



Received: 07-09-2022

Accepted: 17-10-2022

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

ICT capability, service quality and client satisfaction of Higher Education Institutions libraries

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Abstract

This descriptive study aimed to determine the ICT capability, service quality, and client satisfaction of the selected Higher Education Institutions' libraries as the foundation for the proposed enhancement program to improve the ICT capability, service quality, and client satisfaction. The respondents were 283 faculty and 345 fourth-year college students as the end-users of the libraries' services, resources, and facilities. The areas assessed were the level of ICT capability in terms of facilities, services, and usability, the level of service quality in terms of the affect of service, information control, and library as place, and the client satisfaction towards the services and resources facilities and personnel. A researcher-made survey questionnaire was utilized, which underwent a validity and reliability test. The questionnaire was converted into Google

forms and administered online due to the pandemic, which resulted in lockdowns in all schools. This research used the mean, Analysis of Variance, or F-test to process the data gathered. The findings revealed that the libraries had a moderate ICT capability regarding services, facilities, and usability. However, the level of service quality was very good when taken as a whole and in terms of the affect of service, information control, and the library as the place. The respondents were very satisfied with the services, resources, facilities/physical environment, and personnel of the libraries. Furthermore, ICT capability, level of service quality, and client satisfaction of HEIs Libraries vary significantly. Based on the findings of the study, a proposed enhancement program was designed.

Keywords: Library Science, ICT, Service Quality, Library Satisfaction, Higher Education Institution, Descriptive, Survey Method

1. Introduction

In this 21st century, it is impossible to overemphasize the dramatic role of Information and Communication Technology (ICT) in library activities. Many library routines and manual operations are now converted into computerized processes, so ICT techniques are being implemented to provide better and faster end-user services. In this era of globalization, in which the world is connected, information gains power through permanent storage and wide distribution, which could achieve through ICT. The application of ICT in libraries would go a long way in meeting the users' or stakeholders' information needs (Adebayo *et al.*, 2018) ^[1].

In today's world, the delivery of library and information services is shifting from manual to automated methods. The use of new technology and communication tools in providing services to customers via appropriate channels for access to information with a cluster of technologies known as the internet. As a result of advancements in information technology, the way libraries operate has changed dramatically (Ogar & Dushu, 2018) ^[14].

Since time immemorial, the library has played a crucial role in the growth of society. It is a service-oriented organization where users' knowledge needs are met. Most transactional and significant services are conducted digitally or electronically with the incorporation and implementation of Information & Communication Technology (ICT) in various library activities (Bajpai & Madhusudhan, 2019) ^[2].

The ongoing shift in libraries away from the manual approach has positively impacted library and information services, and most libraries gradually adopted the changes until the novel coronavirus (Covid19) pandemic hit the entire world in the first quarter of 2020. Most establishments were closed, followed health protocols, academic institutions, including libraries, were affected, and face-to-face or classroom-based learning was prohibited (Teräs *et al.*, 2020) ^[21]. The sudden and unexpected

outbreak of the virus forced library professionals to ascertain ways of working in a rapid time frame, like shifting to digital platforms wherever possible. Moreover, it provides adequate remote services to the users.

In this situation, higher education institutions are embracing online learning to provide continuous education to students; however, most libraries are not yet fully prepared to operate online. Libraries become disorganized as to what to do to support the academic needs of the faculty and students in online learning.

The reactive surge of online classes offered libraries challenges and opportunities. The major challenge was the transition from physical to online delivery of information services. The selected academic libraries face a number of social, financial, and technical challenges. Lacking wide-scale technological applications, off-campus access to subscribed resources, large-scale digital initiatives, institutional repositories, and collaborative projects makes them special cases to study in this pandemic. These challenges give opportunities to academic libraries to innovate new library services to meet the needs of their users. Libraries were trying to support online classes, complete the information needs of researchers, adopt online working practices, and recognize and adopt individual and collective emerging roles.

Online learning, according to Rapanta *et al.* (2020) [18], is just like formal learning, where students need reference tools in their academic subject, but the difference with online learning is that students need resources that can be accessed virtually using different ways without going physically into the library. As a result of these changes in the mode of learning, the information needs of researchers often vary. Challenges on the part of libraries become evident, particularly in providing information services to online learners who are the students and faculty in their online teaching and learning. According to Begum and Elahi (2022) [4], libraries must transform their services into digital to ensure better service quality for their respective user community.

