Users' Perception of Re-Designed Library Resources and Services in IIM Lucknow

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Technology continues to evolve and the academic libraries have been showing great ingenuity in adopting this technology and identifying appropriate areas to redesign their resources and services to meet the ever-changing needs of the users. The present paper observes the reengineering practice in library resources and services through users' perception and satisfaction in order to enhance its usage. Hence, the paper aims to identify the users' perception and satisfaction with redesigned resources and services in the IIM library Lucknow, India, thereby, also identifying and suggesting potential improvement in the services. For this purpose survey method through self administrated questionnaire is adopted to collect data from end users of library. In total, 150 copies of questionnaire distributed to the students. Out of the filled received questionnaire, 120 were found dully completed and useable. Apart from this, interview with Librarians helped to supplement the questionnaire survey. The findings of the study show that although user' perception and satisfaction towards e-resources and e-services is increasing as there is a general perception of overlooking of traditional print resources, yet they supplement their information needs with print resources and expect more innovative changing in existing resources and services. In order to make the innovation more successful, the present study also recommends that a radical rethinking is required to strengthen the e-resources and improving the e-services.

Keywords: *Resources and services, Library users, Library assessment, Reengineering, Redesigning, IIM Lucknow library*

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1   INTRODUCTION

There have always been regular tremendous changes taking place in libraries owing to technological revolution, shrinking budget, globalization of education, changing landscape of scholarly publications and increasing trend of open access and divergent demands of patrons. The libraries have expanded in response to above challenges by redesigning and reengineering and providing range of customized e-resources and e-services from diverse sources via use of emerging technologies such as Cloud Storage, Social Media and Mobile Apps to users on their preferred location. They have been adopting innovative technologies to reshape their role and relevancy in the constantly changing era. Library professionals have also been redefining their skills and competencies to facilitate the knowledge creation environment. Electronic library, digital library and virtual library are also outcome of changing technological development. Lubanga and Mumba, 2021 elaborate the impact of technology on 21st century librarianship and that it is different from previous concept of librarianship. This has made a profound impact on the libraries and libraries in turn have been redesigning their resources and services, restructuring their operations, redefining their human resources and financial processes, and renovating their space to improve efficiencies and functionalities so that right information to the right user at a right time in a right manner can be provided. In this context, the present study is conducted to identify users' perception and satisfaction toward redesigned resources and services at IIM Lucknow owing to technological innovation.

2   REDESIGNING OF LIBRARY RESOURCES AND SERVICES: NEED OF THE HOUR

Since long, libraries have been playing important role in teaching, learning and research. But the emergence of innovative technologies and internet, especially World Wide Web, has changed the way libraries store, process, preserve and disseminate information. It has made the printed form of information redundant and obsolete. Journals and books are being replaced by electronic format and the physical stacks of libraries have been shifting into Digital lab, research centers, and multimedia creation centers. Moreover, users' demands have also changed with constantly changing pedagogical environment. Students, researchers and teachers now expect to access information round the clock, from almost anywhere in the world via growing number of devices ranging from laptops to phones. They put focus on electronic version of information rather than print resources and demand more specific and personalized services delivered just in time on their preferred devices. All above changes have forced libraries to recognize this paradigm shift and redesign their offerings to meet the objective of education community. Therefore,

libraries have been redesigning themselves and exploiting emerging technologies for modernization, transformation and decentralization of information resources to fulfill the demands of end users. **Libraries have been restructuring their collection policy and subscribing** more and more e- resources including e-books, e-journals, e-databases and other electronic products and also designing web pages, web portals and discovery resources to provide fast and exact access to e- resources available on web. This way, libraries have been moderating their acquisition policies from 'just in case' to 'access when you need'. Apart from this, libraries have also been redesigning their services delivery model from traditional to innovative mode and providing range of innovative services such as OPAC/Web OPAC/ Discovery tools, WebPages / Web portals, Remote access to e-resources, e-document delivery, Self Check out/Check in, Mobile App, Library 2.0, Awareness of copyright & plagiarism, CAS/SDI through Website/e-mail/Social media, Database services, Research support services and Virtual reference services to facilitate access to multiple resources effectively and efficiently. Consequently, libraries have been redesigning their resources and services to meet the users' requirements in changing learning environment.

