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Summer 6-30-2021

Users' Perceptions about 21st Century University Libraries in the Federal Capital of Pakistan: Current Status and a Way Forward

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Rehman, Hafiz Abdur Mr. and Soroya, Muhammad Shahid Mr., "Users' Perceptions about 21st Century University Libraries in the Federal Capital of Pakistan: Current Status and a Way Forward" (2021). *Library Philosophy and Practice (e-journal)*. 5979.

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Users' Perceptions about 21st Century University Libraries in the Federal Capital of Pakistan: Current Status and a Way Forward

Abstract

Aim

The aim of this research is to investigate and explore the users' perception about the 21st century university libraries in the federal capital of Pakistan. The study examines the current status of available resources, services and facilities in the university libraries along with the incorporation of technological advances and level of satisfaction of library users regarding the available infrastructure.

Methods

Research methodology used in this study with a mixed method approach including the quantitative research method and qualitative research method. Questionnaire having the structure of open ended and closed ended question was used a data collection tool in quantitative research method while face to face interaction with the respondents through interviews was done in qualitative research method for the collection of data.

Results

The current measures being taken by library professionals are to encourage sustainable evolution, novel growth, user's satisfaction and to pave the way for making the 21st century academic libraries. The organizational learning traits, in academic libraries of federal capital, is gaining momentum which is a good indication towards adopting user-focused type of resources, new techniques, mechanisms, technologies and tools.

Apparently, in this research study, only the case of academic libraries in the federal capital of Pakistan was taken, but in the large scenario it also symbolizes the insight of other academic libraries of Pakistan and rest of the world as well for remodeling the traditional professional methodology to the 21st century vision of academic libraries.

Conclusions

This study concludes that, academic libraries, around the globe are adjusting and reshaping their resources, services, facilities and infrastructure in line with user requirements and their contemporary technologies. University libraries, in the federal capital of Pakistan, are at forefront to be shaped as the 21st century academic libraries of Pakistan.

Keywords: Users' Perceptions about 21st Century University Libraries, Academic Libraries in 21st Century, Academic Libraries in Pakistan, 21st Century Users and Academic Library

Introduction

The main and prime objective of the university library is to deliver access to a good number of updated resources, standard services and facilities under an encouraging reading environment for students, faculty and researchers. All libraries are in nonstop state-of-change and specifically academic libraries have to adapt to the fluctuating desires of their customers and to line-up with the ever-changing higher education paradigm. Today's academic libraries must have a wide diversity of spaces, demonstration or display areas and focused reading

rooms etc. that work for an individual, group study, and events as well. In response to the ever-changing user requirements and innovative technologies the university libraries, around the globe, are passing through a continuous transition period for satisfying its users. It is the time for the library experts to accurately assess and evaluate this jump of transformation happening within higher education for providing real-time support to the massively varying users. Due to the increasing usage of latest technologies in libraries, there is a great impact both on resources and services along with the changing role of library professionals (Jain and Mutula, 2008).

As the university's libraries are getting innovation globally and most of the users are aware of the latest facilities, resources and services. So, the users now expect more than before from their libraries and librarians. The latest academic libraries are now being planned or have lately been accomplished in many cities around the globe. Innovative technologies and variations in individual conduct modify the technique in which service design is approached in a developing atmosphere. It is needed to reconsider and reformat the entire vision of university libraries (Wood and Walther, 2000). In university, students direly need such a library where they could have sufficient space and the accurate conveniences to ensure the variety of things that a student wants. There are five important factors making the infrastructure of the university library that include; staff training, usage of information technology, resources (printed and electronic), learning spaces, services and equipment. These flexible areas need prime attention and importance for making a library innovative and attractive for users (Alharbi and Middleton, 2011).

Keeping in view the importance of libraries, the universities are increasing the size of library buildings. In this connection, the existing libraries in universities are being renovated, redesigned and enlarged successfully. Apart from that, the new buildings for libraries with latest learning spaces and layout plan are constructed for users (Yao et al., 2009). The transition of university libraries from the traditional set-up to the innovative is continued around the world. One example is of Tsinghua University Library in Beijing, China, has successfully completed its transition period from traditional to the modern (Min and Yee, 2010). Researchers also explore that in the developed countries, the university libraries have been aligning with patron's need by adopting latest technological trends and standard practices (Taha, 2012).

Review of Literature

University Libraries in Pakistan

It is mentioned that since 2009, the budget for the higher education in Pakistan is rigorously cut down. Because of these financial limitations the universities of Pakistan are badly affected with each passing year and thus, consequently, the university libraries are not capable enough to provide even the frequently-demanded resources and rest of the facilities to its users due to the escalating cost of the materials caused by the inflation rate (Khan and Bhatti, 2016). In Pakistan, it is a bit hard for university libraries to properly provide access to several types of information resources. So, it is important to pinpoint the challenges and opportunities faced by university libraries of Pakistan in the emerging situation. In fact, it seems a bit hard for the university libraries in the developing country like Pakistan to adopt the latest status, on the

other hand, the developed countries continuously modernizing their university libraries with the changing pace of sophisticated technology as and when change need (Ameen and Haider, 2007). Prior to the technological advancement, the traditional libraries were just like a store or more like a stockpile and there was no such importance for the users on their visit to the libraries as now. The users were expected to search for their needed materials by themselves. But for the last more than a decade, sophisticated devices of information technology and the availability of internet have developed as vital part of the libraries which has substantially affected library and made its services smarter, enhanced and quicker. The university libraries of Pakistan are lagging behind if compared with the innovate libraries of the developed countries in terms of ICT infrastructure, services, resources, standard practices and rest of the international norms and values (Amara and Mahmood, 2013). The post research revealed that, library professionals in the developed countries are well-trained and equipped with the information literacy skills enabling their users to guide them efficiently towards the resources. But in Pakistan the some of the academic libraries are lacking automation together with related IT skills and training on the part of staff.

University Libraries in user's perception

Nowadays it is necessary for university libraries to be ready for latest modifications, modernisms in their structure in order to meet the desired need of their users. In order to support the academic and research accomplishments of the universities in true sense, the aspiration for remodeling the services, atmosphere and conveniences in university libraries, as per the demand of users, is now a compulsion, or else, it might lose their identity in this fast track technology-based society.

It is also revealed that in this era of advanced technology the library professionals should be enough skillful and analytic to deal successfully with the varying scenes of information and information technology. They need a specific level of competency for handling multiple technologies, services and products which are being adopted in the current state of affairs in various academic libraries around the globe (Farooq et al., 2016).

In the current state of affairs, the old-fashioned services and function of university libraries is considerably improved because of the numerous information sources which ultimately increase the expectations of patrons. The patrons of university library today are willing to practice all types' of applications enabled by latest technologies and to make race in all service area, digital change, diverse design of material etc.

To survive in such an unpredictable situation the university libraries of Pakistan would probably need better understanding and approachability to cope with these confronting challenges. For lowering the gap between user's perceptions and expectations the quality of libraries' services, resources and facilities must be gauged through proper assessment.

For the provision of satisfactory resources and services the functions of today libraries should be user-oriented. In this respect, the library authority must identify various requirements, priorities and advices of its customer. All kinds of activities, programs, planning and initiatives, for present

or future, should be focused on users. The authorities of academic libraries in developed countries identified this truth and concentrated more dynamism on meeting user's demands.

