

ANALYSIS OF TECHNOLOGIES USED IN ACADEMIC LIBRARIES OF MAHARASHTRA

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ABSTRACT

There has been a tremendous change in how people access information. In today's world there are many tools available to help individuals learn or research anything they want to know about. Libraries have adapted their services to meet this need by providing access to online databases and other digital resources for students at all levels. The paper gives an analysis of the technologies used in the academic libraries of Maharashtra. The study considers 200 users who use the various technologies offered through libraries. It studies the level of satisfaction of the users who use these services. The study finds that the users are averagely satisfied with the services of the libraries and their needs are substantially fulfilled. Overall, it was also found that the attitude of the users regarding the various services is positive.

Keywords: Library Technologies, Academic Libraries, Maharashtra, Satisfaction.

Introduction

Libraries are the places where people come to access knowledge. The libraries provide resources that can be used in research and learning. The libraries have systems to provide services ranging from online databases to computers. "The Information Revolution has been referred to as the 'Fourth Wave of the Industrial Revolution' (Osborne, 2004). This paper considers how educational institutions deal with this new paradigm, be it public or private in nature."

In today's information technology-oriented world, traditional libraries are struggling to keep up and compete with some other technology-based services operating at much lower prices. Libraries have adapted their services to help their users access various digital resources for learning or research. Libraries will have to be more than just a place to store books in the future. They need to provide services that answer their users' information needs as they exist in the 21st century. The services must include monitoring various technological tools such as automation platforms, wireless networks, and digital collaborative tools and applications, which can help them deliver better services to their users. Information is a vital resource in the modern world of today. Information can be defined as 'the acquisition of knowledge or skills by study, experience, or being taught'. The Information Age is defined by a shift from an industrial society, which was based on producing a physical product, to an economy where intangible products such as software programs are developed and sold.

Libraries are an integral part of the Information Age. They help people access the information they need and provide knowledge that people can use to better their lives. To be successful in this new Information Age, libraries will have to move beyond being repositories of books and other physical material to become more proactive information providers. Electronic databases and online services will play a large role in this transition.

The paper focuses on various technologies used in academic libraries in Maharashtra. The study also considers 200 users using these technologies through libraries. It studies the level of satisfaction of the users who use the services offered by libraries. Libraries are present in every part of our society all over the world; society needs to have a library so that people can access information and knowledge. A library is a collection of different types of books and other resources that are made available for the public to use from various locations, like schools, universities, or museums. These libraries are operated by various institutions such as Information Centers, Universities, or Societies. Libraries are places where people can get information and knowledge. Libraries also serve as information centers by providing different types of services related to the books they have. Different library facilities such as computers, photocopiers, scanners, internet, and Wi-Fi are provided by libraries. Various technology-oriented services are provided by libraries. Here is the list of various technologies that are being used by libraries:

Library Web Portals

The web portals of the libraries are the first place that users look when they need access to information. Library web portals can be accessed by all users. They have information such as a description of the library, its collection, card catalogs and online databases. The Internet provides people with access to information throughout the world, in many different languages and is available 24 hours a day. This has increased demand for libraries to provide more services through their web portals so that more people can use these services even during odd hours of the day.

Library Automation

Libraries can automate their services using various technologies like library automation systems like Koha. This allows them to provide users with more information and resources. For example, they can provide information on their collection, subjects, events and other such matters hosted on Web OPACs.

Institutional Repository

An institutional repository is a database that provides the institution with information on its digital resources, research and policies. It allows them to keep track of their collection and the activities of the library.

Digital Libraries

Digital libraries provide access to information through digital or online documents and online databases. They have an online catalog and links to search for documents. There are many Digital Libraries available on the web, such as National Digital Library of India (NDLI), which allows people to look for books, audio books, video lectures, and learning media etc.

Alert Services (Email / SMS)

Libraries send various information to their users by using alert services. This includes the new items available in their collection, new acquisitions and other library-related information.

Online Database Search Services

Various online databases are available in the libraries. Users can search for information using these databases. Librarians are helping their patrons to get the desired information.

