Perceived influence of students Programme of study on Utilisation of online library services at the University of Nairobi, Kenya

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Abstract

The purpose of this study was to investigate the influence of demographic and institutional factors on the utilisation of online library services by distance learners of the University of Nairobi. Specifically, the study aimed at achieving one objective: viz. Asses the influence of students program of study on Utilisation of Online Library Services by Distance learners at the University of Nairobi. The study was anchored on the positivist research paradigm. Descriptive survey and correlation research designs were adopted for this study. Data were collected using self-administered questionnaires and interview schedules. The target population consisted of 1671learners in the School of Open and Distance Learning and 14 librarians found in the University of Nairobi namel Kikuyu Campus, Chiromo Campus and the main library Campus (The Jomo Kenyatta Memorial Library). The sample size was 312 respondents. A pre-test study was conducted using 31learners and 1 librarian. This constituted 10% of the study sample. The researcher tested for the inter-item reliability of the instruments using Cronbach's Alpha and results ranged from 52.5%-95.8% for learners' questionnaires while that of librarians recorded 69.8%.Data analysis were done using frequency counts, the mean and standard deviation while hypothesis was tested using multiple linear regression analysis; One Way Analysis of Variance (ANOVA) was at 0.05 level of significance. The finding indicated that there is a significant relationship between internet connectivity and Utilization of online library services at the University of Nairobi. The results showed a coefficient of correlation $r = 0.309$, which suggests a positive relationship between variables; $R^2 = 0.137$, which implies a positive linear correlation. The significance of change also referred to as the ρ-value is $\rho = 0.019$. This value is pegged on the study putting the limit of 0.5 or 95 percent degree of the confidence interval. Since ρ-value 0.019<0.05, the investigator rejected the null hypothesis and accepted the alternative that there was a significance relationship between Internet connectivity and utilisation of online library services at the University of Nairobi. The study recommends that all distance learners irrespective of their gender and age should be enlightened to use online library services provided by the University of Nairobi. In order to create awareness, there is a need to engage distance learners in activities that give practice and require them to demonstrate their competence in evaluating the quality of information they use. The outcome of this study may act as a basis for policy formulation for both the University of Nairobi and the government of Kenya regarding Distance Learning Programmes. Further research may be carried out to ensure that these demographic and institutional factors are tested in other study samples found in other public universities in Kenya.

Keywords: Internet connectivity, Institutional Factors, Distance Students, Utilization, Online library Service

INTRODUCTION

Distance learning has gained popularity in the recent times among universities in the world. This is due to the fact that universities are able to control the number of learners enrolling for the regular programmes (Farahani, 2003). Effective implementation of distance learning programme calls for utilisation of library resources and services, audio-visual media and application of information communication technology (Naidu, 2006). These resources and services are important because they can be used to communicate to learners in distance locations and at the same time enhancing effective coordination of sessions with groups or individual learners. Similarly, learners have the opportunity of getting information from print media and online library services while out of session (Naidu, 2006). This is to ensure that distant learners are adequately equipped with the right course content and examination techniques. Distance learners are called upon to make maximum utilisation of study centres to enable them to read and search for information online (Sacchanand, 2002).

The library is thus the focal point of any centre of learning because it facilitates reading, inquiry and independent study by providing relevant support services and resources for teaching and learning (Candela, Athanasopoulos, Castelli, El Raheb, Innocenti, Ioannidis &Katifori, 2011). The library usually contains information services in different forms such as print media, electronic media, and the Internet hence these services are important in supporting distance learning programmes. Most researchers in distance learning point out that the digital library is an important component of distance learning programmes (Caspers, Fritts&Gover, 2001).

In a related study by Ganiyu (2013) on influence of demographic factors on use of online library resources by undergraduate students in two private universities in Nigeria, the findings indicated that University learners patronise their university libraries to search and retrieve relevant and up-to-date information in electronic or online format for effective teaching, learning and research purposes. The study further describes university library patrons as; undergraduate learners, postgraduate learners, researchers, information professionals, staff and other users from outside the university who intend to use the university library. Distance learners are expected to read further beyond class instructions to collect and retrieve information for classwork, assignments, seminars term papers, dissertations, theses and projects, and this information could be retrieved from online library resources (Ganiyu, 2013).

Online library services have emerged as an important component of the research process for distance learners (Owusu-Ansah&Bubuama, 2015). This is because once the learners have conducted basic research such as consulting lecturers or checking at references in their reading lists they turn to online literature to initiate their research process. Notably, online library resources and e-resources have become areas of interest in higher education. As a result of this development, university libraries worldwide have embraced the regular application of Internet resources, search engines and use of e-mail services as part of their normal communication process (Kindilchie&Sammarine, 2008; Owusu-Ansah&Bubuama, 2015).