In advanced countries, the academic libraries have progressed from the framework of inputs and outputs into result-based assessment of quality of services, but Pakistan, being a developing country, is lacking behind in this area. Several research studies revealed that in most libraries in Pakistan the services were not user-oriented but relatively based on collection.

It is a common concept that libraries all over the world including Pakistan are serving as an access centers for information retrieval and its services have grown from the days of closed piles, through shelf browsing, card catalogues, punch cards, and OPACS, to the broader idea of open access and institutional online research/research databases. This extraordinary resettlement has tried to encompass the changing contemporary needs of library users, together with ease of access, interaction prosperity, low interaction, and low cost as access is more important than ownership.

Currently there are 22 universities in the federal capital of Pakistan having libraries at their premises to meet the information needs of their users. i.e. students, faculty and researchers. Keeping the view the meager resources and financial constrains especially in the developing country like Pakistan it is very important to have an idea of the actual requirement of the users in term of library resources, services and facilities. It will ensure the best utilization of all the resources been provided by the university libraries and will avoid the wastage of money and resources.

The authenticity of this research study remains in its investigation regarding the resources, services and facilities provided by these university libraries at the premises of respective university from the perspective of library users. It will also identify the important issues having a direct impact on the effective management and operations of the university libraries. It will also be quite helpful to make sure the best utilization of the resources, services and facilities being provided by the respective library.

Similarly, the improvement and development in context of the library resources, services and facilities, in line with the demands and needs of the library users, was the main intention behind this research study. It will provide an opportunity to have an encouraging and desirable study environment and repositories of knowledge in the respective libraries operating in the universities of federal capital of Pakistan.

21st Century Academic Libraries and Impact of Information and Communication Technologies (ICTs)

A tremendous development and changes have been observed during the last decades in the information and communication technologies (ICTs). In this digital age of information, Technology is very important to compete with the educational needs of the students. Many of the previous researchers have investigated the impact of the technological incorporation in the libraries to enhance their capability (Laplante and Downie, 2011).

Higher education learning has increased the access to libraries due to the increase in the digital libraries around the world and has open access to the international research literature. Now a day, the priority of the library is to provide open access to the international journals having huge literature for the researchers (Barner, 2011), (Gupta and Jambhekar, 2009) ,(Bar-Ilan, 2008), (Gordon, 2009), (Garcia and Agustin, 2000).

We are passing through an age of information and technology where users are looking forward toward an academic library for the provision of dependable information. On the other hand, libraries are cutting down their physical existence due to the revolution being made by the digital technology. As a result libraries are facing different challenges to survive and are losing its dominance as the only and best source of information provision (Campbell, 2006).

Nowadays libraries are operating in a complex environment where the operations seem to be more diversified and would require specialized managerial skill and techniques for the effective and smooth administration and management of these libraries. On the other hand, the people who are lacking these skills are considering it a threat for their survivals. In this scenario, libraries should move forward and cope with new trends and technologies as an opportunity instead of relying on the conventional skills and avoiding pressure of technophobia (Kerry, 2008).

Libraries are making extensive use of ICT and web-based tools for the better partnership, time saving and repetition of efforts, speedy operations, making possible an access to information resources and provision of best information services. It is also being used effectively for the handling, manipulating and mining of information and knowledge.

The use of different Web 2.0 tools like a purpose-built management system for libraries, specialized databases, electronic mail, Web-based retrieval and online search engines, digital spaces, dedicated websites, social media pages, mobile applications, video conferencing are common nowadays (Hussain and Nazim, 2015).

The expansion and development in the combined affairs, such as to facilitate Interlibrary Loan, jointly making a union catalogue, encouraging collaboration-based library network and acquiring electronic licenses, all these initiatives develop the library services which support the library's perspective toward its members to serve them as much as possible and further to achieve its motive and mission (Al-Harrasi, 2012).

21st Century Academic Library Users

It is very important to understand the consumer-oriented growth tendencies in 21st centuries for the libraries. Researchers have investigated that the academic libraries are becoming complex institutes that provide several services to the students which are developed with the passage of time. Yet along the advancement, the fundamental investigation has been remaining same with the passage of time the delivery method of the services has been changes (Mapulanga, 2015) , (Klipfel 2014), (Jacobson, 2013).

The nature of library users in the 21st century is becoming a challenge for the libraries and library professional in respect of their demands and requirements, especially in the academic libraries. Library users are expecting for an easy, fast and uninterrupted access to the required information, desirable and conducive environment for working alone and collaborative learning areas for discussion with their colleagues, classmates in group as well (Seal, 2015).

The role of library and information science (LIS) profession has drastically changed in the twenty first century due to the present-day library users having a refined and complex nature. Library patrons are pushing forward the library professional to be more efficient and pro active in the provision of library services. On the other hand, implementation ICTs in the field of the LIS has left no option for the librarians to continue with the traditional skill but they are compelled to change the style of services delivery. Libraries are supposed to be a one stop window for all kind of information services required by the library users.(Ezeani, 2015).

Keeping in view the nature of 21st century library users, it is now becoming a foremost duty of the library manager to take care of all the aspects being involved in the satisfaction of library users. Library manager must be a part of planning and designing process where the requirements and needs of library patrons in terms of resources, services and facilities must be addressed well in time. This vision must be included in the design process of any project meant for the library users.(Makori, 2009).

Therefore, it is very important for the academic librarian to have a strong managerial skills and techniques for coping with intricacies of change, understanding of any prospective changes and to find out a way forward for making the best utilization of the available resources and energies.(Knight, 2017).

Research Gap

Several studies have been conducted in the domain of library sciences mainly focused on the service provision of libraries as well as the marketing of the library services (Mills et al. 2015), (Aharony, 2013), (Mathews and Craven, 2012), (Makin, 2006).

The use of technologies in the libraries has also been discussed in detail at different occasion which is no doubt quietly helpful in meeting the demand of the user in minimum possible time (Mapulanga, 2015) , (Klipfel 2014), (Jacobson, 2013).

Most of the authors have focused on the identification of the recent needs of the library system. It is evident from their future implication that it is significant to identify the need of the users to be implemented in the libraries to make them successful (Ezeani, 2015).

However, in the current scenario, a comprehensive study with special reference to Pakistan was direly needed to be conducted mainly focusing on the users' perception about the 21st century university libraries. This study is focused on the research gap which demonstrates that there is lack of research done regarding the user-oriented growing tendencies in the 21st-century university

libraries of Pakistan in respect of the provision of latest services, developing updated collection, usage of innovative technologies and constantly changing infrastructure.

Objectives

1. To find out the current status of resources, services and facilities of university libraries in the federal capital of Pakistan.
2. To explore the technological advancement implemented in the university libraries of federal capital of Pakistan.
3. To investigate the users satisfaction about the university libraries in the federal capital of Pakistan
4. To identify the user perception about the 21st century university libraries in term of resources, services and facilities in the capital of Pakistan.

Research Methodology

Research Methodology used in this study was a mixed method approach including the quantitative research method and qualitative research method. A “quantitative study analyses social facts with an objective reality apart from the beliefs of individuals whereas in qualitative study, reality is socially constructed through individual or collective definitions of the situation” (Firestone 1987). (Gorman and Clayton, 1997) also support this approach of mixed methodology for the precise and accurate results of any research study. The reason of encouragement for this mixed method approach or triangulation is the use of different mode of investigations.

