E-RESOURCES AT PUNJAB UNIVERSITY LIBRARIES- A COMPARATIVE STUDY

Sunil Kumar Ojha,

Librarian, D.A.V.College of Education, Abohar

Abstract:

The Paper focus on the E-Resources, technology has made it more easy and comfortable to apply the strode intellect. The libraries of Punjab are fast changing with the rapid development of electronic Publishing libraries are not only acquiring reading material such as printed books and journals but also arranging for providing access to various learning resources in electronic form the web resources and use of web as a tool is changing the way users and learn.

Key word: *E-Resources, E- Books E-journal, E-news Paper, E- Thesis.*

Introduction: State libraries of Punjab have undergone a significant change in the past two decades due to the application of information technology (IT) in automated cataloguing, circulation systems, online information retrieval, electronic document delivery, and CD-ROM databases. The advent of the Internet, digitization, and the ability to access library and research materials from remote locations had also generated dramatic changes by the end of the twentieth century (Ostrow, 2008). Development of technology has played an important role in the improvement of library and information services. It has proved itself one of the best innovations (Riggs, 2011). Libraries have taken advantage of the new information technologies to provide a wide range of services and products, which were not possible, a few decades ago. Today, CDROMs and online search services have revolutionized the provision of services to users. Undoubtedly without information technology, libraries would have never been able to satisfy the changing needs of users in an information era of today (Singh, 2011).

OBJECTIVES OF THE STUDY: The primary objective of the study is to understand

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the nature of Technology supported resources, facilities and services provided in university libraries of Punjab and assess quality of those services as perceived by customers/ users.

LITERATURE REVIEW:

Gautam (2016) wrote an article entitled "Marching towards Excellence in Education: Librarian's Horizon" for the objectives – to build capacity of library professionals that they enable to cross all technical barriers, to design of library service and develop intellectual society, to develop user centric model to operate library operation with 24/7 accessibility of library services, safety reliability, relevancy, security and privacy of users as well as library professionals. To reduce the time, money, and man power of library, and transform it into learn innovative skills and new technology for improvement of intellectual society. He conclude that "the University News provides a good platform to the intellectuals for elaborating, exploring and sharing of knowledge, views and opinion into the community of intellectuals. Although various tools and technologies are functioning in India and globe, Google tools will enhance the quality of library services. It helps to cultivate a new horizon for library profession and fulfill the dream of sustainable development of India and contribute in the perception of the education system. His notion is to develop and integrated library network by the dint of Google tools, for providing the optimum information in optimum time and place at the least cost."

Kumar (2016) studded on "use of e-resources by the medical students of M.M. University, Ambala." The objectives of the study was to identify the type of e-resources used by the medical students; find out the search patterns; know the purpose of using e-resources; to know the frequency and time spent while using of e-resources and the place were to be assessed e- resources by the medical students. He concluded that medical students frequently used search engines as well as e-research report by title and subject of the required information for updating medical knowledge, maximum medical student's state that e-resources are more informative and all the undergraduate students

use e-resources daily and spent more time than the postgraduate students. The major problems PG students feel for using e-resources are time consuming and face slow downloading whereas UG students face virus, slow downloading and feel that using e-resources makes it more expensive. He suggested that new development is required in the field of modern digital technology to reduce the problems of the students.

Kaur and Singh (2016) wrote an article titled "Investing for impact: a case study of academic institutions of district Jalandhar (Panjab) for the objective to assess the impact of e-resources in terms of resources, staffing, space, technical services and equipment in the academic institutions libraries, they found accessibility of E-resources shown that consortium plays the lead role in accessing the authentic information which was not available in free access on internet; with the concern of space respondent want to more space; impact on technical section was studded that technical work was reduced with the usage of e-resources, classification and cataloguing work has reduced and 100 % agreed that usage of e-resources has reduced their bindery work.