The use of the online database is usually faster than searching for the information in the print format more so when looking for the information in the archives. Online library services are more direct especially when one wishes to apply combinations of words to search for several files at ago, a task that can be achieved more easily than when using printed materials (Candela, et al., 2011).Online resources can also be downloaded, printed and search outcomes saved for future reference and at the same time flexible and can be updated more often than printed tools. Distance learners have the opportunity of accessing online library services from their distant locations away from the university library through the dial-up access (Dadzie, 2005; Candela, et al., 2011; Owusu   Ansah&Bubuam,2015).

The other advantages of employing online library resources and services consist of; regular accessibility to online resources, the users have got the opportunity of operating from any location, availability of information in one place, numerous resources can be provided and finally, it creates room for easy access to information (Candela, et al., 2011; Owusu-Ansah&Bubuama, 2015). Learners' usage of online library services is informed by the fact that these services enhance the quality of the research work by enabling them to take less time in doing research while taking more time in the writing of their research papers. An online library service also increases learner's ability to obtain more services, a diversity of services, and more current and up-to-date services (Mwatela, 2013).

The advent of online technology has made it possible for universities to come up with different ways of re-structuring their collections and information services in order to embrace the new developments. In responding to the new developments, university libraries have adopted the use of online information services, Information and Communication Technology (ICT) to meet the various demands of library users. Distance learners in spite of their demographic characteristics such as age, gender and religion are encouraged to explore the use of online

library resources and services in order to supplement their academic activities (Islam, 2011;Ganiyu, 2013; Nkamnebe, Udem, &Nkamnebe, 2014; Owusu-Ansah&Bubuama, 2015).

Globally, people are increasingly facing higher competition than ever before. Different from any other times in human history, this global competition is intensively knowledge based. CT in education has made significant progress in China over the last two decades in the higher education process and is highly applied in distance based education by the executing agencies, targeting learners and goals to be achieved. The ability of computer technologies to change university teaching and learning is becoming an acceptable norm by education technologists (Finger, 2007; Candela, et al., 2011).

The application of ICT in education is becoming a major contemplation as developing countries concentrate on improving the quality of education. In Africa, for example, Aiona (2008) conducted a study in four main institutions offering distance learning programmes namely, the Open University of Tanzania (OUT), University of Nairobi (UoN), University of South Africa (UNISA) as well as the University of Botswana (UoB). The purpose of the study was to find out the availability of library and information support services for distance learners in those institutions. The findings revealed that there were no library support services in the said universities except for UNISA, which had embraced the most current information technology in providing services to distance learners; thus, library collection could be readily accessed through the Internet (Aiona, 2008).

A little earlier, Kavulya (2004) examined library services provision for distance learning among selected universities in Kenya, including Kenyatta University (KU), Africa Virtual University (AVU) as well as the United States International University – Africa (USIU-A), all based in Nairobi, Kenya. The findings revealed that the learning, as well as information services available in the institutions' libraries, were inadequate and limited; thus, could not be accessed easily by distance learners. However, at AVU, the use of modern technology had taken root since both the catalogue and digital library were available on the Internet to all learners and other library users. Notably, AVU provided a digital library in the form of e-journals-books and above all, online archives. On its part, USIU-A had also made available its 6,000 electronic journals with full text on the Internet to its users (Kavulya, 2004).

Demographics and institutional factors usually offer important clues as to what factors promote distance learners' utilisation of online library services. For example, Islam (2011) conducted research on effects of demographic factors on e-learning effectiveness in Malaysian institutions of higher learning and found that learners' gender and level of education are key elements of e-learning programmes in education. The findings further revealed that learners with broad educational backgrounds had wider knowledge on application of technology and its merits in realising excellent academic achievement because this category of learners are equipped with the latest technological innovations and are up to date with computer usage and applications. Similarly, learners ought to be more computer literate in order to enhance the exploration of the Internet and update their level of understanding in information through e-learning (Islam, 2011).

Similarly, Okiki and Asina(2011) assessed factors influencing use of electronic information sources among postgraduate learners in six Nigerian universities, including University of Ibadan, University of Lagos, OnabisiOnabanjo University, gun State; Federal University of Technology, Akure University of Agriculture and Lagos State University, the findings showed a positive correlation between utilisation of electronic information and the key concepts, which included learners' background characteristics and institutional factors (Okiki&Asina, 2011).