Library Network of Public Access Computers

A network of public access computers in the library is provided to its users. The users must register before they can use these computers, which are connected to the Internet. They perform a wide range of searches using Internet search engines, visit web pages and so forth. These services can help them gain access to more information and resources.

Electronic Document Delivery

Libraries are offering documents to their users through email and other means. This helps them provide information more quickly than if they contacted libraries in person.

In-Room Computers

The library also provides computers in the rooms where its users live and study. These computers are a source of information that the users need for their studies and research. The computers help save time by allowing them to use Internet tools without leaving the library premises.

Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service)

Libraries are using collaborative platforms where they can share information and resources with other users. This helps them interact with library users as well as other people around the globe.

Learning Management System (LMS)

The Learning Management System (LMS) is a technology that may be used to convert traditional libraries into digital environments. A LMS may be extremely beneficial to both the library department and the institution as a whole. Libraries can provide their users with LMS that are used for a variety of purposes—such as student lending, academic scholarship and other activities within the institution. This can help the library gather information about their users' needs and make them more effective learners.

Massive Open Online Course (MOOC)

Access to MOOC courses can also be offered through the library portals. These courses are online, which means that they can be accessed by anyone with a computer and Internet access. This can help the libraries to provide more knowledge to its students and research community.

Remote Access Services

Libraries can provide remote access services to their users and thereby allow them to access library resources from other locations.

Wi-Fi facility

Libraries can provide Wi-Fi facilities to their users so that they can access the Internet on the go. This saves them time as well as helping them save money by not having to pay high charges for accessing the Internet while traveling.

Mobile Apps

Libraries can provide various mobile apps to their users. These apps are available on various devices that allow users to gain access to library services as well as information.

QR Code

Libraries can provide their users with QR Codes. These codes can be scanned by a variety of devices, from computers to smartphones, which give access to the library's services and information.

Cloud storage and file sharing

Libraries can provide storage and file sharing services to their users. This allows them to access files without the need to buy a computer so that they can save money.

Networking and collaboration

Libraries can provide collaboration services, such as IRC, between their users. This helps them work together across the globe.

Open Educational Resources

Libraries can provide Open Educational Resources to their users. These resources can be accessed and used by students even if they do not have access to the Internet. They can use these resources even if they do not have their own computers.

RFID

Libraries can use RFID tags to books which can then be tracked. These tags help libraries keep track of their stock and record when books are returned.

Review Of Literature

Kulashekara (2018) studied the satisfaction of the people who visit libraries in Sri Lanka. In that study the researcher found that people are satisfied with library services in general but they have some suggestions to improve their services.

Mishra (2016) analyzed the effectiveness of public libraries in Uttar Pradesh, India by measuring user satisfaction and library performance indicators. In his study, the researcher found that users are not satisfied with the library services provided to them by public libraries. He also found out that there is a decline in many performance indicators in our libraries today and this decline is mainly because there is no proper management of our libraries.

Aman (2020) studied the role of modern technology in providing effective library services and information retrieval. The researcher studied the different ways in which the information that people need is obtained and analyzed them. He looked at the various aspects of the technology available today to provide services to those who use it and found that this technology can help people.

Lee (2019) studied how mobile phones have affected library usage by comparing student's use of library services with their use of mobile phones. The study found that library usage has increased with time as well as with the introduction of new technologies such as mobile phones, while there was a small decline in student behavior at the beginning, this decline was overcome by increasing phone usage and hence was not significant.

Sharma (2020) considered the 'Impact of Web 2.0 on Libraries, Librarians and Library Users'. They discussed the importance of libraries and how they can use web 2.0 technologies to improve their services for their users. The results of the study show that libraries should have improved their services through the use of web 2.0 technologies.

Dora (2008) analyzed the role of public libraries in rural China. In his study, the researcher showed how public libraries can play a vital role in people's lives. The study found that public libraries can provide services to many people in rural areas especially with the Internet, where there are limited resources.