3   LITERATURE REVIEW

Rapid advancement in technology has brought a sea change in the field of libraries by transforming the physical libraries into digital or virtual format and has also changed the perception of users' toward using the library. The users' satisfaction is the primary objective of every library; and to fulfill this objective libraries have been redesigning their collection, services and infrastructure continuously to meet the changing demands of patrons. Rajan *et al* (2022) focuses on technological transformation of libraries from print to digital environment in order to make new opportunities for users. Cox (2022) identifies the emerging trends concerned with students' wellbeing, sustainability, equality, diversity and inclusion based on new technologies that affect the use and design of library. Dobreva and Anghelescu (2022) and Chisita *et al* (2022) focus on digital transformation of libraries in terms of resources and services during new normal for their users' communities. Bi *et al* (2022) highlight the improvements in library services through paradigm of smart libraries in contrast to traditional libraries to meet the expectation of users. Olubiyo (2022) elaborates that the sustainable digital information services in 21st century for effective, efficient output and productivity for satisfaction of intellectual quest of patrons. Eke and Salihu (2021) examine the adoption and development of mobile library system to overcome the technological challenges as well as to ensure the flexible and efficient service delivery to users. Mageto (2021) presents an e-library system for improving and managing library resources and services in changing era for their users' community. Yu *et al* (2022) Medawar and Tabet

(2021), Tammaro (2021), Decker (2021), Izuagbe (2021), Fasae *et al* (2021), Guo *et al* (2021) and Groote and Scoulas (2021) highlight the positive influence of Covid-19 in transformation of libraries from traditional context to digital framework in terms of resources and services to meet the future oriented demands of users' community. Adetayo and Ilemobola (2021), Rafiq *et al* (2021) and Ippoliti *et al* (2021) highlight the willingness of professionals in embracing innovative technology to expand and modernize information services to meet the expectations of technology centered society in digital era. Arthur and Jackson (2020) provide an overview of reorganization of technical services and also focus on best practice for managing change from users' perspective. Musangi (2019) evaluates the reengineered services and spaces of six university libraries in Kenya to meet users' satisfaction. All these studies show that academic libraries have been redesigning/improving their resources, services and infrastructure constantly along with users' expectation and behavior. Among such studies of redesigning of libraries, knowing user' perception regarding resources and services is also essential. In view of this, some studies related to users' awareness and preference are also reviewed; Bhardwaj and Sharma (2022) examine the awareness and usage of resources among scholars and find out that e-resources are greatly used by scholars than print resources. Mondal and Bhatt (2022) examine the awareness of using e-resources by students and scholars and observe that users are making much use of e-resources. Jbeen *et al* (2022) and Nyakweba *et al* (2022) explore the awareness and usage of e-books and e-services and find that users have positive perception toward e-books and e-services. Peng *et al* (2022) measures the users' satisfaction regarding spatial renovation and finds out that spatial dimension significantly affect the students' satisfaction of learning spaces. Diwedi and Verma (2022) and Puneeth (2021) assess the users' perception and satisfaction with e-resources and conclude that despite highly awareness of e-resources; users make less use of e-resources due to access problem. Kumar and Gupta (2022) assess the users' satisfaction toward redesigned resources and services and observe that users' perception toward e-resources and e-services is growing. Merande *et al* (2021) highlight the users' preference toward e-resources as compared to print resources. Fu *et al* (2022), Abukari (2019) and Arumuru *et al* (2019) investigate utilization and satisfaction of users with available library resources and services. The results of the studies show that most of library users are satisfied with both types of resources. Hindagolla (2021), Udem (2020) and Ameen (2019) in their studies explore the satisfactions and perceptions of undergraduates towards library resources and services and Hindoagolla concludes that majority of (61%) users are satisfied with print collection while only 39% students are satisfied with e-resources and e-services. A similar observation is made in Udem's and Ameen's studies that identify the preference of print resources by most of the respondents. The findings of

studies recommend improvement in quality e- resources and e-service to meet the user satisfaction. Gunasekera *et al* (2021), Burhansab *et al* (2021), Rafiq and Warraich (2019) and Gond *et al* (2019) make an attempt to investigate awareness and perception of users toward print vs. e-resources. The results reveal that most of users are aware of e-resources and they prefer to access both kinds of resources for their educational purpose. Idiegbeyan *et al* (2019) examine the usage and preference of library resources among users. The results of study reveal that 47.6 % respondents prefer print resources; while interestingly, the same number prefers electronic resources. It, therefore, implies that both print and electronic resources are complementary in meeting the information needs of users. Samzugi (2019) and Yamson *et al* (2018) in their studies examine the users' perception of electronic and print resources and the result of both studies match with each other and show that majority of respondents preferred print resources rather than e-resources. From the above studies it is observed that user satisfaction is greatly influenced by quality resources and services either being provided in print or electronic format. Therefore, it is oblivious that libraries are constantly improving their resources and services to meet the demand of users. Considering this approach, the aim of this paper is to explore the usage and satisfaction of users regarding library resources and services provided by IIM Lucknow library.