METHODOLOGY:

As the nature of the study questionnaire for data collection purposes, for collection of relevant data from concerned university libraries, observation and interview technique was used. The interview technique was used to get a clear understanding of functioning of the concerned libraries. Two different questionnaires were designed to collect the data. In the first questionnaire, the information about the current status of university libraries was collected. The faculty and researchers in various departments of four universities of Punjab viz. Punjab Agricultural University, Ludhiana; Punjab Technical University, Jalandhar; Punjab University, Chandigarh; Punjabi University, Patiala came under the scope of the study.

FINDINGS:

The structure of University education in Punjab has based on total 26 universities, which includes 09 Govt. universities, 10 Private universities, 01 Deemed University Government, 01 Deemed University Private and 04 Institute for National Importance

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(All India Survey on Higher Education, 2015-16).

Table No.1

Number of Universities in Punjab

Universities or Institutes	Number of Institutes or
	Universities
Central University	01
State Public (Govt.)	09
Universities	
State Private Universities	10
Deemed University	01
Government	
Deemed University Private	01
Institute for National	04
Importance	
Total	26

(Source-All India Survey on Higher Education 2015-16)

Table No.2
Showing Distribution of Library Model for Resources Building of the Universities of Punjab State

Name of the University	Print	Electronic	Hybrid
Panjab University, Chandigarh	-	-	✓
Punjabi University, Patiala	-	- ✓	
Punjab Agri. University, Ludhiana	-	-	√
IKG P. T. University, Kapurthala	-	-	√

Table 2 depict that the four universities of the state of Punjab namely Panjab University, Chandigarh; Punjabi University, Patiala; Punjab Agricultural University (PAU), Ludhiana and I.K. Gujral Punjab Technical University (PTU), Kapurthala have **Hybrid** model for resource building.

Table No.3

Annual Intake of the Library in e-resources

Name of the University	Books	Periodicals	Journals	Database	Reference Sources	Back files of e- resources
Panjab University	890	600	7500	10	5211	65756
Punjabi University	215	150	8000	6	2533	24670
Punjab Agricultural University	74	96	3740	14	2310	14171
IKG Punjab Technical University	150	247	6000	3	1500	2000

Fig. 1: Annual Intake of the Library in e-resources

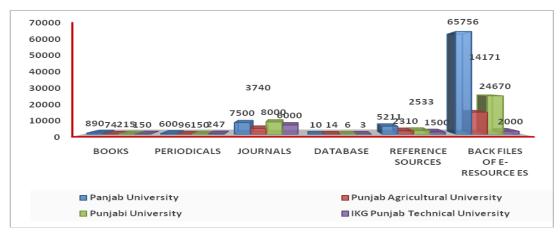


Table 3 & Fig 1 shows that Average annual intake of the library in e-resource of books were found for Punjab University (890), Punjabi University (215) followed by Punjab Agriculture University (74) and IKG Punjab Technical University (150).

The Periodicals: Average annual intake of the library in e-resource for periodicals were found for Panjab University (600), Punjabi University (150) followed by Punjab Agriculture University (96) and IKG Panjab Technical University (247).

Journals: Average annual intake of the library in e-resource for journals found for Punjabi University (8,000), Panjab University (7,500), and IKG Punjab Technical University (6,000). Punjab Agriculture University (3,740).

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Data base: Maximum data base were found for Punjab Agriculture University (14), Panjab University (10), Punjabi University (6) and very minimum data base found for Punjab Technical University (3).

Reference Sources: Maximum references sourceswere found for Panjab University (5,211), Punjabi University (2,533), Agriculture university (2,310), IKG Punjab Technical University (1,500).

Back files of E-resources: Maximum Back files of E- resources were found for Panjab University (65,756), Punjabi University (24,670), Agriculture university (14,171), IKG Punjab Technical University (2,000).

The above discussion clearly indicates that the Panjab University, Chandigarh is the best in Average Annual Intake of the Library in e-resources except journals where Punjabi University, Patiala excels.

Table 4
Bibliographical database and whether Web Update available in various universities of Punjab state.