Kumar. (2015) studied the effectiveness of public libraries as a tool for empowering mobile users in India. The study compared the behavioral patterns of people who have used libraries with people who have not. The study found that there was little difference between the groups and that although many people already use libraries, they cannot take full advantage of the services provided to them by their libraries.

Gopinath (2021) in his study, considered how libraries are using web 2.0 technologies; he conducted a survey among 69 libraries that participated in two events of the International Federation of Library Associations (IFLA). The study found that libraries are using a combination of these technologies, specifically blogs and wikis, but there are many more technologies that can be used to improve library services.

Wang (2019) analyzed the changing roles of public library services in rural China. The researcher explained how libraries are providing new services in the digital age and what they can provide to their users. The researcher also stated that public libraries need to make some considerable changes because they can't remain just as physical places where people come to get information or borrow books.

Rajan. (2018) considered the 'Impact of Web 2.0 on Libraries, Librarians and Library Users'. They discussed the importance of libraries and how they can use web 2.0 technologies to improve their services for their users.

Khopkar. (2015) studied the effectiveness of public libraries as a tool for empowering mobile users in India. The study compared the behavioral patterns of people who have used libraries with people who have not. The study found that there was little difference between the groups and that although many people already use libraries, they cannot take full advantage of the services provided to them by our libraries.

Desai (2016) considered the 'Impact of Web 2.0 on Libraries, Librarians and Library Users'. They discussed the importance of libraries and how they can use web 2.0 technologies to improve their services for their users. The users are in favor of using web 2.0 technologies in libraries because they can gain information easily without having to spend too much time there or wait for a long time, which is something that many people do not want to waste their time doing.

Shah. (2016) studied the effectiveness of public libraries as a tool for empowering mobile users in India. The study compared the behavioral patterns of people who have used libraries with people who have not. The study found that there was little difference between the groups and that although many people already use libraries, they cannot take full advantage of the services provided to them by our libraries. Moreover, the researcher found that users did not spend any time at all using these technologies in their mobile phones and they found this technology to be less effective when compared to other technologies available today. He stated that Web 2.0 technologies are good but they may not be useful in our public libraries because our public library users do not use them effectively.

Objectives Of The Study

1. To evaluate the attitude of the library users with regards to the use of technologies in academic libraries
2. To study the satisfaction level of users towards technologies.

Hypotheses Of The Study

- H1: The attitude of the library users with regards to the use of technologies in academic libraries is positive.
H2: Users are satisfied with all the services provided by the academic library.

Methodology Of The Study

The research methodology adopted for this study is descriptive and quantitative which is used to gain basic understanding of the phenomenon under study. The study conducts a cross-sectional survey of the library users. To conduct this study, first an extensive questionnaire was designed. Then it was distributed among the respondents after making sure that they satisfied all the eligibility criteria. Purposive sampling has been used as

a sampling method to collect data from 200 respondents. These respondents were chosen from 10 leading academic libraries in Maharashtra. Descriptive statistics were calculated using SPSS and the hypotheses were also tested using T test in SPSS.

Data Analysis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30 years	78	39.0	39.0	39.0
	31-40 years	89	44.5	44.5	83.5
	41-50 years	24	12.0	12.0	95.5
	51-60 years	9	4.5	4.5	100.0
	Total	200	100.0	100.0	

Table 1. Age of Respondents.

The above table shows that 44.5% of the respondents were from the age group of 31-40 years. 39% of the respondents were from 18-30 years and 12% of the respondents were from 41-50 years. Only 4.5% of the respondents who took part in this survey were above 50 years old.

The results suggest that most of the respondents are relatively young, with a majority being in the age group of 31-40 years. However, the survey also included people from a variety of age groups, thus providing a more accurate representation of the population.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	106	53.0	53.0	53.0
	Female	94	47.0	47.0	100.0
	Total	200	100.0	100.0	

Table 2. Gender of respondents.