4   INDIAN INSTITUTE OF MANAGEMENT (IIM) LIBRARY, LUCKNOW

Indian Institute of Management (IIM) Lucknow is the fourth in the prestigious IIMs family of management schools. The institute was established in 1984 by the Government of India as a national level school of excellence in management science. This institute has well known library named as 'Gyanodaya' Library. The library has rich collection of over 60,000 learning resources in the discipline of management and related areas in various form and subscribe more than 400 learned periodicals, operating from a 30,000 sq. ft. spacious centrally located, air conditioned, two storied building, built on most modern lines, equipped with ergonomically designed furniture & fittings, managed by a highly dedicated team of professionals. The library caters to the information needs of its highly demanding clientele by offering a wide range of Information Technology (IT) based product and services.

5   OBJECTIVES

The success of a library depends on its ability to minimize the gap between resources and services demanded and provided. Consequently, libraries have been redesigning their resources and services from their users' perspective. To address these questions, the objectives of the paper are:
- To know the users' awareness regarding library resources

- To know the purpose of using library resources and services
- To explore the preference and frequency of using library resources and services
- To find the users' changing awareness, usage and dependency with resources and services.
- To measure the satisfaction level of users' toward library resources and services
- To examine the users' opinion on need toward innovative changes in resources and services

6   METHODOLOGY

Indian Institute of Management (IIM), Lucknow was selected for the study. The survey method is adopted to conduct this study. For data collection, self-administrated questionnaires were personally distributed randomly among MBA students of IIM Lucknow who were present in the library, their respective departments, mess and canteen etc. Out of 150 distributed questionnaires, 120 dully filled questionnaires were received. The collected data are analyzed with percentages and presented in tables.

7   DATA ANALYSIS AND INTERPRETATION

The analysis and interpretation of collected data from IIM library users to identify their preference and satisfaction towards resources and services is presented below:

TABLE 1

Purpose of using Library

Purpose	Print n (%)	Electronic n (%)	Both n (%)
Reading Text books and other Course Material	69(57.5)	32(26.6)	19(15.9)
For Research Work	31(25.8)	72(60)	17(14.2)
To consult Journals/ Periodicals	48(40)	52(43.3)	20(16.7)
Reading Newspapers/Magazines	86(71.6)	23(19.2)	11(9.2)
Preparing Presentation & Paper publication	24 (20)	87(72.5)	9(7.2)
Updating subject knowledge	27(22.5)	80(66.7)	13(10.8)
For Employment Opportunities	41(34.2)	58(48.3)	21(17.5)
Referring Old question Papers	46(38.3)	52(43.4)	22(18.3)

The library acquires a range of information resources in different formats and makes them accessible to users. The users make use of these resources either in print or electronic or in both formats when they visit the library as per

their requirements. Table 1 shows the perception of respondents towards type of format preferred by library users while retrieving their desired information viz print, electronic or both. The results depict that most of respondents prefer to use electronic resources for preparing presentations and publishing papers (72.5%), updating subject knowledge (66.7%), collecting information for research work (60%), employment opportunities (48.3%), consulting periodicals/ journals (43.3%) and referring old question papers (43.4%). Notably, only two print resources are preferred more than e-resources by respondents are; reading textbooks and other course materials (57.5%) and reading newspapers/magazines (71.6%). This indicates that most of the users prefer the electronic format as compared to print or both types of formats for retrieving their desired information.

TABLE 2

Frequency of accessing the Library Resources

Frequency	Physically n (%)	Virtually n (%)
Daily	40(33.3)	44(36.7)
Twice a week	42(35)	46(38.3)
Weekly	16(13.3)	18(15)
Monthly	8(6.7)	2(1.7)
Occasionally	14(11.7)	10(8.3)

Table 2 depicts that 36.7% respondents visit the library daily in virtual mode whereas 33.3% in physical mode to access the library resources. Further the results show that 38.3 % respondents visit the library twice a week virtually whereas 35% in physical mode. However, 11.7% respondents are occasional visitors in physical mode, while 8.3% access the library in virtual mode. The results indicate that though majority of users prefer to access the library resources virtually, there is not much difference in accessing of library resources in physical or virtual mode.

TABLE 3

Time spent for Consulting / searching Library Resources

Time Spent	Physically n (%)	Virtually n (%)
<30 minutes	42(35)	47(39.2)
1-2 hour	38(31.7)	39(32.5)
2-3 hours	17(14.1)	16(13.3)
3-4 hours	12(10)	11(9.2)
>4 hours	11(9.2)	7(5.8)

Table 3 depicts that majority of respondent i.e. 39.2% prefer to spend less than 30 minutes for searching library resources in virtual mode and 35%

prefer in physical mode. 32.5% users prefer to spend 1-2 hours for searching information in virtual mode and 31.7% prefer physically. Further results indicate that only 9.2% and 5.8% users access the library resources in physical and virtual modes respectively for more than 4 hours. It is also observed that with the increase in hours for consulting resources, the physical preference of users is also increasing.