Name of the University	library has Bibliographical database		Whether Web Update available			
	Yes	No	Planned	Yes	No	Planned
Panjab University	✓	-	-	√	-	-
Punjab Agriculture University	√	-	-	√	-	-
Punjabi University	√	-	-	√	-	-
IKG Punjab Technical University	√	-	-	√	-	-

Table 4. ICT solution in various universities of Punjab state is:

- a) **Library has Bibliographical database:** Each university in their library has Bibliographical database.
- b) Web Update available: All universities has update web in their Library. Punjab

- Technical University has update web on LAN and where as Punjabi University, Punjab University on World Wide Web.
- c) Library has Digital Collection and from its own resource: Each university in their library has digital collection and all connection is on LAN and World Wide Web as mention in above Table.

Table 5
Distribution of Information Resources among university

Name of the University	Access to E-	E-books	E-	E-	Any
	resources		journals	thesis	Other
Panjab University	YES	YES	YES	YES	YES
Punjab	YES	YES	YES	YES	YES
AgriculturUniversity					
Punjabi University	YES	YES	YES	YES	YES
IKG Punjab Technical University	YES	YES	YES	YES	YES

Table 5 shows Access to E-resources: All universities has easy access to E-resources in their library. Types of E- resources: E-Books, E-Journals, E-Thesis the main E-resource at all universities library.

Table 6

Mode of availability Subscribed by state universities of Punjab

Mode of availability Subscribed by University	Punjab Agriculture	Punjabi University	Panjab University	IKG Punjab Technical University
Business Source Elite	1	-	-	-
CAB Abstracts	1	-	-	-
Commodities Database	1	-	-	-
Consortium for e-Resources in Agriculture	1	-	-	-
FSTA (Food Science & Technology Abstracts),	1	-	-	-
Indiastat	1	-	1	-
Krishikosh	1	-	-	-
Krishiprabha	1	-	-	-
PAU Theses	1	-	-	-
INFLIBNET	-	1	-	1
SciFinder Scholar	-	1	-	-

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MathScinet,	-	1	-	-
Royal Society of Chemistry	-	1	-	-
web of Science etc	-	1	-	-
Science Direct	-	-	1	-
Scopus	-	-	1	-
West Law,	-	-	1	-
IEEE	-	-	1	-
JoVE	-	-	1	-
J-Gate	-	-	1	-
Ebsco	-	-	1	-
Proques	-	-	1	-
Dissertation & Thesis Abstracts	-	-	1	-
Times of India online	-	-	1	-
Districts of India	-	-	1	-
Through Consortia INFLIBNET / INDEST/Any other	INFLIBNET	INFLIBNET	UGC- INFONET	INFLIBNET

Mode of availability Subscribed by University: Punjab Agriculture university has mode of availability as Business Source Elite, CAB Abstracts, Commodities Database, Consortium for e-Resources in Agriculture, FSTA (Food Science & Technology Abstracts), Indiastat, Krishiprabha, PAU Theses, INFLIBNET, SciFinder Scholar, MathScinet, Royal Society of Chemistry, web of Science etc.

Punjabi University has mode of availability as INFLIBNET, SciFinder Scholar, Royal Society of Chemistry and web of Science etc

Punjab University has mode of availability as Indiastat, Science Direct, Scopus, West Law, IEEE, JoVE, J-Gate, Ebsco, Proques, Dissertation & Thesis Abstracts, Times of India online, Districts of India where as Punjab Technical university has INFLIBNET

CONCLUSION:

University libraries of Punjab have a good collection of e-resources. E-resources are the wave of future and e-collection offers possibilities for expending access as well as changing learning behavior and academic research trends. All the responding University libraries have access to e-resources such as e-books, e-journal, e-theses and other on-line and standalone information resources indexing and distracting services. The universities libraries in Punjab are reaching out to readers with wider on line reading material these

days and thus also focus on upgrading the technological infrastructure.

All the Universities have resource sharing facility both (online/offline). The universities are also inclined to be part of consortia of technology and knowledge providers.

Mode of Campus-wide accessibility through IP Based authentication is all the Universities. Despite some technical advancement, the system and process are now being customized to empower readers the State-of-Art-reading experience.

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