

Evaluation of ICT Facilities and Use by Patrons of Kenyatta University Post-Modern Library, Kenya

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Abstract

The study evaluates ICT facilities and their use by Kenyatta University Postmodern Library patrons. The study's objectives were to assess the available ICT facilities in Kenyatta University Post Modern Library and determine the purpose of using the facility and the challenges patrons face while using ICT facilities. The study employed descriptive survey research; 120 respondents were chosen as the population. Total enumeration was used as the sample size. A convenience sample technique was used for the study. The study used a questionnaire as a major data collection instrument; it was administered to 120 Kenyatta University Post Modern Library staff patrons through the Google form platform. Data collected were analyzed using descriptive analysis through frequency and percentages. The study revealed that computers, printers, the internet, and photocopying machines, among others, are the available ICT facilities in the Library. The finding also indicates that the available facilities are used for scanning, photocopying, surfing the internet, and researching. The study recommends that the Library should improve internet connectivity by increasing bandwidth. The Library should improve on training the users on ICT skills to enhance the use of ICT facilities in the Library; the Library should seek funds to enable it to acquire more ICT facilities.

Keywords: Evaluation, Information and Communication Technology (ICT) facilities, Usage, Patrons, Kenyatta university post-modern library.

Introduction

Advancements in information and communication technology (ICT) have significantly impacted the efficiency and effectiveness of academic Libraries in serving patrons in the 21st century (Ajemasu, Inuwa, Saad & Jumba, 2019). Information itself and the ways it is accessed have changed due to development in information and communication technology, according to (Saleem, Shabana & Batcha, 2013). Amollo (2011) comments that "libraries must embrace ICT to keep abreast of user expectations, habits and global trends".

Walmiki and Ramakrishnegowda (2009) state that information and communication technology comprises a set of technological tools used to identify, collect, organize, create and disseminate data and information. The authors added that ICT comprises digital technologies such as computers, information networks, the internet and software applications. Supporting this view, Ajemasu et al. (2019) agree that information and communication technology is a comprehensive concept that denotes not only a single unit of technology but an assembly of

technologies like telecommunication, data processing equipment, and so on.

Odionye's (2016) study on the use and applications of ICTs in Nigerian university libraries, a case study of the University of Nigeria Nsukka, revealed that students (library patrons) use scanning services of the Library to digitize documents. A similar study in Nigeria academic libraries conducted by Ivwighreghweta (2013); Ogbonna (2003) reveals that Libraries use computers, photocopiers and networks to provide opportunities for resource sharing, communication and full-text searching among libraries. Sivakumaren, Geetha and Jeyaprakash's (2011) study on ICT facilities use in various university libraries in India reported using computers, scanners, printers and photocopiers, barcode readers, smartcards, and internet connectivity were also identified.

According to Odongo's (2011) study on the assessment of ICT adoption in Kenyan academic libraries, a case of the University of Nairobi Libraries reported similar use of ICT facilities as above with the addition of LAN, Networked servers, LCD projectors, CD ROM readers, and book check systems. Similarly, Namanya's (2014) study on the utilization of information communication technology for research output amongst postgraduate students, a case study of the University of Nairobi Library system, found that 71% of the respondents agreed that internet facilities are used mostly for research output as they enable postgraduate students to source for reference materials. The study reports that patrons preferred the internet as it provides wider coverage of information resources.

An observation made at Kenyatta University Post Modern Library agrees that the Library has been using various ICT facilities to improve services such as computers, printers, scanners, photocopiers, internet connectivity, OPACs and so on. Just like every other academic Library in developing Countries, Kenyatta University's post-Modern Library faced challenges such as poor internet connection, technical skills, high cost of ICT implementation, availability of modern technology infrastructure, cost of staff training, Library Managers' readiness for implementation, among others (Jameel, 2018).