Research Techniques

Questionnaire having the structure of open ended and closed ended questions was used a data collection tool in quantitative research method. It was a fast and simple way for the collection of data (Bell, 1999; Milny, 1999). However, face to face interaction with the respondents through interviews was done in qualitative research method for the collection of data. The data received from the respondents (MS and PhD students) through interviews supported and strengthened the data collected through questionnaires.

While interviews were conducted to get the qualitative data and information in more detail and depth about the specific problem. The data collected through the questionnaires was also strengthened and supported by the interviews conducted from different library users (MS and PhD) level for sharing their views and opinions about the problem which was quite helpful in generalization and creation of the categories and themes.

Questionnaire Survey

A survey was conducted for making sure; the current status of resources, services and facilities of universities libraries in the federal capital of Pakistan, to investigate the users satisfaction about the university libraries in the federal capital of Pakistan, to explore the technological advancement implemented in the university libraries of federal capital of Pakistan and to identify the user perception about the 21st century university libraries in term of resources, services and facilities in the capital of Pakistan.

The questionnaires were distributed personally in print form as well as the online survey was conducted for the collection of data. Both ways of communication were used to get the maximum possible responses from the participants as the whole country was passing through a COVID-19 Pandemic.

Pilot Study or pre-testing the questionnaire

In order to testify the actual program a pilot study is normally carried out where a group of small samples from the targeted population is selected. This small group namely pilot study group is provided with the draft questionnaire for getting their inputs and feedback regarding the research tool. Keeping in view the importance of the pilot study and its impact on the validation and effectiveness of the research tool the subject procedure was also carried out for this study/research before the presentation of the final questionnaire to the respondent. Students from different universities were selected as a pilot group. The outcome/results of the subject pilot group revealed that there were no confusion and ambiguity in the questions asked in the questionnaire. The questions were vibrant, accurate and easily understandable. However, the question having any ambiguity, impreciseness and unclarity were redesigned as per the requirement.

Reliability Statistics

Construct	Cronbach's Alpha
User's satisfaction on Library Collection	0.903
User's satisfaction on Library Equipment	0.923
User's satisfaction on Library Services	0.964
User's satisfaction on Library Facilities	0.964

Target Population and sampling strategy

In this research study the target audience was MS/PhD (Graduate) students studying in different universities of the federal capital of the Pakistan. The selection of Graduate students as compared to the undergraduate students was based on their use of library resources, services and facilities. A convenience sample of students have been taken for this study who were available at that time in major public and private sector universities of federal capital of Pakistan.

Interviews

Interviews of those students were conducted who were the regular user of the university library with a view to have a deep insight about the resources, services and facilities available and required. The interview method adopted for this research study was a semi structured interview which is generally recommended for getting the more precise, authentic and actual feedback and information from the participants (Scottish NHS, 2001). That is why the subject strategy was adopted for having in-depth knowledge and insight about the users' perception about the 21st Century University Library. The interviews were conducted face to face for obtaining the required data in a precise manner.

Analysis of Data

SPSS software was used for the analysis of data collected through questionnaire (Denscombe, 2007). While data collected through interviews and discussions was analyzed and grouped as per the theme for the better understanding of the results (Gillham, 2007).

Data Analysis and Results

Demographical details of the respondents

The first three questions were asked from the respondents about their demographical details. The complete details of the respondent's demographics are given in the Table 1. At first, looking at the demographics of the respondents from the gender point of view it is clearly evident that the ratio of the male respondents was more 149 (52.7%) than the females 133 (47%). While students having MS/MPhil qualification 239 (84.5%) were more than of the PhD 43 (15.2%). Students from 'Public Sector' universities participated more 225 (79.5%) than the 'Private Sector' 57 (20.1%).

Table 1. Demographical details of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	149	52.7	52.8	52.8
	Female	133	47	47.2	100
Education	MS/ M. Phil	239	84.5	84.8	84.8
	PhD	43	15.2	15.2	100
Type of Institution	Public Sector	225	79.5	79.8	100
	Private Sector	57	20.1	20.2	20.2

Library Collections

The respondents were asked about the type of library holdings available in their libraries. They were given a checklist of 11 library collections items and were asked to check those items which are available in their libraries. Results given in Table 2 demonstrate that a majority of the students

271 (96.1%) have the facility of Printed Books, 234 (83%); Newspapers 234 (83%); Theses 230 (81.60%); Printed Magazines 218 (77.30%); Printed Journals 208 (73.80%); E-Books 206 (73%); E-Journals 196 (69.50%); E-Databases 175 (62.10%) in their libraries. However, scarcity of the following resources Audio Visual Materials 105 (37.20%); Maps 95 (33.70%); Microform 38 (13.50%) was identified by the students in their libraries.

Table 2. Available collections in libraries

	Yes		No	
	Frequency	Ratio	Frequency	Ratio
Printed Books	271	96.10%	11	3.90%
Newspapers	234	83.00%	48	17.00%
Theses	230	81.60%	52	18.40%
Printed Magazines	218	77.30%	64	22.70%
Printed Journals	208	73.80%	74	26.20%
E Books	206	73.00%	76	27.00%
E Journals	196	69.50%	86	30.50%
E Databases	175	62.10%	107	37.90%
Audio Visual Materials	105	37.20%	177	62.80%
Maps	95	33.70%	187	66.30%
Microform	38	13.50%	244	86.50%

Users Satisfaction with Library Collections

The students were asked to indicate their level of satisfaction with the available collections in their respective libraries. They were given a checklist of 11 items and were asked to rank their level of satisfaction on Likert scale ranging from 1. Strongly Disagree to 5. Strongly Agree. The result of the Table 3 show that a good range of the students are quite satisfied with the different type of available materials as the aggregate mean value of most of the given options is between the range of 3.00 to 4.00.

Table 3. Users Satisfaction with Library Collections

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean
	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	
Newspapers	17	6.00%	3	1.10%	54	19.10%	92	32.60%	116	41.10%	4.02

Theses	15	5.30 %	17	6.00 %	51	18.1 0%	96	34.00 %	103	36.50 %	3.90
Printed Magazines	14	5.00 %	14	5.00 %	53	18.8 0%	115	40.80 %	86	30.50 %	3.87
Printed Books	33	11.70 %	9	3.20 %	34	12.1 0%	101	35.80 %	105	37.20 %	3.84
E-Books	16	5.70 %	21	7.40 %	74	26.2 0%	94	33.30 %	77	27.30 %	3.69
E-Journals	17	6.00 %	27	9.60 %	69	24.5 0%	91	32.30 %	78	27.70 %	3.66
E-Databases	17	6.00 %	33	11.7 0%	64	22.7 0%	88	31.20 %	80	28.40 %	3.64
Printed Journals	32	11.30 %	23	8.20 %	65	23.0 0%	91	32.30 %	71	25.20 %	3.52
Audio Visual Materials	34	12.10 %	44	15.6 0%	85	30.1 0%	82	29.10 %	37	13.10 %	3.16
Maps	29	10.30 %	59	20.9 0%	77	27.3 0%	74	26.20 %	43	15.20 %	3.15
Microform											

Library Furniture

The respondents were asked about the type of library furniture available in their libraries. They were given a checklist of 13 items and were asked to check those items which are available in their libraries. Results given in the Table 4 demonstrate that a majority of the students indicated that have the following library furniture in their libraries including Book shelves, Computer tables, Computer chairs, Study cubicles, Study carrels, Easy setting (sofas). However, the students identified that following library furniture's are lacking in their respective libraries including Couches, Hexagon tables, Ottomans, Pigeon holes, Lockers.