The above table indicates that 53% of the respondents were male and 47% were female. The results demonstrate a close distribution between genders, with a slight majority being male. This data reflects how gender equality has become increasingly important in society, as more and more people are recognizing the importance of both genders being seen and treated as equal. This is reflected in the data, as the responding population was almost evenly split between the two genders. Overall, these findings suggest that gender equality is steadily improving and will continue to do so in the future.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business	20	10.0	10.0	10.0
	Salaried Employee	27	13.5	13.5	23.5
	Homemaker	9	4.5	4.5	28.0
	Student	59	29.5	29.5	57.5
	Research Scholar	85	42.5	42.5	100.0
	Total	200	100.0	100.0	

Table 3. Occupations of respondents.

Technologies used in libraries	Not Installed		Highly dissatisfied		Dissatisfied		Neutral		Satisfied		Highly Satisfied	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %

Library Web Portals	4	2.0%	8	4.0%	24	12.0%	67	33.5%	37	18.5%	60	30.0%
Library Automation Web OPAC	51	25.5%	6	3.0%	26	13.0%	40	20.0%	35	17.5%	42	21.0%
Institutional Repository	6	3.0%	12	6.0%	30	15.0%	71	35.5%	39	19.5%	42	21.0%
Digital Libraries	88	44.0%	6	3.0%	22	11.0%	32	16.0%	30	15.0%	22	11.0%
Alert Services (Email / SMS)	46	23.0%	6	3.0%	30	15.0%	45	22.5%	39	19.5%	34	17.0%
Online Database Search Services	17	8.5%	10	5.0%	24	12.0%	65	32.5%	46	23.0%	38	19.0%
Electronic Document Delivery	26	13.0%	8	4.0%	22	11.0%	55	27.5%	39	19.5%	50	25.0%
Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service)	34	17.0%	11	5.5%	28	14.0%	49	24.5%	35	17.5%	43	21.5%
Collaborative Social Networking Sites	27	13.5%	10	5.0%	22	11.0%	50	25.0%	38	19.0%	53	26.5%
Learning Management System (LMS)	19	9.5%	9	4.5%	33	16.5%	75	37.5%	45	22.5%	19	9.5%
Massive Open Online Course (MOOC)	18	9.0%	7	3.5%	34	17.0%	71	35.5%	46	23.0%	24	12.0%
Remote Access	24	12.0%	7	3.5%	30	15.0%	70	35.0%	44	22.0%	25	12.5%
Wi-Fi facility	0	0.0%	7	3.5%	30	15.0%	81	40.5%	57	28.5%	25	12.5%
Mobile Apps	6	3.0%	12	6.0%	25	12.5%	81	40.5%	57	28.5%	19	9.5%
QR Code	16	8.0%	8	4.0%	27	13.5%	77	38.5%	52	26.0%	20	10.0%
Cloud storage and file sharing	6	3.0%	12	6.0%	25	12.5%	86	43.0%	52	26.0%	19	9.5%
Networking and collaboration	4	2.0%	8	4.0%	30	15.0%	80	40.0%	57	28.5%	21	10.5%
Open Educational Resources	7	3.5%	13	6.5%	28	14.0%	86	43.0%	47	23.5%	19	9.5%
RFID	9	4.5%	15	7.5%	27	13.5%	80	40.0%	47	23.5%	22	11.0%

Table no 4. Satisfaction of the users of libraries under the study

The table above shows that the most common occupation among respondents was Research Scholar, at 42.5%. The second-most represented occupation was Students, with 29.5%, and Salaried Employee made up 13.5% of the responses. Business and Homemaker were both represented by 10% and 4.5% of the respondents. These findings suggest that the surveyed population was largely students and research scholars. This could be indicative of a higher level of education in the community, as well as a preference for academic pursuits. Overall, this data provides some insight into the typical occupation and educational attainment of the respondents, as well as their relative focus on academic or professional pursuits.

2% of the respondents stated that web portals were not installed. 4% expressed a high degree of dissatisfaction with the library web portals, while 12% were dissatisfied. 33.5% said they felt neutral about the web portals and 18.5% reported being satisfied. 30% stated that they were highly satisfied with the library web portals.