Statement of the Problem

Academic libraries in developed nations have been able to use ICT facilities to improve services. Background literature has shown that despite the availability of ICT facilities in Kenyatta University Post Modern Library, not all patrons can access and maximize utilization of such facilities to acquire knowledge and retrieve information. Although the Library has made some effort to increase awareness and usage of the ICT facilities, much has not been achieved increase the use of ICT facilities. The reasons behind the low usage are not known. Again, the little effort made by the Library to improve services is faced with various challenges, such as poor funding, technical know-how, and internet connectivity, among others. Therefore, it is necessary to evaluate ICT facilities available in PML, frequency and purpose of usage, and the challenges faced by the Library patrons while using ICT facilities to understand how these facilities are being utilized.

Purpose of the study

This study aims to evaluate the availability and use of ICT facilities in Kenyatta University Post Modern Library, intending to ascertain the relevance and usefulness of the available ICT in the Library.

Research Objectives

The specific objectives that will guide this study are:

1. To assess the available ICT facilities in the Post-Modern Library of Kenyatta University
2. To find out the frequency of usage of the ICT facilities in the Post-Modern Library of Kenyatta University
3. To determine the purpose of using the ICT facilities in the Post-Modern Library of Kenyatta University
4. To find out the challenges faced while using ICT facilities in the Post-Modern Library of Kenyatta University

Materials and Methods

For this study, the descriptive survey research design was adopted to show the current situation in the Library under study. The study population comprised 120 patrons of the Postmodern Library of Kenyatta University. Bernard (2012) supported this by asserting that if a study population is less than two hundred (200), the entire population should be used for the study. Therefore, total enumeration was used as our sample size because the population is small and manageable. A convenient sampling technique was used for the study. The questionnaire was used as a data collection method, allowing each respondent to fill in their response independently. Data collected was analyzed using descriptive statistics of frequency counts and percentages. The researcher used google form and posted the questionnaire to various social media platforms belonging to the Library to collect data. It took the researcher two months to collect the data for the article. The three authors did a face validity of the questionnaire to ensure that the instrument tests what it is expected to test. Research assistance help was sought in administering the research questions designed through a google form. The research assistant helped re-post the questionnaire on the Library's social media platform. Ethical consideration was made to avoid infringing on the respondents' privacy and maintain the confidentiality of the information obtained.

Literature Review

Use of ICT facilities in Academic Libraries

Many studies have been carried out to show that Libraries have done their best to incorporate technology into their operations to offer better services to their clients. A study by Sivakumaren et al. (2011) shows that, at least, there was the availability of the following ICT facilities in Academic Libraries in India; computers, scanners, printers, laptops, and photocopiers. The authors recommended that "the university Libraries must increase the number of computers available to enable the users to maximize the usage of ICT-based resources and services."

Egbuna's (2017) study on the availability of ICT facilities in Academic Libraries in Anambra shows that all institutions have ICT awareness. Still, the available facilities were inferior, and only one of the institutions was committed to developing ICT in its services. Frequency is how often ICT facilities are used in a period. In their study, Ngozi, Adaora and Grace (2017) found that more students accessed ICT facilities weekly and bi-monthly at 56.7% while 46.6% accessed it weekly when they had written assignments. They stated that 50% accessed daily while 11% of the students accessed once a semester, showing that more students use ICT facilities. Library patrons use academic Libraries to serve various purposes. In a study

conducted by Ivwighrehweta (2013) on the application of information technology to academic library operations and services at Nigeria Western Delta University, it was found that students use Library resources for research, browsing the internet, scanning documents, photocopying, games, electronic communication and searching for information. In support, Namanya (2014) agrees that various facilities such as the internet, OPACs and Email facilities are used for research output.

Challenges of using ICT facilities in Academic Libraries

Despite the benefits of using ICT facilities in Academic Libraries, most Libraries face diverse challenges ranging from technology change, funding, software and hardware becoming obsolete, inadequate preparedness for implementation, and poor management readiness. Chisenga (2006) researched ICT opportunities and challenges in University Libraries in Eastern, Central, and Southern Africa. The finding identified the following challenges affecting the use of ICT facilities in Academic Libraries: sustainability of ICT infrastructure, ICT technical infrastructure, using and managing ICT facilities, preservation of digital-based information resources, management of intellectual property rights, institutional policy and strategy.