Table 4. Available library furniture

	Yes		No	
	Frequency	Ratio	Frequency	Ratio
Study Table	275	97.5%	7	2.5%
Study Chair	268	95%	14	5.0%
Book shelves	263	93.3%	19	6.7%
Computer tables	250	88.7%	32	11.3%
Computer chairs	246	87.2%	36	12.8%
Study cubicles	179	63.5%	103	36.5%
Study carrels	173	61.3%	109	38.7%
Easy setting (sofas)	167	59.2%	115	40.8%

Couches	124	44.0%	158	56.0%
Hexagon tables	88	31.2%	194	68.8%
Ottomans	52	18.4%	230	81.6%
Pigeon holes	77	27.3%	205	72.7%
Lockers	29	10.3%	253	89.7%

Users Satisfaction with Library Furniture

The students were asked to indicate their level of satisfaction with the available furniture's in their respective libraries. They were given a checklist of 13 items and were asked to rank their level of satisfaction on a Likert scale ranging from 1. Strongly Disagree to 5. Strongly Agree. The result of the Table 3 show that a good range of the students are quite satisfied with the different type of available materials as the aggregate mean value of most of the given options is between the range of 3.00 to 4.00.

Table 5. Users Satisfaction with Library Furniture

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean
	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	
Study Tables	17	6.00%	5	1.80%	28	9.90%	86	30.50%	146	51.80%	4.20
Study Chairs	15	5.30%	16	5.70%	24	8.50%	97	34.40%	130	46.10%	4.10
Book Shelves	21	7.40%	8	2.80%	26	9.20%	93	33.00%	134	47.50%	4.10
Computer Tables	21	7.40%	15	5.30%	35	12.40%	83	29.40%	128	45.40%	4.00
Computer Chair	23	8.20%	17	6.00%	35	12.40%	86	30.50%	121	42.90%	3.94
Study Carrel	32	11.30%	14	5.00%	66	23.40%	77	27.30%	93	33.00%	3.66
Easy Setting (sofas)	36	12.80%	16	5.70%	53	18.80%	86	30.50%	91	32.30%	3.64
Study Cubicles	30	10.60%	33	11.70%	61	21.60%	79	28.00%	79	28.00%	3.51
Couches	59	20.90%	41	14.50%	64	22.70%	60	21.30%	58	20.60%	3.06
Hexagon Table	52	18.40%	42	14.90%	80	28.40%	64	22.70%	44	15.60%	3.02
Pigeon Holes	57	20.20%	43	15.20%	93	33.00%	60	21.30%	29	10.30%	2.86
Ottomans	60	21.30%	50	17.70%	103	36.50%	47	16.70%	22	7.80%	2.72
Lockers	80	28.40%	43	15.20%	80	28.40%	46	16.30%	33	11.70%	2.68

Library Equipment

The respondents were asked about the type of library equipments available in their libraries. They were given a checklist of 10 library equipment items and were asked to check those items which are available in their libraries. Results given in Table 6 demonstrate that a majority of the students do not have following library equipments in their libraries including Printers,

Photocopiers, Scanner, Software, Software, Fax, Telephone, and Television. While a small number of students indicated that have following library equipments available in tier libraries including Computers, Internet and Wi-Fi.

Table 6. Available library equipment

		Count	Ratio
Computers	No	24	8.5
	Yes	258	91.5
Internet	No	36	12.8
	Yes	246	87.2
Wi-Fi	No	125	44.3
	Yes	157	55.7
Printers	No	152	53.9
	Yes	130	46.1
Photocopiers	No	194	68.8
	Yes	88	31.2
Scanner	No	177	62.8
	Yes	105	37.2
Software	No	209	74.1
	Yes	73	25.9
Fax	No	236	83.7
	Yes	46	16.3
Telephone	No	226	80.1
	Yes	56	19.9
Television	No	230	81.6
	Yes	52	18.4

Users Satisfaction with Library Equipments

The students were asked to indicate their level of satisfaction with the available library equipment's in their respective libraries. They were given a checklist of 10 items and were asked to rank their level of satisfaction on a Likert scale ranging from 1. Strongly Disagree to 5. Strongly Agree. The result of the Table 7 shows that most of the students are quite unsatisfied with the different type of available equipment's as the aggregate mean value of most of the given options is between the ranges of 2.00 to 3.00.

Table 7. Users Satisfaction with Library Equipment's

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
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	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	Mean
Internet	32	11.30%	15	5.30%	31	11.00%	95	33.70%	109	38.70%	3.83
Computers	32	11.30%	18	6.40%	39	13.80%	75	26.60%	118	41.80%	3.81
Wi-Fi	34	12.10%	16	5.70%	40	14.20%	84	29.80%	108	38.30%	3.77
Software	60	21.30%	51	18.10%	47	16.70%	64	22.70%	60	21.30%	3.05
Scanner	71	25.20%	48	17.00%	47	16.70%	53	18.80%	63	22.30%	2.96
Printers	66	23.40%	49	17.40%	59	20.90%	62	22.00%	46	16.30%	2.9
Photocopier	73	25.90%	60	21.30%	48	17.00%	53	18.80%	48	17.00%	2.8
Telephone	78	27.70%	54	19.10%	67	23.80%	41	14.50%	42	14.90%	2.7
Fax	86	30.50%	74	26.20%	64	22.70%	35	12.40%	23	8.20%	2.41

Library Services

The respondents were asked about the different type of library services available in their libraries. They were given a checklist of 15 library services and were asked to check those services which are being offered in their libraries. Results given in Table 8 demonstrate that a majority of the students indicated that they are not availing most of the following library services in their libraries including Current Awareness Services, Electronic Document Delivery Service, Interlibrary Loan Service, VPN Service, Collection Development and Management Services, SDI Service, Personalized Services via Mobile App, Real Time chat Service etc. While a small number of students indicated that they are availing most of the following library services in their libraries including Information Services, Research Support Services, Reference Services, Bibliographic Services, IT Services, User Education and Electronic and Digital Services.

Table 8. Offered library services

	Yes		No	
	Count	Ratio	Count	Ratio
Information Services	250	88.70%	32	11.30%
Research Support Services	213	75.50%	69	24.50%
Reference Services	207	73.40%	75	26.60%
Bibliographic Services	198	70.20%	84	29.80%
IT Services	168	59.60%	114	40.40%
User Education	162	57.40%	120	42.60%
Electronic and Digital Services	153	54.30%	129	45.70%
Current Awareness Services	133	47.20%	149	52.80%
Electronic Document Delivery Service	132	46.80%	150	53.20%
Interlibrary Loan Service	108	38.30%	174	61.70%
VPN Service	97	34.40%	185	65.60%
Collection Development and Management Services	96	34.00%	186	66.00%
SDI Service	84	29.80%	198	70.20%

Personalized Services via Mobile App	82	29.10%	200	70.90%
Real Time chat Service	78	27.70%	204	72.30%

Users Satisfaction with Library Services

The students were asked to indicate their level of satisfaction with the available library services being offered in their respective libraries. They were given a checklist of 15 items and were asked to rank their level of satisfaction on a Likert scale ranging from 1. Strongly Disagree to 5. Strongly Agree. The result of the Table 9 shows that a good range of the students are quite satisfied with the different type of available library services as the aggregate mean value of most of the given options is more than 3.00.