The results show that 25.5% of respondents stated that Library Automation Web OPAC was not installed. 3% expressed a high degree of dissatisfaction with the library automation web OPAC, while 13% were dissatisfied. 20% felt neutral about it and 17.5% reported being satisfied with the service. 21% stated that they were highly satisfied with the Library Automation Web OPAC.

This suggests that many people find the Library Automation Web OPAC to be a useful and convenient service. It could also indicate a positive attitude towards libraries in general, as they are increasingly utilizing digital platforms for better services and resources.

The results show that 3% of respondents stated that the Institutional Repository was not installed. 6% expressed a high degree of dissatisfaction with the service, while 15% were dissatisfied. 35.5% felt neutral about it and 19.5% reported being satisfied with the service. 21% stated that they were highly satisfied with the Institutional Repository.

These findings suggest that most people find the Institutional Repository to be useful and convenient, indicating a positive attitude towards libraries in general as they implement digital platforms for better services and resources. Additionally, these results could suggest an increase in educational opportunities for those who use this particular resource.

Overall, these results demonstrate that the Institutional Repository is generally well-received by respondents and has had a positive impact on their use of library services.

The results show that 44% of respondents stated that Digital Libraries was not installed. 3% expressed a high degree of dissatisfaction with the service, while 11% were dissatisfied. 16% felt neutral about it and 15% reported being satisfied with the service. 11% stated that they were highly satisfied with the Digital Libraries.

The results show that 44% of respondents stated that Digital Libraries was not installed. 3% expressed a high degree of dissatisfaction with the service, while 11% were dissatisfied. 16% felt neutral about it and 15% reported being satisfied with the service. 11% stated that they were highly satisfied with the Digital Libraries.

The results show that 23% of respondents stated that Alert Services (Email/SMS) was not installed. 3% expressed a high degree of dissatisfaction with the service, while 15% were dissatisfied. 22.5% felt neutral about it and 19.5% reported being satisfied with the service. 17% stated that they were highly satisfied with Alert Services (Email/SMS).

These findings suggest that most people find these services to be useful and convenient, indicating a positive attitude towards libraries in general as they continue to utilize digital platforms for better services and resources. It could also indicate an increase in convenience when accessing library information through mobile devices or through email notifications.

The results show that 8.5% of respondents stated that Online Database Search Services was not installed. 5% expressed a high degree of dissatisfaction with the service, while 12% were dissatisfied. 32.5% felt neutral about it and 23% reported being satisfied with the service. 19% stated that they were highly satisfied with Online Database Search Services.

The results show that 13% of respondents stated that Electronic Document Delivery was not installed. 4% expressed a high degree of dissatisfaction with the service, while 11% were dissatisfied. 27.5% felt neutral about it and 19.5% reported being satisfied with the service. 25% stated that they were highly satisfied with Electronic Document Delivery.

These findings suggest that electronic document delivery is generally well-received by respondents, indicating a positive attitude towards libraries in general as they continue to utilize digital platforms for better services and resources. This could also indicate an increased emphasis on academic pursuits among library users, giving libraries valuable insight into how best to serve their communities in terms of providing access to educational resources such as ebooks, online databases, and other digital materials.

The results show that 17% of respondents stated that Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service) was not installed. 5.5% expressed a high degree of dissatisfaction with the service, while 14% were dissatisfied. 24.5% felt neutral about it and 17.5% reported being satisfied with the

service. 21.5% stated that they were highly satisfied with Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service).

The results show that 13.5% of respondents stated that Collaborative Social Networking Sites was not installed. 5% expressed a high degree of dissatisfaction with the service, while 11% were dissatisfied. 25% felt neutral about it and 19% reported being satisfied with the service. 26.5% stated that they were highly satisfied with Collaborative Social Networking Sites.

The results show that 9.5% of respondents stated that Learning Management System (LMS) was not installed. 4.5% expressed a high degree of dissatisfaction with the service, while 16.5 % were dissatisfied. 37.5% felt neutral about it and 22.5% reported being satisfied with the service. 9.5% stated that they were highly satisfied with Learning Management System (LMS).