Khanya (2021) researched information communication technology usage in Limpopo Libraries. He identified three major challenges affecting the use of ICT facilities in the Library: poor infrastructure, untrained staff and lack of finances. Ogbonna (2003) identified problems associated with using ICT in Academic Libraries in Nigeria, such as poor funding, poor communication facilities, poor power supply, and inadequate computer literacy. Like other developing countries, Kenyan academic Libraries have faced the same challenges as other African University Libraries, which have necessitated the need to identify these challenges and proffer necessary solutions to enhance service delivery.

Results

The research findings are based on the respondent's responses to the research questions, such as available ICT facilities used, the purpose of use and challenges of using ICT facilities in Kenyatta University Post Modern Library; each research response is derived from a structured questionnaire to recommend a solution to the research problems at hand.

Demographic information

Socio-Demographic data of the respondents provide information on research participants. They are essential for generalization purposes to establish if the people in a study are a representative sample of the target community.

Table 1

Status of the participant/ respondents

The purpose of identifying the Status of the respondents is to ensure even participation of the sampled population. The respondents cover postgraduate and undergraduate students of the Library. Table 1 below shows the Status, number of respondents and percentages of respondents.

S/N	Status of the respondents	NO. of respondents	Percentage
1	Postgraduate students	24	20%
2	Undergraduate students	96	80%
TOTAL		120	100%

Table 1 above shows that (80%) of the respondents were undergraduate students, while (20%) of the respondents were postgraduate students. This shows that most respondents who participated in the study were undergraduate students.

Table 2

Gender

The purpose of identifying the gender of the respondents is to ensure gender balance and equality among postgraduate and undergraduate students of the Library. Table 2 below shows the Status, number of respondents and percentages of respondents.

S/N	Gender	No .of respondents	Percentage
1	Male	52	43%
2	Female	68	57%
Total		120	100%

Table 2 above shows that most of the respondents who participated in the study are female (57 %), followed by male (43 %); This shows that most of the respondents are female.

Table 3

Availability of ICT facilities in Kenyatta University PML

In this segment, respondents were asked to state the availability of ICT facilities in Kenyatta University's post-modern Library to identify the most used ICT facilities among the Post Modern Library staff. Table 3 below shows the respondent's details.

ICT Facilities	Available	%	Not available	%	Not sure	%	Total	
							F	%
Computers	110	92	-	-	10	8	120	100%
Photocopiers	80	67	5	4	35	29	120	100%
Document scanners	79	66	17	14	24	20	120	100%
Printers	100	83	-	-	20	17	120	100%
OPACs	120	100	-	-	-	-	120	100%
Internet/WIFI	120	100	-	-	-	-	120	100%
Fax machine	57	47	-	-	63	53	120	100%

ICT Facilities	Available	%	Not available	%	Not sure	%	Total	
							F	%
Smart card reader	50	42	28	23	42	35	120	100%
Barcode reader	70	58	12	10	38	32	120	100%
Network	120	100	-	-	-	-	120	100%

SA strongly agree, A agrees, D disagree, SD strongly disagree

Table 3 above reveals the frequency of usage of various ICT facilities by the patrons at KU PML internet is the most frequently used facility with a frequency of 110, representing (92%) followed by the network with a frequency of 80, representing (67%), OPACs with a frequency of 78 representing (65%) and computers with 58%. The returned rates show that the Fax Machine is the least used facility with a frequency of 118, representing (98%) followed by the barcode reader with (73%) and then the intelligent card reader with a frequency of 60, representing (50%). Sivakumaren et al. (2011) agreed with this study in their article on ICT facilities used in various University Libraries in India. The study reported that the use of computers, scanners, printers and photocopiers, barcode readers, smartcards, and internet connectivity were also identified.

Table 4

Purposes of using ICT facilities in the studied Library

Table 4 below identifies the purpose of using the ICT facilities in Kenyatta University Post Modern Library. Respondents were asked to pick from the provided options for using ICT facilities. The detail is presented in Table 4 below.