In the Philippines, Article VI, Section 27 of MORPHE states that due to the advent of new technologies, higher education institutions may establish and provide an e-library. The presence and availability of these facilities may be considered substantial compliance in place of books and other required printed materials (Sarmiento, 2015) [20]. Furthermore, Standards for Philippine Libraries under Area V, Section VII, require that the library have facilities for information technology and communication services (Conti *et al.*, 2007) [7].

It is important to note that library services aim to satisfy the library users' informational, recreational, and reference needs. The application of computers and other electronic information resources is necessary to meet these objectives and ensure the overall satisfaction of the users' information needs. This application tries to bring several products and services to the scene that are more than obtainable (Onuoha *et al.*, 2019) [16].

This situation stimulates the researcher's interest to give focus where technology is highly encouraged by everyone, and the library services must remain functional in any circumstances in providing informational service. This study is intended to assess the ICT capability of the libraries of Higher Education institutions with service quality and client satisfaction as a basis for the proposed action plan to

enhance the ICT capability, service quality, and client satisfaction at HEI's Libraries.

This descriptive study aimed to determine the ICT capability, service quality, and client satisfaction of the selected Higher Education Institutions in Negros Occidental libraries during the school year 2020-2021 as the foundation for the proposed enhancement program to improve the ICT capability, service quality, and client satisfaction.

1.1 Statement of the problem

This study aimed to determine the extent of ICT capability, service quality, and client satisfaction of the libraries of Higher Education Institutions as a basis for the proposed enhancement program to enhance the ICT capability, service quality, and client satisfaction at HEIs Libraries. Specifically, it sought to answer the following questions.

1. What is the extent of the ICT capability of HEI Libraries when taken as a whole and in terms of a) Facilities, b) Services, and c) Usability?
2. What is the level of service quality of HEI Libraries when taken as a whole and in terms of the following dimensions: a) Affect of Service, b) Information Control, c) Library as Place?
3. What is the level of client satisfaction of HEI Libraries when taken as a whole and in terms of a) Services, b) Resources, c) Facilities/Physical Environment, and d) Personnel?
4. Is there a significant difference in the extent of the ICT capability of HEI Libraries?
5. Is there a significant difference in the level of service quality of HEI Libraries?
6. Is there a significant difference in the level of client satisfaction with HEIs Libraries?
7. Based on the results of the study, what enhancement program can be proposed to enhance the ICT capability, service quality, and client satisfaction at HEI's libraries?

1.2 Hypotheses of the study

This study hypothesized the following:

1. There is no significant difference in the extent of the ICT capability of the HEI Libraries.
2. There is no significant difference in the level of service quality of HEI Libraries.
3. There is no significant difference in the level of client satisfaction with HEIs.

1.3 Framework of the study

This study was anchored to the following theories and concepts, which have great relevance and support to the present study.

First is the Technology Acceptance Model (TAM) theory developed by Davis in 1989. TAM is an information systems theory that models how users come to accept and use technology. The model suggests that when users are presented with new technology, several factors influence their use. The theory further indicates that perceived usefulness and ease of use determine an individual's intention to use a system.

The theory provides a valuable tool for library managers to assess the likelihood of success for new technology introductions. It helps us understand the acceptance of initiatives' constructive design, including training and marketing, directed at consumer groups that may be less likely to embrace and use new programs (Venkatesh *et al.*).

Since the TAM is gaining popularity for understanding the relationship between humans and technology through perceived usefulness and ease of use, its adoption in this study presents the foundation for ascertaining the extent of ICT capability, service quality, and client satisfaction as bases for designing a library enhancement program. The usefulness of this theory to the present study predicts individual adoption and use of new technologies in the library setting.

On the other hand, this research also focused on the LibQUAL+ model, developed from a conceptual model based on SERVQUAL, a standard service quality assessment method. LibQUAL+ is a tool that libraries use to solicit, track, understand, and act upon users' opinions of service quality. Further, this tool helps libraries assess and improve library service, change organizational culture, and market the library. LibQUAL+ is a way of listening to the users. In other words, LibQUAL+ is a tool for measuring library users' perceptions of service quality, and it identifies the gaps among minimum, desired, and perceived service expectations. It uses a scalable interface and protocol to ask library users about their service expectations. It is designed to identify gaps among minimum, desired, and perceived service expectations (Bavakutty & Majeed, 2005)^[3].