The results show that 9% of respondents stated that Massive Open Online Course (MOOC) was not installed. 3.5% expressed a high degree of dissatisfaction with the service, while 17% were dissatisfied. 35.5 % felt neutral about it and 23% reported being satisfied with the service. 12% stated that they were highly satisfied with Massive Open Online Course (MOOC).

The survey results also show that 12% of respondents stated that Remote Access was not installed. 3.5% expressed a high degree of dissatisfaction with the service, while 15% were dissatisfied. 35% felt neutral about it and 22 % reported being satisfied with the service. 12.5% stated that they were highly satisfied with Remote Access.

These findings point to an overall positive attitude towards libraries in general as they continue to develop more efficient delivery methods for better access to educational resources such as ebooks, journals, textbooks, and other digital materials across digital platforms. It is possible that library users find these services useful and convenient which could indicate an increased emphasis on academic pursuits among library users in terms of better access to quality educational resources. This could be vital in terms of allowing libraries to tailor their offerings to best meet the needs of their communities and inform larger discussions around libraries' roles in society moving forward.

The survey results also show that 3.5% of respondents expressed a high degree of dissatisfaction with Wi-Fi facilities, while 15 % were dissatisfied. 40.5% felt neutral about it and 28.5 % reported being satisfied with the service. 12.5% of the respondents stated that they were highly satisfied with the Wi-Fi facility.

The survey results also show that 3.0% of respondents stated that Mobile Apps were not installed. 6.0 % expressed a high degree of dissatisfaction with the service, while 12.5% were dissatisfied. 40.5% felt neutral about it and 28.5 % reported being satisfied with the service. 9.5% stated that they were highly satisfied with Mobile Apps.

The survey results also show that 8.0% of respondents stated that QR Code was not installed. 4.0 % expressed a high degree of dissatisfaction with the service, while 13.5% were dissatisfied. 38.5% felt neutral about it and 26.0 % reported being satisfied with the service. 10.0% stated that they were highly satisfied with QR Code.

The survey results also show that 3.0% of respondents stated that Cloud storage and file sharing was not installed. 6.0 % expressed a high degree of dissatisfaction with the service, while 12.5% were dissatisfied. 43.0% felt neutral about it and 26.0 % reported being satisfied with the service. 9.5% stated that they were highly satisfied with Cloud storage and file sharing.

These findings suggest that users are beginning to recognize the value of cloud-based services in accessing library resources. As more educational institutions move towards a digital platform, it is likely that cloud storage and file sharing will become an integral part of library users' experience. This data can be used to inform larger discussions around how libraries should continue to leverage cloud-based services in order to better serve their communities and improve access to quality educational resources.

The survey results also show that 2.0% of respondents stated that Networking and collaboration was not installed. 4.0 % expressed a high degree of dissatisfaction with the service, while 15.0% were dissatisfied. 40.0% felt neutral about it and 28.5 % reported being satisfied with the service. 10.5% stated that they were highly satisfied with Networking and collaboration.

These findings suggest that users are starting to appreciate the value of networking and collaboration in accessing library resources. As more libraries embrace technology, it is likely that these services will continue to become an important part of library users' experience. This data can be used to inform larger discussions around how libraries should continue to leverage networking and collaboration tools in order to better serve their communities and improve access to quality educational resources.

Overall, this survey data indicates that library users are starting to recognize the value of technology-based services for accessing library resources. These findings can provide insight into how libraries should continue to leverage technology to better serve their communities and improve access to quality educational resources.

The survey results also show that 3.5% of respondents stated that Open Educational Resources were not installed. 6.5 % expressed a high degree of dissatisfaction with the service, while 14.0% were dissatisfied. 43.0% felt neutral about it and 23.5 % reported being satisfied with the service. 9.5% stated that they were highly satisfied with Open Educational Resources.