TABLE 4

Preference between Print vs. E-resources

Preference	Print n (%)	Electronic n (%)	Both n (%)
Books	34(28.3)	15(12.5)	71(59.2)
Journals/Periodicals/Magazines (National/International)	22(18.3)	59(49.2)	39(32.5)
Reference Documents	22(18.3)	38(31.7)	60(50)
Bibliography/Databases	13(10.8)	92(76.7)	15(12.5)
Thesis/Dissertation	21(17.5)	11(9.2)	88(73.3)
Faculty Publications	2(1.7)	102(85)	16(13.3)
Case Studies	5(4.2	88(73.3)	27(22.5)
Research/ Technical Reports	2(1.7	87(72.5)	31(25.8)
Govt. Publications	7(5.8	73(60.8)	40(33.4)

The present table reveals that most of respondents prefer e-format of different types of resources including Faculty publications by 85%, Databases by 76.7%, Case studies by 73.3%, Reports by 72.5%, Government publications by 60.8%, and e-journals are preferred by 49.2% respondents over print resources. Simultaneously books by 42.5% and thesis and dissertation by 17.5% respondents are preferred in print form. Further results indicate that large number of users prefer to use documents in both format i.e. thesis and dissertations by 88%, books by 45%, reference documents by 60%, and government publication by 40% respondents.

TABLE 5

Preferred Place to access the e-resources

Preferred Place	n (%)
Library	18 (15)
Campus	50 (41.7)
Home/Hostel	52 (43.3)

Table 5 shows that most of respondents prefer to access e-resources from Home/Hostel (43.3%), followed by on-campus by (41.7%) respondents. Just 15% respondents prefer to access e-resources from library.

TABLE 6

Awareness, Usage and Dependency on Print vs. E-resources

Usage		1 n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)
Awareness	Print	29(24.2)	45(37.5)	10(8.3)	31(25.8)	5(4.2)
	E-resources	46(38.3)	66(55)	2(1.7)	4(3.3)	1(.8)
Usage	Print	14(11.7)	57(47.5)	12(10)	36(30)	1(.8)
	E-resources	31(25.8)	68(56.7)	10(8.3)	8(6.7)	3(2.5)
Dependency	Print	9(7.5)	45(37.5)	23(19.1)	38(31.7)	5(4.2)
	E-resources	25(20.8)	70(58.4)	9(7.5)	15(12.5)	1(.8)

* Highly Increased=1, Increased=2, Neutral=3, Decreased=4, Highly decreased=5

Table 6 indicates that awareness towards e-resources has highly increased (38.3%) and increased (55%) among respondents while their awareness of print resources has decreased (25.8%) and highly decreased (4.2%). Further, the figures indicate that usage of e-resources has highly increased (25.8%) and increased (56.7%) while usage of print resources has decreased (30%). Most of respondents admit that their dependency on e-resources has highly increased (20.8%) and increased (58.4%) as compared to print resources (37.5%), at the same time dependency on print resources has decreased (31.7%). In total, average 9.1% respondents are neutral in their responses. The results indicate that users' level of awareness, usage and dependency on e-resources is increasing over print resources.

TABLE 7

Preference of Manual vs. ICT based services

Preference	Manual n (%)	ICT based n (%)	Both n (%)
Circulation service	-	120(100)	-
OPAC	-	120(100)	-
Renewal/Reservation of reading material	24(20)	65(54.2)	31(25.8)
Reference service	34(28.3)	54(45)	32(26.7)
Display of new arrivals	17(14.2)	69(57.5)	34(28.3)
CAS/SDI services	11(9.2	40(33.3)	69(57.5)
Inter Library Loan services	7(5.8)	64(53.3)	49(40.9)
User education	19(15.9)	43(35.8)	58(48.3)
Bibliography/Database service	7(5.8)	97(80.9)	16(13.3)
Newspaper Clippings	37(30.8	51(42.5)	32(26.7)
Library news & events	7(5.8)	55(45.8)	58(48.4)
Resource Sharing	6(5)	59(49.2)	55(45.8)
Research Support Service	3(2.5)	46(38.3)	71(59.2)

Table 7 reveals that ICT enabled services i.e. Circulation service (100%), OPAC (100%), Database (80.9%), Display of new arrivals (57.5%), Renewal/reservation of reading material (54.2%), ILL (53.3%), Reference/referral service (47%), Resource sharing (49.25), Library news and events (45.8%) and newspaper clippings (42.5%) are more preferred by library users as compared to manual services. On other side, Research support services (59.2%), CAS/SDI services (57.5%), user education (48.3%), and library events (48.4%) are equally preferred in both modes. The results give an account of a more willing inclination of the users' towards ICT based services than manual services.