In this study, the LibQUAL+ instrument with 41 items that categorized five dimensions was used to determine the level of service quality provided by the public HEIs libraries. The first dimension, the Affect of Service, represents staff-related issues, like knowing how competent the library staff members handle users' information-related queries or problems. On the other hand, the Information Control dimension is connected to information resources and digital technology-based tools for accessing library resources. In contrast, the Library as a Place dimension deals with space and other physical facilities accessible and supported by the library.

This study analyzes customer satisfaction with library services, resources, facilities, and personnel using the Expectancy-Disconfirmation theory with Four Zones of Tolerance (ZoT) formulated by Oliver (1980)^[15]. Expectancy-Disconfirmation Theory defines the consumer's responses to evaluating a perceived discrepancy between the pre-conceptualized performance standard and the service's actual performance after a customer has experienced using it (Cristobal). It means that when performance exceeds expectations (or other pre-conceptualized standards), it results in positive disconfirmation and satisfaction. When performance is less than expectations (or other pre-conceptualized standards), it results in negative disconfirmation and dissatisfaction.

To elaborate on the theory applied in this study, clients have some pre-conceptualized standards in their minds that guide their decision to use services, resources, facilities, and personnel before using them. The clients evaluate the library's performance and capability against pre-conceived standards after using it to determine whether or not a resource or service meets their needs or exceeds their expectations.

1.4 Related literature

Libraries are being developed as authentic and authoritative languages in which knowledge of all human endeavors can be acquired, processed, preserved, and made easily accessible to all, regardless of gender, status, religion, race,

or color. Its primary function is to meet the information needs of its users and society as a whole. These were previously done by traditional library facilities, which use the standard methods of information collection, storage, retrieval, cataloging and classification, circulation, and others. With the implementation of information and communication technology libraries and information services, unprecedented developments and transitions have occurred (Ekwelem, 2019)^[10].

Furthermore, Fagbe *et al.* (2015)^[11] discussed the importance of academic libraries and information centers as sources of useful documents that aid in meeting society's knowledge needs. These centers are also outfitted with cutting-edge information technology (IT) tools in modern settings to encourage the collection, distribution, and access of information to resources located in remote repositories where this was previously not possible. To that end, it is impossible to overstate the importance of information technology (IT) in academic libraries in Nigeria in meeting the educational needs of their patrons. The availability of space, technological know-how, a trained IT workforce, support, and a maintenance culture are all factors to consider when establishing fully functional libraries that comply with IT. Once these have been identified, understanding IT resources and providing appropriate training to future users of these resources may pose significant challenges.

Izevbekhai and Egharevba (2020)^[12] study appraised ICT competency among library users in private university libraries in Edo State, Nigeria. The findings reveal that most library users in private university libraries in Edo State, Nigeria, are familiar with using ICT devices and are competent in using ICT devices to search for information in university libraries. However, the study further reveals that most library users in private university libraries in Edo State are not competent in using e-resources platforms (Ebscohost, Research4life, Jstor, etc.) available in the university libraries. Therefore, it is recommended that the management of private university libraries acquire more ICT devices for the library users and train them to enhance their knowledge of e-resources platforms.

ICT is primarily used in libraries to provide various services such as access to OPAC, library databases, automated circulation of library materials, and others. As a result, ICT services have significantly impacted every aspect of academic library activity, providing its users with value-added information services and access to a wide range of digital information resources (Bhoi, 2007)^[5].

Bilson and Markwei (2019)^[6] found out that cataloging and classification, online public access catalog, acquisitions, video conferencing, web 2.0 and social networking tools, online search and retrieval, electronic resources, digitization, electronic/digital libraries, and institutional archives, website library, indexing and abstracting technological services, and bibliographic guidance have all benefited from ICT. Furthermore, they state that, despite the tremendous changes brought about by ICT in Ghanaian libraries, they are still confronted with numerous challenges that must address for them to operate efficiently and provide the necessary information resources to their users. Thus, it is recommended for policymakers, particularly those in charge of libraries, to provide funding for ICT equipment and infrastructure, maintain and update ICT equipment, train users and staff, involve management in ICT-related issues in libraries, to provide an uninterrupted power supply

supplemented by standby generators, and to provide fast and continuous bandwidth.