Table 9. Users Satisfaction with Library Services

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean
	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	
Information Service	27	9.60%	12	4.30%	50	17.70%	113	40.10%	80	28.40%	3.73
Research Support	21	7.40%	28	9.90%	51	18.10%	102	36.20%	80	28.40%	3.68
Reference Service	29	10.30%	22	7.80%	60	21.30%	91	32.30%	80	28.40%	3.61
Electronic and Digital	32	11.30%	30	10.60%	51	18.10%	90	31.90%	79	28.00%	3.55
Bibliographic Service	28	9.90%	29	10.30%	62	22.00%	100	35.50%	63	22.30%	3.50
Information Technology	36	12.80%	32	11.30%	68	24.10%	79	28.00%	67	23.80%	3.39
User Education	34	12.10%	33	11.70%	69	24.50%	86	30.50%	60	21.30%	3.37
Current Awareness	33	11.70%	39	13.80%	74	26.20%	63	22.30%	73	25.90%	3.37
VPN Service to remotely Access the Digital Resources	34	12.10%	48	17.00%	68	24.10%	66	23.40%	66	23.40%	3.29
Collection Development and Management	33	11.70%	42	14.90%	86	30.50%	66	23.40%	55	19.50%	3.24
Electronic Document Delivery Service	36	12.80%	44	15.60%	75	26.60%	72	25.50%	55	19.50%	3.23
Inter library Loan Service	41	14.50%	59	20.90%	81	28.70%	50	17.70%	51	18.10%	3.04
Personalized via Mobile App	41	14.50%	59	20.90%	83	29.40%	56	19.90%	43	15.20%	3.00
SDI Service	42	14.90%	55	19.50%	84	29.80%	66	23.40%	35	12.40%	2.99
Real Time chat Service	53	18.80%	65	23.00%	81	28.70%	55	19.50%	28	9.90%	2.79

Library Facilities

The respondents were asked about the main part of any library infrastructure having a direct impact on meeting the needs of library users i.e. Library facilities. They were given a checklist of 21 basic library facilities keeping in view the 21st Century University Libraries and were asked to check those facilities which are being available in their libraries. Results given in Table 10 demonstrate that a majority of the students indicated that they are not availing most of the following library facilities in their libraries including self check in/check out, Drop Box, Study carrels, maker spaces, Video conferencing, space for users with special needs, Auditorium, Tutoring Centre, Writing Centre, Archives, Bookstore, Coffee shop, photocopy center, Art Gallery or exhibition space and lockers for users. While a small number of students indicated that they are availing some of the traditional facilities in their libraries including computer workstation, internet, quiet study areas, group study room and conference room.

Table 10. Library Facilities

	Yes		No	
	Count	Row N %	Count	Row N %
Computer workstations	210	74.7%	71	25.3%
Self-Check In/Check Out	72	25.6%	209	74.4%
Drop Box Facility	68	24.2%	213	75.8%
Internet/Wi-Fi	234	83.3%	47	16.7%
Research Cubical	131	46.6%	150	53.4%
Study carrels	0	0.0%	281	100.0%
Quiet Study Areas	174	61.9%	107	38.1%
Makerspaces	82	29.2%	199	70.8%
Group Study Rooms	195	69.4%	86	30.6%
Conference/meeting rooms	179	63.7%	102	36.3%
Video Conferencing Room	125	44.5%	156	55.5%
Space for users with special needs	82	29.2%	199	70.8%
Auditorium	110	39.1%	171	60.9%
Tutoring center	85	30.2%	196	69.8%
Writing center	82	29.2%	199	70.8%
Archives	88	31.3%	193	68.7%
Bookstore	132	47.0%	149	53.0%
Coffee Shop	96	34.2%	185	65.8%
Photocopy center	100	35.6%	181	64.4%
Art gallery or exhibition space	80	28.5%	201	71.5%
Lockers for Users	56	19.9%	225	80.1%

Users Satisfaction with Library Facilities

Keeping in view the nature of study the students were asked to indicate their level of satisfaction with the available library facilities being offered in their respective libraries. They were given a checklist of 21 items and were asked to rank their level of satisfaction on a Likert scale ranging from 1. Strongly Disagree to 5. Strongly Agree. The result of the Table 11 shows that half of the population are quite satisfied with the different type of available library facilities as the aggregate mean value of most of the given options is more than 3.00 while half of the students have shown

their concern due to the non availability of facilities as per the standard of modern academic library.

Table 11. Users Satisfaction with Library Services

	Strongly Disagree		Disagree		Neutral		Agree	Strongly Agree			Mean
	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	
Computer workstations	32	11.30%	25	8.90%	43	15.20%	101	35.80%	81	28.70%	3.62
Self-Check In/Check Out	34	12.10%	44	15.60%	57	20.20%	97	34.40%	50	17.70%	3.3
Drop Box Facility	39	13.80%	69	24.50%	64	22.70%	68	24.10%	42	14.90%	3.02
Internet/Wi-Fi	25	8.90%	28	9.90%	36	12.80%	109	38.70%	84	29.80%	3.71
Research Cubical	28	9.90%	37	13.10%	56	19.90%	91	32.30%	70	24.80%	3.49
Study carrels	30	10.60%	30	10.60%	61	21.60%	95	33.70%	66	23.40%	3.49
Quiet Study Areas	26	9.20%	32	11.30%	58	20.60%	87	30.90%	79	28.00%	3.57
Makerspaces	49	17.40%	57	20.20%	85	30.10%	56	19.90%	35	12.40%	2.9
Group Study Rooms	32	11.30%	39	13.80%	44	15.60%	97	34.40%	70	24.80%	3.48
Conference/meeting rooms	26	9.20%	45	16.00%	43	15.20%	100	35.50%	68	24.10%	3.49

Video Conferencing Room	36	12.80%	54	19.10%	55	19.50%	83	29.40%	54	19.10%	3.23
Space for users with special needs	41	14.50%	56	19.90%	71	25.20%	81	28.70%	33	11.70%	3.03
Auditorium	41	14.50%	70	24.80%	57	20.20%	72	25.50%	42	14.90%	3.01
Tutoring center	46	16.30%	82	29.10%	66	23.40%	51	18.10%	37	13.10%	2.83
Writing center	48	17.00%	76	27.00%	71	25.20%	48	17.00%	39	13.80%	2.84
Archives	43	15.20%	65	23.00%	79	28.00%	51	18.10%	44	15.60%	2.96
Bookstore	45	16.00%	70	24.80%	64	22.70%	57	20.20%	46	16.30%	2.96
Coffee Shop	55	19.50%	73	25.90%	59	20.90%	58	20.60%	37	13.10%	2.82
Photocopy center	52	18.40%	78	27.70%	58	20.60%	50	17.70%	44	15.60%	2.84
Art gallery or exhibition space	61	21.60%	70	24.80%	66	23.40%	52	18.40%	33	11.70%	2.74
Lockers for Users	79	28.00%	67	23.80%	72	25.50%	35	12.40%	29	10.30%	2.53
Air Conditioning	44	15.60%	29	10.30%	40	14.20%	69	24.50%	100	35.50%	3.54

Qualitative Data Analysis

Library Collection

The respondents were asked about the type of library holdings available in their libraries. They were given a checklist of 11 library collections items and were asked to mention all those items those items which are available in their libraries. As demonstrated in the quantitative data analysis the results were almost the same during the discussion with different students at the time of interview.