Table 8 shows that awareness regarding ICT based services has highly increased (37.5%) and increased (45%) among users, awareness toward manual services has decreased (40.3%) among respondents. Further results show that usage of ICT based services among users has highly increased (15.8) and increased (41.7%), at the same time usage of manual services has decreased (42.5%) as compared to ICT enabled services. Further study indicates that dependency on ICT based services has also highly increased (10%) and increased (48.3%) while dependency on manual services has decreased (39.2%). An average 15.4% of respondent are neural in their responses. The results show that preference of library users has been changing from manual services to the ICT based services.

Table 9 shows that 40.8% respondent are fully satisfied; 36.7% are partially satisfied and 17.5% are neutral with print sources, at the same time only 0.8% are fully dissatisfied. Further results indicate that 37.5% respondents are fully satisfied, 39.2% are partially satisfied and 20% are neutral while 2.5% are partially dissatisfied with electronic sources. The results with both types of resources reveal that 34.2% respondents are fully satisfied, 31.6% are partially satisfied while 30% and 1.7% respondents are partially dissatisfied and fully dissatisfied respectively. The results represent that majority of the respondents are satisfied with both types of resources i.e. print and electronic resources. Notably it is observed that although users' perception is moving toward e-resources, the print resources are still required to supplement their information needs.

Table 10 shows that 29.2% respondents are fully satisfied, 16.7% are partially satisfied and 35.8% are neutral in satisfaction with manual library services. In comparison, 14.2% and 4.2% respondents are partially and fully dissatisfied with manual services. On the other side, 30% respondents are fully and 31.7% are partially satisfied, whereas 31.7% respondents showed neutral satisfaction toward the ICT-based library services. Further results indicate that 27.5% are fully and 30.8% are partially satisfied and 39.2% are neutral with both types of library services. It is observed from the results that there is not much difference in level of satisfaction with manual vs ICT based services, thus indicating that both types of services are still in demand.

TABLE 8

Awareness, Usage and Dependency of Manual vs. ICT based services

Usage		1 n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)
Awareness	Manual	11(9.7)	44(36.6)	12(10)	49(40.3)	4(3.4)
	ICT Based	45(37.5)	54(45)	18(15)	2(1.7)	1(.8)
Usage	Manual	15(12.5)	28(23.3)	17(14.2)	51(42.5)	9(7.5)
	ICT Based	19(15.8)	50(41.7)	26(21.6)	23(19.2)	2(1.7)
Dependency	Manual	9(7.5)	39(32.5)	21(17.5)	47(39.2)	4(3.3)
	ICT Based	12(10)	58(48.3)	17(14.2)	31(25.8)	2(1.7)

* Highly Increased=1, Increased=2, Neutral=3, Decreased=4, Highly Decreased=5

TABLE 9

Satisfaction with Print and E-resources

Level of Satisfaction	1 n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)
Print Resources	49(40.8)	44(36.7)	21(17.5)	5(4.2)	1(.8)
E-resources	45(37.5)	47(39.2)	24(20)	3(2.5)	1(.8)
Both	41(34.2)	38(31.6)	3(2.5)	36(30)	2(1.7)

*Fully Satisfied=1, Partially Satisfied=2, Neutral=3, Partially Dissatisfied=4, Fully Dissatisfied=5

TABLE 10

Satisfaction with Manual and ICT Based Services

Level of Satisfaction	1 n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)
Manual Services	35(29.2)	20(16.7)	43(35.8)	17(14.2)	5(4.2)
ICT Based Services	36(30)	38(31.7)	38(31.7)	5(4.2)	3(2.5)
Both	33(27.5)	37(30.8)	47(39.2)	-	3(2.5)

*Fully Satisfied=1, Partially Satisfied=2, Neutral=3, Partially Dissatisfied=4, Fully Dissatisfied=5

TABLE 11

Need to redesign Library Resources and Services

Statements	1 n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)
Designing & development of more user centric web based resources and services	81 (67.5)	34(28.3)	-	-	5(4.2)
Create kiosk/drop boxes throughout the campus, hostel etc	79 (65.8)	37(30.8)	-	-	4(3.3)
Exploration of social media tools to alert on specific collection	54 (45)	45(37.5)	-	-	21(17.5)
Graphical & visual display of information on web	72 (60)	37(30.8)	-	-	11(9.7)
Create virtual spaces for users to consult experts outside the institution	82 (68.3)	37(30.8)	-	-	1(0.8)
Development of Library Mobile app based services	71 (59.2)	26(21.6)	-	-	23(19.2)
Development of digital lab for creating/ uploading contents	69 (57.5)	32(26.7)	-	-	19(15.8)
Add & See Review, Rating & Recommendation by users	58 (48.30)	44(36.7)	-	-	18(15)
Promotion & training of research tools/citation searching tools	52 (43.3)	47(39.2)	-	-	21(17.5)
Creation of advance search features	66 (55)	36(30)	-	-	18(15)
GPS feature inside library to locate exact material	59 (49.2)	38(31.7)	2(1.7)	6(5)	15(12.5)
Exploration of cloud sourcing techniques	71 (59.2)	29(24.2)	-	2(1.7)	18(15)
Introduce more innovative technology in library functioning	81 (67.5)	30(25)	-	2(1.7)	7(5.8)