Partap (2019)^[17] avers that due to the impact of Information and Communication Technology (ICT) and users' changing needs, libraries must shift from a manual to an automated environment. Users now want quality services within the shortest possible time. Libraries have to assess their services from the user's point of view. The user can judge the services better provided by the concerned Library. The twenty-first century ushers in a series of transformations that affect all aspects of society. Reading has become more important in integrating new communicative expressions, such as multimodality, as discursive processes have evolved to more complex forms.

The twenty-first century ushers in a series of transformations that affect all aspects of society. Libraries, as irreplaceable sources of information, must revise their goals to aid in the task of multiliteracy. Reading promotion is essential to library tasks, and technology can be instrumental in introducing users to texts. Because this paper presents an intervention project to promote reading using ICTs that was carried out with a library group of public libraries, it demonstrated a positive impact on librarians' tasks as well as the need for training in reading promotion using ICT (Rendón-Galvis and Jarvio-Fernández, 2020)^[19].

According to Naik and Prakash (2020)^[13], the use of Information and Communication Technology (ICT) in today's libraries and information centers is critical. ICT aids in capturing, processing, storing, and communicating information. To function effectively and efficiently, no library can continue to rely solely on traditional printed information resources.

2. Materials and methods

This study used a descriptive research design with comparative methods. Since the study determined the ICT capability of the libraries of Higher Education institutions concerning service quality and client satisfaction as a basis for the proposed action plan, this method was appropriate. The subject of this study was the selected HEIs Libraries in Negros Occidental, which consisted of six (6) local colleges and state universities, and the faculty and students were the respondents who participated in the conduct of this study. The respondents were 283 faculty members and 345 fourth-year college students as the end-users of the libraries' services, resources, and facilities. The areas assessed were the ICT capability in terms of facilities, services, and usability, the level of service quality in terms of the affect of service, information control, library as place, and client satisfaction. Stratified random sampling was used to select the respondents to ensure that each stratum was well represented. The respondents per school were then identified using a simple random sampling technique based on the lottery method. This study utilized the researcher-made survey questionnaire, which tested validity and reliability. Due to pandemics during the conduct of the study, the survey questionnaire was converted into Google forms and administered online. This research limits the questionnaire's items to answer questions and the statistical tools used in processing data such as mean, Analysis of Variance (ANOVA), or F-test.

3. Results and discussions

Table 1: The extent of ICT Capability

HEI	Facilities		Services		Usability		As a Whole	
	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
A	2.86	Moderate	2.69	Moderate	3.04	Moderate	2.83	Moderate
B	2.97	Moderate	2.79	Moderate	3.24	Moderate	2.98	Moderate
C	3.62	High	3.66	High	3.83	High	3.70	High
D	3.00	Moderate	3.13	Moderate	3.21	Moderate	3.11	Moderate
E	3.51	High	3.41	High	3.82	High	3.56	High
F	3.36	Moderate	3.36	Moderate	3.59	High	3.42	High
TOTAL	3.28	Moderate	3.25	Moderate	3.51	High	3.33	Moderate

Table 1 shows the result of the data gathered in determining the extent of the ICT capability of the selected local colleges and state universities in Negros Occidental as assessed by their respective faculty and students. Concerning ICT facilities, the results revealed that School C had the highest mean of 3.62, interpreted as High, and School A had the lowest mean of 2.86, interpreted as Moderate. Furthermore, the obtained mean of 3.28 indicates that the ICT facilities of the selected local colleges and universities are Moderate when taken as a whole. As a result, these libraries provide ICT facilities, but their availability and accessibility are not yet fully maximized unless users request them. In terms of ICT services, School C received the highest mean of 3.66, which was interpreted as High. On the other hand, School A had the lowest mean of 2.69, which was interpreted as Moderate. In general, the selected local colleges and universities obtained a moderate level of ICT services, as evidenced by the obtained mean of 3.25. As a result, ICT services are typically provided, available, and accessible when users request them. Furthermore, in terms of ICT

usability, School C received the highest mean of 3.83, interpreted as High, while School A received the lowest mean of 3.04 and was interpreted as Moderate. The ICT usability of the selected local colleges and state universities is generally high, with a mean of 3.51. The findings indicate that information and communication technology (ICT) is an effective major tool in providing quick and accessible services, updated resources, and meeting users' needs quickly.