However, there were few areas which were pointed out during the discussion and need to address by the libraries especially who are dealing with the classified researcher. For Example: Books in printed form are available but are outdated and new editions are utmost required especially in the field of Information and Communication Technologies, Management Sciences and International Relation Etc. Same is the case with printed Journals which good number of libraries are lacking. Researchers have identified the Journals as an authentic and updated source of information and should be available for the library users especially for those who are actively involved in the research productivity.

Another major issue was raised during the discussion i.e. availability of information material in an electronic form. Initially HEC launched National Digital Library Programme providing an access to the leading databases comprising books, magazines, transactions and journals in various disciplines which was a great source of information available to the researcher across the country. The subject program had a great impact on the research productivity of the country. Unfortunately, since last year HEC has started cost sharing program of the subject facility where the subscribing institutions are supposed to pay a part of the subscription charges from their own budget. Due to financial constraints, especially in this COVID-19 Pandemic, many of the universities cannot afford to bear the cost. Users are worried about the situation as this process will proceed to cut off this crucial and important service for the research students.

Level of Satisfaction and Perception in context of 21st University Library:

Generally, the participants showed their satisfaction over the library collections available in their respective libraries. However, 21st Century University Libraries must be equipped with latest collection of relevant books both in printed form and electronic form covering all the major subject areas as mentioned by the participants specifically. Being authentic and updated sources of information, an access to leading Journals databases and publishers must be available to the researcher 24/7 especially in the current situation of COVID-19 Pandemic where online mode of learning and teaching is being preferred over the physical presence of students and teachers. It was also emphasized that Online Repositories and theses databases are the most important and integral part of any modern library providing services to their users and it must be available.

Library Furniture

When the participants were asked about the availability of library furniture during an interview. Majority of the respondents were agreed on the availability of basic furniture like Study table, study chairs, computer table and computer chairs. However, furniture like study carrells, Study Cubical, Easy Seating and other necessary items especially required for the researchers were missing in majority of the libraries.

Level of Satisfaction and Perception about the 21st Century University Library:

During an interview the respondent shown their concern about the availability of specific furniture when they were asked the question in context of 21st century university libraries. The participants pointed out that normally we spend more time as compared to a general library user, so we need separate spaces with a specific furniture like easy sofa seating and comfort zones. Study Carrells and Study Cubicles were also mentioned to be provided in the library for carrying out the research work with more concentration and attention. Students' lockers were also pointed out by different participants for mental satisfaction and peace of mind regarding their personal belongings at the time they used the library spaces.

Library Equipments

Due to the digital era, it was quite important and interesting area for the participants when they were asked about the availability of library equipments. Generally, the response was good in context of the basic equipments like computer, internet, Wi-Fi, Software in majority of the libraries while few of the libraries were missing even the basic equipment's. Availability of Scanning, Printing, Photocopying facilities was a question mark for majority of the libraries.

Level of Satisfaction and Perception in context of 21st Century University Library

During the discussion it was pointed out by various participants that the equipments available in their respective libraries are not upto the mark. They were not so much satisfied with the available set up and were looking forward for the upgraded and latest equipments. For example, Internet and Wi-Fi connectivity should be available 24/7 with high uninterrupted downloading speed. Computers available must be replaced with the new technology. Some of them also shown their interest in the availability of laptops. Software available are almost unlicensed which sometime create a lot of problems while handling with the data by the researcher. Specialized subject software need to be installed on the computers available in the library.

It was also discussed in detail that the following facilities are very crucial and important for the researcher when we are talking about the 21st Century University Libraries. i.e. Scanning, Printing, Photocopying facilities. Few of the students clearly mentioned that a researcher cannot survive without the above-mentioned facilities.

Library Services

Services are considered to be the main area of any academic library. It has a direct impact over the satisfaction of library users. The participants in this specific study were enquired about the services being provided by their library. It was told that though their libraries are providing services in different areas like Information Services, Reference Services, Research Support Services, User Education, Collection Development etc. However, some of libraries were lacking these services. The latest addition to the library services including Electronic Document Delivery, Inter Library Loan, Mobile Application Services, SDI Services and Real Time Chat Services are still a nightmare to majority of the university libraries.

Level of Satisfaction and Perception in context of 21st Century University Library:

It was shared with the interviewer that the services already provided by the university libraries need to be more productive. Special emphasis must be given to the online and digital services as it remains the only option to entertain the students even in the remote areas particularly when we are passing through the situations like current COVID-19 Pandemic. 21st Century university libraries are converting to a paperless library so our libraries should also adopt the changes in the area of services keeping in view the user needs and requirement.

Library Facilities

During the discussion over the availability of library facilities with the participants in their respective libraries it was revealed that there are some libraries providing the basic facilities like computer workstation, Internet, Study Carrells, Research cubical, Group Study Room, Self-Check In/Out, Drop Box, Conference Room, Video Conference Room and Auditorium etc to their users. However, room for improvement and development is still there.

Participants from the Engineering Department showed their concern about the availability of makerspaces while Participants from Social Sciences and Humanities Department were looking for the Tutoring and Writing Centre. Architecture Students wishes for the availability of Art Gallery and Exhibition Area.

In addition to the above reservations, Bookstore, Coffee Shop, Photocopy Centre and Lockers for users were commonly asked by the participants.

Level of Satisfaction and Perception in context of 21st Century University Library

The respondents were asked about their level of satisfaction regarding the availability of library facilities keeping in view the 21st century university libraries. They repeated the observations mentioned earlier and asked for the better facilities to meet the requirement library users. Half of the respondents were little bit satisfied conditionally while rest of the respondents shown their concerns where the facilities were lacking.

Results and Discussion

Current status of resources, services and facilities of universities libraries in the federal capital of Pakistan

There are five important factors making the infrastructure of the university library that include staff training, usage of information technology, resources (printed and electronic), learning spaces, services and equipment. These flexible areas need prime attention and importance for making a library innovative and attractive for users (Alharbi and Middleton, 2011).

The aim of this research study was to investigate the current status of available resources, services and facilities in the university's libraries of the federal capital of Pakistan. This study explored the three main areas i.e. resources, services and facilities of the university libraries operating in the federal capital of Pakistan.

As evident from the previous chapter though majority of the libraries are taking care of their library users with the provision of basic resources, services and facilities but still there is a need of improvement and development in context of 21st Century University Libraries.

The findings and results of this specific question can be categorized as follows.

Library Collection

The main and prime objective of the university library is to deliver access to a good number of updated resources under an encouraging reading environment for students, faculty and researchers. It helps in promoting research and inspiring learning and teaching among students and teachers.

In a nutshell, the university libraries have access to a good and great number of resources both printed and electronic. It keeps itself shoulder by shoulder with the growing technology, standard practices and international norms and values. It provides a conducive environment for academia and research as well (Li et al., 2009).

There are more or less than seventy different types of arithmetical gauges and indicators showing the importance and impact of various resources on academic research productivity. The analysis made gives a logical insight into the relation between resources, services and its general impact on the library users and research (Noh, 2012)

In this specific study it is revealed that majorities of the libraries are providing the basic resources, both in printed and electronic form, to their library users as per their environment and culture. Some of the library users were also satisfied with their available library holdings.

However, there were few areas which were pointed out during the discussion and need to address by the libraries especially who are dealing with the classified researcher. For Example: Books in printed form are available but are outdated and new editions are utmost required especially in the field of Information and Communication Technologies, Management Sciences and International Relation Etc. Same is the case with printed Journals which good number of libraries are lacking. Researchers have identified the Journals as an authentic and updated source of information and should be available for the library users especially for those who are actively involved in the research productivity.