* Should definitely do=1, Should do=2, Should definitely not do=3, Should not do=4, Don't know=5

From the analysis of Table 11, it is apparent that most of the respondents opine that the library should definitely make changes in all its activities and services. The results show that more than 50% respondents support the statement that their library should definitely develop users centric web based services; install Kiosks/drop boxes throughout the campus/ hostel; develop mobile based services; provide information in graphics and visual signs on the web; create virtual spaces; develop digital media lab for creating/uploading contents; create advanced search features; exploration of cloud sourcing; and introduce more innovative technologies. Further 40-50% respondents recommended that library should promote research tools/citations; customize consortia functions and activities; explore social media tools to alert on collection and services; add and see reviews, ratings and users' recommendations; and create GPS App for locating material inside the library. In total, an average 11.6 % respondents do not know what changes should be implemented/ suggested in the library. The findings of this table show that despite various improvements in resources and services, users still expect more innovative changes in existing resources and services.

8   CONCLUSION AND SUGGESTIONS

Academic libraries have existed since centuries to serve educational community with the right kind of knowledge, no matter how different they are in nature, range and scale of their activities. The primary objective of library is to satisfy the information demands of its users and this can be possible only through adequate collection. Traditionally, the library housed printed materials, but today the emergence of technological innovation has repositioned the frontiers of academic library resources, operations, and services as well as expectations of users' groups. The technologies are constantly improving and impacting the library users to a great extent. On other side, users are expecting fast and reliable access to authentic information on their preferred devices. However, to cope up with this scenario, libraries have to be dynamic in their efforts to redesign their resources and services as per their users' demand in order to survive in constantly changing environment.

The present study clearly reflects that though library users are speedily adapting the innovative technology trends and showing great interest and preference for e-resources and e-services for their academic work, they usually supplement with print resources. The study also shows that despite various improvements in e-resources and e-services, IIM users' expect more innovative changes in existing resources and services. Therefore, authorities of IIM library, Lucknow have to put in more efforts to improve / redesign their resources,

services and infrastructure regularly to meet the changing demands of users through continuous monitoring of changing perception and preference of users from time to time. The monitoring or evaluation of users' satisfaction is a significant determinant of library performance in terms of quality resources and services to ascertain whether library needs improvement.

REFERENCES

1 ABUKARI (Z) (2019). User satisfaction of resources and services of libraries: A case study of the Narh-Bita College, Tema, Ghana. *Library Philosophy and Practice*. *9*: 1-18. https://digitalcommons.unl.edu/libphilprac/2743

2 ADETAYO (A J) and ILEMOBOLA (W O) (2021). Librarians' generation and social media adoption in selected academic libraries in Southwestern Nigeria. *Library Philosophy and Practice*. 1-22. https://digitalcommons.unl.edu/libphilprac/4984

3 AMEEN (K) (2019). Graduate researchers' perceptions and expectations: An exploratory study about reference and information services. *Reference Services Review*. 48(2): 227-242. https://doi.org/10.1108/RSR-02-2019-0009

4 ARTHUR (M A) and JACKSON (M L) (2020). Notes on operations redesigning technical services for the twenty-first century: A case study from the University of Alabama Libraries. *Library Resources & Technical Services*. 64 (13): 123-130. https://doi.org/10.5860/lrts.64n3.120-130

5 ARUMURU (J), BALASUBRAMANI (R) and PRATHEEPAN (T) (2019). User's satisfaction with library resources and services in polytechnic college libraries in Coimbatore District. *Library Philosophy and Practice.* https://digitalcommons.unl.edu/libphilprac/2580.

6 BHARDWAJ (T) and SHARMA (S) (2022). Use of electronic information resources in libraries. *Research and Review: Journal of Social Science.* 8 (1). DOI: 10:4172/J Social Science 8.2.003

7 BI (S), WANG (C), ZHANG (J), HUANG (W), WU (B), GONG (Y) AND NI (W) (2022). A survey on artificial intelligence aided internet-of-things technologies in emerging smart libraries. *Sensors*. *22* (8). https://doi.org/10.3390/s22082991

8 BURHANSAP (PA), BATCHA (M S) and AHMAD (M) (2021). Investigating awareness and usage of electronic resources by the library users of selected colleges of Solapur University. https://digitalcommons.unl.edu/libphilprac/4309