When taken as a whole, School C obtained the highest mean of 3.70, interpreted as high, and School A, got the lowest mean of 2.83, interpreted as Moderate. Overall, the ICT capability of the selected local colleges and state universities is Moderate, as shown in the obtained mean of 3.33. It is evident in the result that School C consistently got the highest mean regarding the ICT capability in terms of facilities, services, and usability. The result means that this college has maximized the adoption of ICT in its library operation. However, it can note that School A consistently got the lowest mean regarding its ICT capability. The result

entails that School A needs to improve its ICT facilities, services, and usability capability. Further, it shows that improvement or enhancement is still needed in enhancing

their ICT capability. It may result from inadequate and insufficient ICT facilities, services, and usability.

Table 2: Level of Service Quality

HEI	Affect of Services		Information Control		Library as place		As a Whole	
	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
A	3.58	Very Good	2.99	Good	3.68	Very Good	3.39	Good
B	3.44	Very Good	3.09	Good	3.81	Very Good	3.40	Good
C	3.92	Very Good	3.94	Very Good	4.01	Very Good	3.88	Very Good
D	3.48	Very Good	3.27	Good	3.72	Very Good	3.46	Very Good
E	4.03	Very Good	3.71	Very Good	4.47	Very Good	4.02	Very Good
F	3.76	Very Good	3.62	Very Good	3.85	Very Good	3.73	Very Good
TOTAL	3.74	Very Good	3.52	Very Good	3.92	Very Good	3.68	Very Good

Table 2 exhibits the results of the data gathered in determining the level of service quality of the selected HEI libraries composed of local colleges and state universities in terms of dimensions such as the affect of service, information control, and library as place. Regarding the Affect of Services, School E got the highest mean score of 4.03 while School B got the lowest mean score of 3.44, both interpreted as Very Good. Further, the results show that, as a whole, the affect of service obtained a mean score of 3.74, interpreted as Very Good. It implies that the library staff possessed responsiveness, assurance, empathy, and competence in dealing with their clients, especially in their information needs. Regarding Information Control, School C got the highest mean score of 3.94, interpreted as Very Good, while School A got the lowest mean score of 2.99, interpreted as Good. When taken as a whole, the information control dimension obtained a mean score of 3.52, interpreted as Very Good. The result means that the library provides sufficiency, adequacy, relevance, and timeliness of the information resources and services to a maximum level.

Regarding the Library as a place, School E got the highest mean score of 4.47, interpreted as Excellent, while School A got the lowest mean score of 3.68, and interpreted as Very Good. When taken as a whole, the Library as place dimension obtained a mean score of 3.92, interpreted as Very Good. The findings indicated that the library met the users' expectations regarding the infrastructure, physical space, and comfort. Overall, it is evident that School E got the highest mean score of 4.02 and was interpreted as Very Good. On the other hand, School A obtained the lowest mean score of 3.39, which is interpreted as Good. The overall result shows that the service quality of selected Public HEIs Libraries, local colleges, and state universities, as assessed by the faculty and students, has an overall mean score of 3.68, interpreted as Very Good. It implies that the service quality of the selected public HEI libraries addresses everything that clients love to have or experience and is provided to the maximum level.

Table 3: Level of Client Satisfaction

HEI	Services		Resources		Facilities/ Physical Environment		Personnel		As a Whole	
	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
A	3.16	Satisfied	3.15	Satisfied	3.34	Satisfied	3.67	Very Satisfied	3.33	Satisfied
B	3.24	Satisfied	3.21	Satisfied	3.55	Very Satisfied	3.82	Very Satisfied	3.45	Very Satisfied
C	3.82	Very Satisfied	3.78	Very Satisfied	3.93	Very Satisfied	4.03	Very Satisfied	3.89	Very Satisfied
D	3.27	Satisfied	3.18	Satisfied	3.49	Very Satisfied	3.64	Very Satisfied	3.44	Very Satisfied
E	3.74	Very Satisfied	3.89	Very Satisfied	3.93	Very Satisfied	4.35	Extremely Satisfied	3.98	Very Satisfied
F	3.63	Very Satisfied	3.64	Very Satisfied	3.84	Very Satisfied	3.86	Very Satisfied	3.74	Very Satisfied
Total	3.33	Satisfied	3.53	Very Satisfied	3.72	Very Satisfied	3.91	Very Satisfied	3.68	Very Satisfied

Table 3 shows the level of client satisfaction of selected HEI Libraries composed of local colleges and state universities in terms of services, resources, facilities/physical environment, and personnel.