Another major issue was raised during the discussion i.e. availability of information material in an electronic form. Initially HEC launched National Digital Library Programme providing an access to the leading databases comprising books, magazines, transactions and journals in various disciplines which was a great source of information available to the researcher across the country. The subject program had a great impact on the research productivity of the country.

Unfortunately, since last year HEC has started cost sharing program of the subject facility where the subscribing institutions are supposed to pay a part of the subscription charges from their own budget. Due to financial constraints, especially in this COVID-19 Pandemic, many of the universities cannot afford to bear the cost. Researcher are worried about the situation as this process will proceed to cut off this crucial and important service for the research students.

It is mentioned that since 2009, the budget for the higher education in Pakistan is rigorously cut down. Because of these financial limitations the universities of Pakistan are badly affected with each passing year and thus, consequently, the university libraries are not capable enough to provide even the frequently-demanded resources and rest of the facilities to its users due to the escalating cost of the materials caused by the inflation rate (Khan and Bhatti, 2016).

Access to information resources must be provided to each and every individual. But in Pakistan, it is a bit hard for university libraries to properly provide access to several types of information resources.

Library Furniture

All libraries are in nonstop state-of-change and specifically academic libraries must adapt to the fluctuating desires of their customers and to line-up with the ever-changing higher education paradigm. Today's academic libraries must have a wide diversity of spaces, demonstration or display areas and focused reading rooms etc. that work for an individual, group study, and events as well.

In university, students direly need such a library where they could have sufficient space and the accurate conveniences to ensure the variety of things that a student wants. It can be a quick conversation with a friend, finishing an assigned task to a group or a long essay-writing session. They would like to use resources, avail services and interact with a trained, helpful and friendly staff.

In fact, the library is the students' office and they strongly believe that, comfort, facilities and components of a modern office should be available in university library. The library must have all those needed materials whatever its user thinks about. The staff should always say "YES" and never "NO" to its users.

Recent research expansion in Australia has offered clear guidelines and standard practices for the universities to redefine its role according to the current circumstances and keep abreast of the changes in order to play its part in the national development of the country (Mamtora, 2013).

The results of this specific study regarding the availability of library furniture shows that respondents were agreed on the availability of basic furniture like Study table, study chairs, computer table and computer chairs. However, furniture like study carrells, Study Cubical, Easy Seating and other necessary items especially required for the researchers were missing in majority of the libraries.

The results also shown the concerns of different library users about the availability of specific furniture when they were asked the question in context of 21st century university libraries.

The participants pointed out that normally we spend more time as compared to a general library user, so we need separate spaces with a specific furniture like easy sofa seating and comfort zones. Study Carrells and Study Cubicles were also mentioned to be provided in the library for carrying out the research work with more concentration and attention.

Student's lockers were also pointed out by different participants for mental satisfaction and peace of mind regarding their personal belongings at the time they used the library spaces.

Library Equipments

Due to the digital era, it was quite important and interesting area for the participants when they were asked about the availability of library equipments. Generally, the response was good in context of the basic equipments like computer, internet, Wi-Fi, Software in majority of the libraries while few of the libraries were missing even the basic equipments. Availability of Scanning, Printing, Photocopying facilities was a question mark for majority of the libraries.

During the discussion it was pointed out by various participants that the equipments available in their respective libraries are not up to the mark. They were not so much satisfied with the available set up and were looking forward for the upgraded and latest equipments. For example, Internet and Wi-Fi connectivity should be available 24/7 with high uninterrupted downloading speed.

Computers available must be replaced with the new technology. Some of them also shown their interest in the availability of laptops. Software available are almost unlicensed which sometime create a lot of problems while handling with the data by the researcher. Specialized subject software need to be installed on the computers available in the library.

It was also discussed in detail that the following facilities are very crucial and important for the researcher when we are talking about the 21st Century University Libraries. i.e. Scanning, Printing, Photocopying facilities. Few of the students clearly mentioned that a researcher cannot survive without the above-mentioned facilities.

Library Services

It is also agreed that at the current stage of modernizations, the survival of academic libraries is connected with miscellaneous digital advancement. This revolution has significantly shaken the main structure of both libraries and librarians' role. The literature shows that the latest inventions have greatly affected the collection management and services of academic libraries (Khan and Masrek, 2017).

The old-fashioned responsibilities of librarianship like; reference services, collection development and technical processing of library materials etc have advanced to such an extent that these are absolutely depend upon information technology tools.

Now, librarians encourage online cataloguing, procurement of books, digital references, website for library marketing, usage of citation software, library management software and above all showcasing the research productivity of an institution by developing institutional repository.

It is revealed that in most of today's university libraries there is research support center or research support services which specifically focus on providing latest resources to the

researchers on their current area of research. This time-saving approaches encourage the researchers to boost productivity (Si et al., 2019).

Services are considered to be the main area of any academic library. It has a direct impact over the satisfaction of library users. The participants in this specific study were enquired about the services being provided by their library.

It was told that though their libraries are providing services in different areas like Information Services, Reference Services, Research Support Services, User Education, Collection Development etc. However, some of libraries were lacking these services.

The latest addition to the library services including Electronic Document Delivery, Inter Library Loan, Mobile Application Services, SDI Services and Real Time Chat Services are still a nightmare to majority of the university libraries.

It was shared with the interviewer that the services already provided by the university libraries need to be more productive. Special emphasis must be given to the online and digital services as it remains the only option to entertain the students even in the remote areas particularly when we are passing through the situations like current COVID-19 Pandemic.

21st Century university libraries are converting to a paperless library so our libraries should also adopt the changes in the area of services keeping in view the user needs and requirement.

Library Facilities

In 1931, S.R. Ranganathan, a well-known mathematician and librarian from India, introduced five famous laws in Library Science that is called the five laws of Ranganathan. The fifth law says “Library is a growing organism”, it focuses significantly for making internal changes, as and when required, in order to bring the facilities and resources of a library in line with the external changing environments

In university, students direly need such a library where they could have sufficient space and the accurate conveniences to ensure the variety of things that a student wants. It can be a quick conversation with a friend, finishing an assigned task to a group or a long essay-writing session. They would like to use resources, avail services and interact with a trained, helpful and friendly staff.

In fact, the library is the students’ office and they strongly believe that, comfort, facilities and components of a modern office should be available in university library. The library must have all those needed materials whatever its user thinks about. The staff should always say “YES” and never “NO” to its users.

During the discussion over the availability of library facilities with the participants in their respective libraries it was revealed that there are some libraries providing the basic facilities like computer workstation, Internet, Study Carrells, Research cubical, Group Study Room, Self-Check In/Out, Drop Box, Conference Room, Video Conference Room and Auditorium etc to their users. However, room for improvement and development is still there.

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for the Tutoring and Writing Centre. Architecture Students wishes for the availability of Art Gallery and Exhibition Area.

In addition to the above reservations, Bookstore, Coffee Shop, Photocopy Centre and Lockers for users were commonly asked by the participants.

The respondents were asked about their level of satisfaction regarding the availability of library facilities keeping in view the 21st century university libraries. They repeated the observations mentioned earlier and asked for the better facilities to meet the requirement library users. Half of the respondents were little bit satisfied conditionally while rest of the respondents shown their concerns where the facilities were lacking.

Technological advancement implemented in the university libraries of federal capital of Pakistan.

