ocw.usw.edu
43	Vietnam	http://ocw.fetp.edu.vn/home.cfm
44	Webcast, Berkley	http://webcast.berkeley.edu
45	World Lecture Project	http://www.world-lecture-project.org/navld=1
46	Yale University	http://oyc.yale.edu
47	EPWRF Indian Time series	http://www.epwrfits.in
48	Indiastat	http://www.indiasat.com

49	J-Gate	https://jgateplus.com
50	McGraw Hill Access Engineering Database	http://www.accessengineeringlibrary.com

Importance of Electronic Resources

On a whole country, e-resources play a critical role, per person has to know significance Electronic Resources. All types of individuals embrace everything since to the reliability, simplicity, functionality or usability.

- The information preserves at standard interval and can be reserved always up-to-date in electronic media.
- Smooth the progress of easy replication into new media and sharing the data.
- The electronic resources unresponsive to environment exposure and if handle with care, it will prove huge stability which cannot be attain on paper based print media.
- Saves massive time by providing easy and immediate access without slaying time for processing, printing, binding and delivery.
- It gives awareness to the user community such as PG students, research scholars, faculty, and staff members.
- The user can get all the data in digitalized format, so there is no need for printing and binding.
- The cost of e-resources is less than the print version.
- Have possible to preserve delicate / valuable unique materials.
- To access and recover appropriate articles, number of search engines is available.
- It facilitates concurrent access to huge number of users.
- Smooth the progress of access to physically challenged persons.
- It consents to remote access from anywhere at any time. Kavithanjali (2019)[21]

Selection of Electronic Resources

Availability seems to be even the new term for librarians, employees or developers, just like libraries have been trying to acquire printed materials for a long time now. Library users, are indeed already focused on taking data analytics from e-resources facing e-resources rather than printed material since technique produced. A evaluation method will have carried out according to the criteria for a consumers, panel, group discussion, user's recommendation etc. Rohan R (2016)[22]

Statement to the Problem

Today, almost all the university libraries provide print as well as electronic resources facilities for their users. In these libraries, some users are using electronic resources since they are unaware of electronic resources, while others are using print resources because they don't know about print resources, which are available in their respective libraries. Sometimes, they may also not get help from library staff for using electronic resources. Moreover, they might not have attended any training programme or the libraries do never include organized orientation programme on the use of electronic resources. These may be some of the problems that cause less or at usage for e-resource. There for its latest research are intended for understand "Use of electronic resources in technical University libraries of Haryana: a study" and make certain suggestions for improvement of electronic resources required facilities or facilities provided by these libraries

Conclusion

Given any due respect to electronic resources, seeking, researching, or taking part in the development or use of information has experienced radical changes throughout nearly every aspect of today's educational and learning systems, including how individuals engage, connect, or share information. Its usage of electronic resources has developed greatly mostly on foundation and columns of a range of new technical processes and tools. E-resources play a more and bigger part in research. The study has allows the participants to voice your pleasure as the hopes for changes. E-Resources are considered to indicate a positive impact. Numerous comments mentioned both future expectations and fulfillment. Students are very receptive to advice from their teachers, peers, or a librarian about specific resources. It's crucial to instruct college students in the greatest resources, Web resource evaluation techniques, and search tactics. Ease will always be the single most important element in how knowledge is used.

Electronic journals are preferred by most readers, but just when devices simplify the tasks and to provide the knowledge users require. The main advantages of electronic journals for all groups include computer accessibility, easy accessibility, or the capacity to save, print, or distribute publications.

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