S/N	Option	SA	A	D	SD	Response
1	Complete research work	✓				SA
2	Photocopying document		✓			A
3	Scanning document		✓			A
4	Browsing the web	✓				SA
5	Online learning/classes	✓				SA
7	Write/ complete assignments		✓			A
8	Recreation		✓			A
9	Interaction/communication	✓				SA
10	Retrieve information resources	✓				SA

SA strongly agree, A agrees, D disagree, SD strongly disagree

Table 4 above shows that most respondents strongly agree on using ICT facilities for the following purposes; completing research work, browsing the web, online learning, interaction/communication and retrieving information resources. Most agree on using it for recreation, photocopying documents, scanning documents, completing or writing assignments and updating knowledge. Other purposes listed by respondents were submitting online assignments, borrowing library items (books), sharing resources, accessing library OPACs from their desktops remotely and printing documents. The study agreed with Ivwighrehweta (2013)

study on the application of information technology to academic Library operations and services in Nigeria. It was found that students use library resources for research, browsing the internet, scanning documents, photocopying, games, electronic communication and searching for information.

Table 5

Challenges faced by patrons while using ICT facilities in the studied Library

In this segment, the research intends to identify the challenges associated with using available ICT facilities in Kenyatta University Post Modern Library. The respondents were given a range of options to identify challenges they encountered while using ICT facilities during service delivery. The respondent's details are presented in table 5 below.

S/N	Option	SA	A	D	SD	Response
1	inadequate ICT facilities		✓			Agree
2	Limited access		✓			Agree
3	Irregular power supply			✓		Disagree
4	Low internet connectivity		✓			Agree
5	Inadequate technological skills		✓			Agree
6	Cost of reprographic services	✓				Strongly agree
7	Un-functioning computer labs		✓			Agree

SA strongly agree, A agrees, D disagree, SD strongly disagree

Table 5 above shows library patrons' challenges while using ICT facilities. Most respondents agree that inadequate ICT facilities, limited access, low internet connectivity, inadequate technological skills and non-functioning computer labs exist. Respondents strongly agree that the high cost of reprographic services is a challenge. On the other hand, the majority also disagreed that there was an irregular power supply because PML has an automatic back - up generator which supplies the Library with electricity whenever there is a power shortage. Other challenges raised by respondents include; frequent breakdown of facilities, lack of awareness about the availability of certain facilities in the Library, strict library policy and OPACs blocking users from accessing documents beyond the confines of Library collections. These challenges hinder the effective utilization of ICT facilities by patrons of KU PML. The study agreed with an article by Ogbonna (2003), which mentioned problems associated with using ICT in Academic Libraries in Nigeria, such as poor funding, poor communication facilities, poor power supply, and inadequate computer literacy.

Discussion

The finding summary shows that Kenyatta University's post-modern Library uses computers, photocopiers, document scanners, printer OPACs, Internet. WIFI and back code machine. Despite the high presence of ICT facilities in the Library, the fax machine has not been actively used.

The study summary findings also show that all the available ICT facilities in the Kenyatta University post-modern Library are used for scanning, photocopying, research work, browsing the web, and online learning/classes, among others

The findings also show that Kenyatta University's post-modern Library is faced with

challenges such as inadequate ICT facilities, low internet connectivity, and inadequate technological skill. The Library is not faced with problems related to the power supply.

Conclusion

In concluding this paper, we can say without contradiction that Kenyatta University's post-modern Library is equipped with ICT facilities to improve its services. The article also concludes that ICT facilities are used for research, document scanning, photocopying, and browsing the web. Kenyatta University's post-modern Library is faced with problems associated with using ICT facilities. Such problems are inadequate ICT facilities, low internet connectivity and inadequate technological skill.

Recommendations

The study, therefore, recommends the following solutions to the stated findings:

1. The Library should improve internet connectivity by increasing bandwidth. The higher the bandwidth, the easier it is for Library patrons to use less time to browse the web or retrieve information resources from the internet hence saving the time of library users.
2. The Library should improve on training the users on ICT skills to improve the use of ICT facilities in the Library.
3. The Library should seek funds to enable it to acquire more ICT facilities. Such sources of funds can be sought from its parent institution, the government grants, through writing solicited or unsolicited proposals to donors, and through fines and fees charged from the provision of reprographic services. These initiatives assist in solving the problems associated with inadequate ICT facilities

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