Prior to the technological advancement, the traditional libraries were just like a store or more like a stockpile and there was no such importance for the users on their visit to the libraries as now. The users were expected to search for their needed materials by themselves. But for the last more than a decade, sophisticated devices of information technology and the availability of internet have developed as vital part of the libraries which has substantially affected library and made its services smarter, enhanced and quicker.

In fact, it seems a bit hard for the university libraries in the developing country like Pakistan to adopt the latest status, on the other hand, the developed countries continuously modernizing their university libraries with the changing pace of sophisticated technology as and when change need (Ameen and Haider, 2007).

Researchers showed their concern that the step of this renovation is fluctuating in various parts of the world. It is relatively very sluggish in developing countries like Pakistan which is already confronting several inner complications. Undoubtedly, in the course of the last decade the government has made numerous struggles to grow the infrastructure of ICT for up-keeping and encouraging education and research philosophy.

The university libraries of Pakistan are lagging behind if compared with the innovate libraries of the developed countries in terms of ICT infrastructure, services, resources, standard practices and rest of the international norms and values (Amara and Mahmood, 2013).

Research enlighten the scenario in context of Pakistan that it is evident from the performance of higher education commission that overall trend of the education has been changed in recent times. The advancement in the educational institutions, as well as the technological incorporation in the educational mechanism, allow the institutes to enhance the performance and overall productivity. The libraries are far behind to achieve excellent IT levels (Ramzan and Singh, 2009).

It is found that libraries need to be fully automated using standard library software/management systems. However, access to online resources through the Higher Education Commission (HEC) is found extensive and comprehensive. The data indicate the need to enhance libraries' IT expenditure.

Today's libraries are more complex and require a variety of management techniques to make them work successfully. Our libraries need to move away from existing structures and at the same time avoid the pressures of technological determinism which distorts the role of those who are not technologists. The “conventional skills” of librarians and that new employee talents and strengths should be looked upon as opportunities and not threats (Kerry, 2008).

Users’ satisfaction about the university libraries in the federal capital of Pakistan

Nowadays it is necessary for university libraries to be ready for latest modifications, modernisms in their structure to meet the desired need of their users.

In order to support the academic and research accomplishments of the universities in true sense, the aspiration for remodeling the services, atmosphere and conveniences in university libraries, as per the demand of users, is now a compulsion, or else, it might lose their identity in this fast-track technology-based society.

Libraries and library professionals face multiple challenges in meeting user needs in the second decade of the new millennium. This is particularly true in academic libraries where students and faculty demand and expect fast, easy, and seamless access to information as well as flexible, comfortable places to work alone as well as collaboratively with colleagues, friends, classmates, and instructors (Seal, 2015).

It is of great concern that user’s satisfaction and service quality are rarely considered for assessment in Pakistan as contrary to the fact that maximum priority is extended to that in the developed countries.

For example, in Pakistan, the user’s suggestion or feedback is not considered seriously while planning and adopting new policies and procedures.

In this specific study the users were generally satisfied with the provision of basic information resources, services, and facilities. However, there were some areas which need to be addressed specifically to meet the requirements of library users as mentioned above in section 5.1.

User perception about the 21st century university libraries in term of resources, services and facilities in the federal capital of Pakistan

Investigation shows that for frequent growth and development of the libraries, it is very important to understand the need of the customers in accordance with the growing technological incorporations (Tikam, 2011).

It is also revealed that in this era of advanced technology the library professionals should be enough skillful and analytic to deal successfully with the varying scenes of information and information technology. They need a specific level of competency for handling multiple technologies, services and products which are being adopted in the current state of affairs in various academic libraries around the globe (Farooq et al., 2016).

In the current state of affairs, the old-fashioned services and function of university libraries is considerably improved because of the numerous information sources which ultimately increase

the expectations of patrons. The patrons of university library today are willing to practice all types' of applications enabled by latest technologies and to make race in all service area, digital change, diverse design of material etc.

To survive in such an unpredictable situation the university libraries of Pakistan would probably need better understanding and approachability to cope with these confronting challenges. For lowering the gap between user's perceptions and expectations the quality of libraries' services, resources and facilities must be gauged through proper assessment.

For the provision of satisfactory resources and services the functions of today libraries should be user-oriented. In this respect, the library authority must identify various requirements, priorities and advices of its customer. All kinds of activities, programs, planning and initiatives, for present or future, should be focused on users. The authorities of academic libraries in developed countries identified this truth and concentrated more dynamism on meeting user's demands.

In advanced countries, the academic libraries have progressed from the framework of inputs and outputs into result-based assessment of quality of services, but Pakistan, being a developing country, is lacking behind in this area. Several research studies revealed that in most libraries in Pakistan the services were not user-oriented but relatively based on collection.

Research explore that it seems a bit hard for the library professionals, policy makers, and universities' authorities to properly measure the quality of services in university libraries of Pakistan due to unavailability of wide-ranging data. In the developing countries less priority is given to the user's demand or feedback (Shafiq, 2012).

It is a common concept that libraries all over the world including Pakistan are serving as an access centers for information retrieval and its services have grown from the days of closed piles, through shelf browsing, card catalogues, punch cards, and OPACS, to the broader idea of open access and institutional online research/research databases.

This extraordinary resettlement has tried to encompass the changing contemporary needs of library users, together with ease of access, interaction prosperity, low interaction, and low cost as access is more important than ownership.

Conclusions

Currently there are 22 universities in the federal capital of Pakistan having libraries at their premises to meet the information needs of their users. i.e. students, faculty and researchers. Keeping the view the meager resources and financial constrains especially in the developing country like Pakistan it is very important to have an idea of the actual requirement of the users in term of library resources, services and facilities. It will ensure the best utilization of all the resources been provided by the university libraries and will avoid the wastage of money and resources. This research study concludes that, academic libraries, around the globe are adjusting and reshaping their resources, services, facilities and infrastructure in line with user requirements and their contemporary technologies. University libraries, in the federal capital of Pakistan, are at forefront to be shaped as the 21st century academic libraries of Pakistan.

The current measures being taken by library professionals are to encourage sustainable evolution, novel growth, user's satisfaction and to pave the way for making the 21st century academic libraries. The organizational learning traits, in academic libraries of federal capital, is gaining momentum which is a good indication towards adopting user-focused type of resources, new techniques, mechanisms, technologies and tools. Apparently, in this research study, only the case of academic libraries in the federal capital of Pakistan was taken, but in the large scenario it also symbolizes the insight of other academic libraries of Pakistan and rest of the world as well for remodeling the traditional professional methodology to the 21st century vision of academic libraries.

Recommendations

Keeping in view the findings of this study it is recommended that:

- Noise factor must be controlled specially in the research corners or areas specified for the researchers.
- Interaction between the caretaker of university libraries and users must be strengthened for timely solution of the problems being faced by the library users.
- Facilities like air-conditioning and heating must be regulated properly to maximize the comfort of library users.
- Provision of upgraded and enhanced computers/laptop is crucial for ensuring the adequate access to library resources by users.
- Scanning, photocopying and printing facilities must be provided to library users.
- University libraries must provide an adequate and uninterrupted Wi-Fi connectivity and internet speed for ensuring the un-broken live streaming of lectures, access to digital and electronic resources.
- Information literacy and user education programs must be conducted to create awareness among the library users for the effective utilization of library resources, services and facilities.
- Diversified spacing must be implemented inside the university libraries to create and maintaining the feelings of ownership among the users.
- Strict security measures must be taken for increasing the feelings of safety among the library users. Security cameras, controlled access and provision of user lockers will be quite helpful in this regard.

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