In terms of services, it is evident that School C obtained the highest mean of 3.82, interpreted as Very Satisfied. However, School A obtained the lowest mean of 3.16, interpreted as Satisfied. When taken as a whole, the client's satisfaction with the library services obtained a mean score of 3.33, interpreted as Satisfied. It implies that the services like library orientation and instruction, automated circulation, accessibility of electronic resources, and the adoption of the library's online reference service matched the clients' expectations since they have to get what they expect, nothing more, nothing less.

Moreover, in terms of resources, School E obtained the

highest mean of 3.89, interpreted as Very Satisfied, and School A obtained the lowest mean of 3.15, interpreted as Satisfied. The overall results revealed that the clients are Very Satisfied with the library resources, as evidenced in the obtained mean of 3.53. It implies that the availability and accessibility of resources like reference books, periodicals, e-journals, and e-books exceeded the client's expectations since they met their needs and experienced some surprises that enhanced their satisfaction.

Consequently, in terms of facilities/physical environment, Schools C and E obtained the highest mean of 3.93, interpreted as Very Satisfied. Moreover, School A obtained the lowest mean of 3.34, interpreted as Satisfied. As a whole, the clients are Very Satisfied with the facilities/physical environment of the library, as evidenced in the obtained mean of 3.72. It would mean that the

facilities/physical environment of the library, such as its lighting and ventilation, conduciveness, computers, and electronic facilities, exceeded the client's satisfaction.

Furthermore, regarding personnel, clients from School E are Very Satisfied, with the highest mean of 4.35, while School D obtained the lowest mean of 3.64, but still interpreted as Very Satisfied. When taken as a whole, the clients are very satisfied with the library personnel, as shown in the obtained mean of 3.91. It means that the personnel's willingness to assist users' needs, the manner of dealing with them, and precisely their ICT skills were able to assist them in technological needs exceeded the client's expectations. Further, effective and efficient personnel are one of the most valuable assets a library can have. The personnel is the ones who handle the majority of the transactions in a library. In order to improve their professional skills, the personnel's performance must be evaluated by the person who usually serves them.

Generally, the results revealed that the clients of the selected public HEI libraries are Very Satisfied, as evidenced in the obtained mean of 3.68. The result would mean that the services, resources, facilities/physical environment, and personnel exceeded the expectations of its clients.

Table 4: Significant Difference in the Extent of ICT Capability

HEI Libraries	n	Mean	Computed value (F)	p-value	Interpretation
School A	111	2.83	20.113	<0.001	Significant at 0.05 level of significance
School B	62	2.98			
School C	185	3.70			
School D	78	3.11			
School E	78	3.56			
School F	114	3.42			
Total	628	3.33			

The result in Table 4 shows the difference in the extent of the ICT capability of the selected HEIs libraries. It is evident in the result that the selected public HEI libraries obtained a mean rank of 3.33. The computed F-value is 20.113 and a p-value of 0.000. Since the computed p-value is lesser than 0.05, it can be noted that there is a significant difference in the extent of ICT capability among public HEIs libraries. Further, the result indicates that the ICT capability of the local colleges and state universities differ significantly. Thus, the null hypothesis is rejected. Therefore, post hoc analysis using Scheffe's test was utilized to determine the group/s that showed differences among other groups. Post Hoc Analysis using Scheffe's test. In comparing the ICT capability among schools, there was a significant difference between School A and C (p = 0.000), School A and E (p = 0.000), School A and F (p = 0.000), School B and C (p = 0.000), School B and E (p = 0.016), School C and D (p = 0.000), and School C and F (p = 0.024) in which the computed p-value is lesser than 0.05 level of significance. The results further revealed that School A's ICT services, facilities, and usability are lower than those of Schools C, E, and F. On the other hand, other comparisons between schools bear no significant difference. The result means that School C has the highest level of ICT capability among other schools, while school A has the least ICT capability.