9 CHISITA (CT), CHIPARAUSHA (B), TSABETSE (V), OLUGBARA (CT) and LETSEKA (M) (2022). Remaking academic library services in Zimbabwe in the wake of Covid-19 pandemic. *The Journal of Academic Librarianship*. 48 (3): 102521. https://doi.org/10.1016/j.acalib.2022.102521

10   COX (A) (2022). Factors shaping future use and design of academic library space. *New Review of Academic Librarianship*. 1-18. https://doi.org/10.1080/13614533.2022.2039244

11   DECKER (E N) (2021). Reaching academic library users during the COVID-19 pandemic: New and adapted approaches in access services. *Journal of Access Services*. 18 (2): 77-90. https://doi.org/10.1080/15367967.2021.1900740

12   DIWEDI (S K) and VERMA(S) (2022). Use of electronic resources by users of the Gautam Buddha Central Library at the Bbau, Lucknow, Uttar Pradesh: A study. *Library Philosophy and Practice*. 1-14. https://digitalcommons.unl.edu/libphilprac/6968

13   DOBREVA (M) and ANGHELESCU (H) (2022). Libraries and COVID-19: Opportunities for innovation. *IFLA Journal*. *48 (*1): 3-8. DOI: 10.1177/03400352221077748

14   EKE (N O) and SALIHU (I A) (2021). Design and implementation of a mobile library management system for improving service delivery. 7 (4): 3001-3010. DOI:10.22178/pos.69-7

15   FASAE (J K), ADEKOYA (C O) and ADEGBILERO-IWARI (I) (2021). Academic libraries' response to the COVID-19 pandemic in Nigeria. *Library Hi Tech*. 39 (3): 696-710. https://doi.org/10.1108/LHT-07-2020-0166

16   FU (Y), LOMAS (E), INSKIP (C) and BUNN (J) (2022). Understanding international users' library experience in the Digital Age: Joining the behavioral and experiential aspect. *Journal of Documentation*. https://doi.org/10.1108/JD-02-2022-0035

17   GOND (S), MALIK (F A) and USHA (2019). User awareness and perception towards e-resources of Gautam Buddha Central Library BBAU Lucknow: A study. *International Journal of Research in Engineering IT and Social Sciences*. 9 (1): 166-172.

18   GROOTE (D) and SCOULAS (J M) (2021). Impact of Covid-19 on the use of the academic library. *Reference Services Review*. 49 (3/4): 281-301. https://doi.org/10.1108/rsr-07-2021-0043

19   GUNASEKERA (C), ALAHAKOON (C) and DISSANAYAKE (H) (2021). E-resource usage of undergraduate students at University of Peradeniya: A user survey. *Sri Lanka Library Review*. *35* (2): 1-28. http://doi.org/10.4038/sllr.v35i2.45

20   GUO (Y), YANG (Z), LIU (Y Q), BIELEFIELD (A) and THARP (G) (2021). The provision of patron services in Chinese academic libraries responding to the COVID-19 pandemic. *Library Hi Tech*. 39 (2): 533-548. https://doi.org/10.1108/LHT-04-2020-0098

21   HINDAGOLLA (M) (2021). Exploring undergraduates' satisfaction with library resources and services: A case study of the Science Library University

of Peradeniya, Sri Lanka. *Journal of the University Librarians Association of Sri Lanka*. *24* (2): 1-26. DOI: http://doi.org/10.4038/jula.v24i2.8045

22 IDIEGBEYAN (J), IFIJEH(G), AREGBESOLA (A), OWOLABI (S) and TOLUWANI (E) (2019). E resources vs. prints usages and preferences by undergraduates in a Private University Nigeria. *DESIDOC Journal of Library and Information Technology*. *39* (2): 125-130. DOI: 10.14429/djlit.39.2.13885

23 IPPOLITI (C), KIERSTEN (M) and MAHMOOD (K) (2021). Make labs not war: Rethinking library creative technology services through a critical making lens. *College and Undergraduate Libraries*. 27 (2): 354-368. https://doi.org/10.1080/10691316.2021.1908199

24 IZUAGBE (R) (2021). Retooling the concept of information service provision: Imperatives for libraries in developing countries in times of pandemic. *A paper presented at virtual conference of the west and African Research educational network (WACREN)* 15-19 March, 2021.