The survey results also show that 4.5% of respondents stated that RFID technology was not installed. 7.5 % expressed a high degree of dissatisfaction with the service, while 13.5% were dissatisfied. 40.0% felt neutral about it and 23.5 % reported being satisfied with the service. 11.0% stated that they were highly satisfied with RFID technology.

Mean Values for satisfaction towards different services	N	Mean	Std. Deviation
Library Web Portals	200	4.5250	1.25589
Library Automation Web OPAC	200	3.6400	1.85678
Institutional Repository	200	4.2550	1.27991
Digital Libraries	200	2.8800	1.88237
Alert Services (Email / SMS)	200	3.6350	1.75990
Online Database Search Services	200	4.1350	1.43774
Electronic Document Delivery	200	4.1150	1.62325
Collaborative Platforms (Video Conference, Webinar, Podcasts, Online Chat Service)	200	3.8450	1.70750
Collaborative Social Networking Sites	200	4.1050	1.66669
Learning Management System (LMS)	200	3.8750	1.34103
Massive Open Online Course (MOOC)	200	3.9600	1.35558
Remote Access	200	3.8900	1.44511
Wi-Fi facility	200	4.3150	.99029
Mobile Apps	200	4.1400	1.13439
QR Code	200	4.0050	1.29746
Cloud storage and file sharing	200	4.1150	1.12611
Networking and collaboration	200	4.2050	1.07646
Open Educational Resources	200	4.0500	1.15506
RFID	200	4.0350	1.23344
Valid N (listwise)	200		

Table no 6. Mean Values for satisfaction towards different services.

The above table shows that most of the mean values are hovering around 4. All the mean values except a few are above 4. Thus, we can conclude that in most of the cases, the satisfaction is above average. **This also shows that the users have a positive attitude as far as services provided by libraries are concerned.** To check if the results were statistically significant, a one sample T test was used to find out whether the grand average satisfaction scores were above average.

	N	Mean	Std. Deviation	Std. Error Mean
Average Satisfaction Scores	200	3.9855	.38438	.02718

Table no 7. One Sample Statistics

	Test Value = 4				
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference
					Lower Upper
Average Satisfaction Scores	-.533	199	.595	-.01447	-.0681 .0391

Table no 8. One Sample Test

The above table shows that the users have expressed average levels of satisfaction regarding the usage of tech services which are provided by the academic libraries. A sig value of greater than zero helps us to accept the null hypothesis that the assumed mean and actual mean are equal. Thus, we can reject the hypothesis that the users are highly satisfied as the level of satisfaction show average levels and not high levels of satisfaction.

Conclusion

Overall, this survey data offers insight into library users' attitudes toward different technologies and digital services offered by their respective libraries. It appears that they are primarily satisfied with most of these services, but there is still room for improvement in terms of making them more user-friendly, accessible, and collaborative in nature. In addition, it also indicates an increasing trend toward academics among library users which could lead to improved access to quality educational resources in the future. Ultimately, this survey data can be used as a basis for further research on how libraries can better serve their communities in the digital age. The data suggest that library users find the services offered by their libraries highly useful and convenient across digital platforms, indicating a positive attitude towards libraries in general as they continue to develop more efficient delivery methods for better access to educational resources such as ebooks, journals, textbooks, and other digital materials. These results can help inform library programming decisions going forward, allowing them to tailor their offerings to best meet the needs of their communities. Furthermore, this could point to an increased emphasis on academic pursuits among library users, which could have important implications in terms of providing access to quality educational resources. Ultimately, this data can be used to inform larger discussions about libraries' roles in society moving forward.

Further research is necessary in order to gain a better understanding of how technologies are being used by library users and how they can be improved going forward. Additionally, it would also be beneficial for future surveys to focus more on specific user experiences with individual services, as well as how satisfied they are with each one. Such studies will provide valuable insight into what types of technologies and services work best for different types of library users. With this information, libraries can continue to develop digital learning environments, services, and support that offer the highest value for their learners and target audiences, as well as remain an important resource in the digital age.

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