Table 5: Significant Difference in the Service Quality

HEI Libraries	n	Mean Rank	Computed value (F)	p-value	Interpretation
School A	111	3.39	13.524	<0.001	Significant at 0.05 level of significance
School B	62	3.40			
School C	185	3.88			
School D	78	3.46			
School E	78	4.02			
School F	114	3.73			
Total	628	3.68			

Table 5 shows the difference in the service quality of the selected public HEI libraries. It is evident in the result that the selected public HEI libraries obtained a mean rank of 3.68. The computed F- value (is 13.524 and has a p-value of 0.000. Since the computed p-value is lesser than 0.05, it can be noted that there is a significant difference in the service quality of the public HEIs libraries. Further, the service quality in local colleges and state universities differs significantly. Thus, the null hypothesis is rejected. The Post Hoc Analysis using Scheffe's test shows that in comparing the quality of service among schools, there was a significant difference between School A and C (p = 0.000), School A and E (p = 0.000), School A and F (p = 0.007), in which the computed p-value is lesser than 0.05 level of significance. The result indicates that School A had a good service quality compared to Schools C, E, and F. Moreover, the computed p-value between School B and C (p = 0.001), School B and E (p = 0.000), and School B and F (p = 0.048) is also lesser than 0.05 level of significance; thus, the result showed significant difference. The result implies that the service quality of School B is high compared to Schools C, E, and F. Furthermore, it is evident in the result that School C and D (p = 0.004) and School D and E (p = 0.000) significantly differ since the computed p-value is lesser than 0.05 level of significance. The result means that Schools C had a very good service quality with School D, and the service quality of School D is higher than with School E. On the other hand, other comparisons between schools bear no significant difference. The result means that School E has the highest quality of service among other schools, while school A has the least quality of service.

Table 6: Significant Difference in the Level of Satisfaction

HEI Libraries	n	Mean	Computed value(F)	p-value	Interpretation
School A	111	3.33	12.493	<0.001	Significant at 0.05 level of significance
School B	62	3.45			
School C	185	3.89			
School D	78	3.44			
School E	78	3.98			
School F	114	3.74			
Total	628	3.68			

Table 6 shows that library clients have a high level of satisfaction, as evident in the obtained mean of 3.68. It is evident in the result that the computed F value of 12.493 with a p-value of 0.000 is lesser than the 0.05 level of significance. Therefore, the null hypothesis is rejected. It means that there is a significant difference in the level of

client satisfaction with selected public HEI libraries. Post Hoc Analysis using Scheffe's test compares clients' satisfaction among schools. There was a significant difference between School A and C ($p = 0.000$), School A and E ($p = 0.000$), and School A and F ($p = 0.001$), as shown in the computed p-value, which is lesser than 0.05 level of significance. The result shows that the satisfaction level of the clients of School A differs significantly of Schools C, E, and F. Likewise, the level of clients satisfaction of School B and C ($p = 0.009$), School B and E ($p = 0.041$), School C and D ($p = 0.002$), and School D and E ($p = 0.018$) significantly differ as shown in the computed p-value which is lesser than 0.05 level of significance. On the other hand, other comparisons between schools bear no significant difference. The result means schools C and E have almost the same level of client satisfaction among other schools, while school A has the least level of client satisfaction.

4. Conclusions

Based on the findings, it is concluded that the extent of the ICT capability of HEI Libraries in terms of services, facilities, and usability is at a moderate level. Moreover, the selected HEI libraries had a very good service quality in terms of the affect of service, information control, and library as a place. The clients of the selected HEIs libraries, both faculty and students, were very satisfied with the provision of new innovative library services provided by the libraries. The ICT capability and the service quality of the selected HEI libraries differ significantly. The level of client satisfaction with HEI libraries differs significantly. For ICT capability, the library, through the support of the Administration, should improve its ICT capability through the adoption of technology-based facilities and need to subscribe to a strong internet connection, both wired and wi-fi. Moreover, the library must adopt KOHA or another integrated library system for their OPAC, e-reference, and e-circulation purposes.

5. Recommendations

The library should redesign its daily function by integrating technology into its processes. The library should develop its collection for client satisfaction by providing recent and updated books and subscriptions to electronic databases and e-books. Moreover, the library should build a digital library with access to open access educational resources. The library staff should also be trained in automation and content management systems to automate the libraries and develop their digital libraries/repositories. For the enhancement program, it is recommended that the Administration adopt and implement all the programs and activities indicated in the proposed Library Enhancement Program to enhance their ICT capability and service quality to exceed their client's satisfaction.

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