25 JBEEN (A), REHMAN (S) and MAHMOOD (K) (2022). Awareness use and attitudes of students towards e-books: differences based on gender discipline and degree level. *Global Knowledge Memory and Communication*. 71 (6/7): 449-467. https://doi.org/10.1108/GKMC-12-2020-0193

26 KUMAR (R) and GUPTA (D K) (2022). Re-structuring library resources and services in IIT Delhi library: Analytical study from users' perspective *Collection and Curation*. 41 (1): 9-16. https://doi.org/10.1108/CC-02-2021-0006

27 LUBANGA (S) and MUMBA (J) (2021). Research and development creativity and innovation in academic libraries in Malawi: A way to rethink library development in the 21st Century", *SSRN Electronic Journal*. DOI: 10.2139/ssrn.3867430

28 MAGETO (T) (2021). Design and development of E-Library system: Covid-19 pandemic challenges. *Journal of Computer Sciences and Applications*. 9 (1): 1-15. DOI:10.12691/jcsa-9-1-1

29 MEDAWAR (K) and TABET (M) (2020). Library collections and services during Covid-19: Qatar National Library experience. *Alexandria*: *The Journal of National and International Library and Information Issue*. 30 (2/3): 178-190. DOI: 10.1177/0955749020986377

30 MERANDE (J), MWAI (N) and OGALO (J) (2021). Use of electronic resources by postgraduate users in Kenyan Selected Academic Libraries. *Journal of Information Sciences and Computing Technologies*. 10 (10): 1-12. http://scitecresearch.com/journals/index.php/jisct/article/view/2055

31   MONDAL (H K) and BHATT (R K) (2022). Use of e-resources by research scholars and postgraduate students of University of Dhaka, Bangladesh: A study. *Library Herald*. 60(3): 138-155.

32   MUSANGI (P S) (2019). Assessment of reengineered library services and spaces for improved user experience in universities in Kenya. *Journal of Arts and Humanities*. 8 (4): 19-29. DOI: http://dx.doi.org/10.18533/ journal.v8i4.1622

33   NYAKWEBA (I), BUKIRWA (J M), SENDIKADIWA (E) and RATANYA (F C) (2022). Users' needs and expectations on information services provided in libraries: Case of four public university libraries from the Western Region of Kenya. *Library Management*. 43 (1/2): 1-14. https://doi.org/10.1108/ LM-12-2020-0178

34   OLUBIYO (P O) (2022). Capacity Building for Sustainable Digital Information Services in 21st Century Administration of Academic Libraries in Nigeria. *Library Philosophy and Practice*. 1-15. https://digitalcommons.unl.edu/ libphilprac/6745

35   PENG (L), WEI (W), FAN (W), JIN (S) and LIU (Y) (2022). Student experience and satisfaction in academic libraries: A Comparative study among three Universities in Wuhan. *Buildings*. 12 (5): 682. https://doi.org/ 10.3390/ buildings12050682

36   PUNEETH (B M) (2021). Awareness and Use of E-Resources by the Library Users in University of Agricultural Sciences GKVK Bangalore: A Case Study *International Journal of Library and Information Studies*. 11 (1): 2231-4911. Available at: https://www.researchgate.net/publication/362013472

37   RAFIQ (M), BATOOL (S H), ALI (A F) and ULLAH (M) (2021). University libraries response to Covid-19 pandemic: A developing country perspective. *The Journal of Academic Librarianship*. 47 (1): 102-280. https://doi.org/ 10.1016/j.acalib.2020.102280

38   RAFIQ (S) and WARRAICH (N F) (2019). Medical undergraduate students' perception towards the use and non-use of e-books: a case from Pakistan. *Collection and Curation*. 38 (2): 32-38. https://doi.org/10.1108/CC-08-2017-0040

39   SAMZUGI (A) (2019). User preference on use of print and Electronic Resources in Selected Universities in Tanzania: A survey *Library Philosophy and Practice*. https://digitalcommons.unl.edu/libphilprac/2811

40   RAJAN (S S), ESMAIL (M) and MUSTHAFAK (M) (2022). Repositioning academic libraries as a hub of technology enhanced learning space: Innovations and Challenge. *Library Philosophy and Practice*. 1-14. https:/ /digitalcommons.unl.edu/libphilprac/6694

41 TAMMARO (A M) (2021). The new normal: Public libraries in Italy post Covid-19 *International Information and Library Review*. *53* (1): 63-68. https://doi.org/10.1080/10572317.2020.1785172

42 UDEM (O K), IKENWE (J I) and UGWUAMOKE (E C) (2020). Undergraduates' perception of library service quality and value in the 21st-Century in Southeast Nigeria: A case study *Library Philosophy and Practice* https://digitalcommons.unl.edu/libphilprac/4501

43 YAMSON (G C), APPIAH (A B) and TSEGAH (M) (2018). Electronic vs. print resources: A survey of perception, usage and preferences among central university undergraduate students", *European Scientific Journal*. *14* (7): 291-304. DOI: 10.19044/esj.2018.v14n7p291

44 YU (F) and MANI (N) (2020). How American Academic Medical/Health Science Libraries responded to Covid-19 health crisis: An observational study. *Data and Information Management.* 4 (2): 200-208. DOI:10.2478/dim-2020-0013