Various studies have examined the influence of institutional factors on the utilisation of online library and information sources among learners in institutions of higher learning, including distance learners. For instance,

Alisona, Kiyingib, and Baziraake (2012) reported a significant correlation between utilisation of medical e-resources and poor Internet connectivity; while Owusu-Ansah&Bubuama (2015) identified slow access to Internet facilities as a key institutional factor constraining the utilisation of online library services by distance learners at the University of Ghana. Other institutional factors influencing utilisation of online library services include inadequate number of functional computers in relation to the number of learners (Alisona, et al., 2012); as well as inadequacy of ICT infrastructural facilities included shortage of computers, lack of affordable online access by learners, as well as absence of in-depth ICT skills and information searching skills among library staff (Watts &Ibegbulam, 2006). The utilisation of online information sources is also affected by frequent power outages, inadequate assistance by library staff, lack of user support systems, as well as lack of subscriptions to some databases (Molefi, 2008; Alisona, et al., 2012).

In Kenya, the ICT Sector Policy Guidelines notes that "inadequate implementation of ICT policies, regulatory intensions to support rapid development, deployment of ICT infrastructure, limited support for research and inadequate support to ICT support are some of the key challenges facing ICT in Kenya" (the Republic of Kenya, 2013).Still, in Kenya, a study conducted by Githinji(2014) on factors influencing University of Nairobi Master of Education degree learners' access and utilisation of ICT facilities, reported a low utilisation of scholarly electronic publications among postgraduate learners, particularly due to inadequate awareness about the availability of e-resources.

Despite enormous efforts made by various institutions to place information and communication as a key component of university teaching and learning, it emerges that both learners and faculty members are unable to make use of online resources and services. While this is usually attributed to the diversity of operational deficits on the part of learners, faculty, and universities, Githinji (2014) underscores the need for more research aimed at unearthing underlying factors that contribute to this kind scenario in Kenyan institutions of higher learning. It was in this context that the current study was an attempt to critically analyse the influence of demographic and institutional factors on utilisation of online library services by learners enrolled in the distance learning programme of the University of Nairobi.

Statement of the problem

Distance learners just like on-campus learners are entitled to information in all formats other than paper or print media (Nyambogo, Ongondo, and Ongus, 2004).The study further reiterates that despite this position, some distance learners lack exposure to computers while others possess poor attitude towards Information Communication Technology. The records and statistics available at the University of Nairobi library reference section at the time of conducting this study indicated that only about 22% of distance learners had visited the online library sites while the majority of the 78% relied on print based materials in the other library section (JKML,2015).This could probably explain complaints raised by lecturers, that during the presentation of their term papers and assignments, majority of distance learners do not use electronic resources to support their academic work despite the fact that the University of Nairobi library subscribes to a number of these services (Githinji,2014).

The University of Nairobi established an infrastructural ICT Centre in March 2002 which was tasked with the responsibility of offering quality and cost effective Communication Technology that meet the changing learning, teaching and research and management requirements of the University. Currently, the registration of courses and selection of degrees, journals, and books as well us abstracts from the University are all online (Lumbano, 2004, Githinji, 2014). Despite this positive move, the University is faced with serious challenges that range from ; lack of online courses, some basic facilities like computers are lacking in the Extra-Mural centres and still, some of the staff and learners who are supposed to use to use ICT and online library services have limited knowledge of accessing these facilities and services.

This implies that about the 3,406 learners who were enrolled in the School of Open and Distance Learning during the April Intake for the 2013/2014 academic year were disadvantaged in accessing ICT facilities and online library services provided by the University thus hampering their effective utilisation of these services for learning purposes (Mwatela, 2013). Demographic and Institutional factors are often critical in giving clues as to what factors constitute to learners failure to embrace the use of ICT infrastructure and online library services (Mwatela, 2013, Githinji, 2014).It is in this context that this study set out to investigate the influence of demographic and institutional factors on the utilisation of online library services at the University of Nairobi.

Learners' Programme of Study and Utilisation of Online Library Services

A study conducted by Crystal (2008) on effects of personal characteristics on learner online readiness, found that, the programme in which learners are enrolled, for example, Master of Business Administration (MBA), and Master of Science in International Business (MSI), might play a role in learners usage of online library services.

In a similar study by Diyaolu et.al (2012) on the influence of demographic factors on the use of the digital library by the postgraduate students in Private Universities in Ogun estate in Nigeria, the results indicated that students program of study has a significant influence on digital library usage. The findings indicated a strong relationship between the program of study and the use of online library services. From the previous study, it is evident that the research was done in Nigeria among the private universities. The present study, however, was done in Kenya at the University of Nairobi which is a public university hence the gap in knowledge that the present study filled.

Islam (2009) carried out a study on effects of democratic factors on e-learning effectiveness in a higher learning institution in Malaysia, the findings indicated that students program of study and age were major factors influencing the use of the digital library by postgraduate students. Whereas the previous study was done in Malaysia among the postgraduate students, the present study was done in Kenya among the undergraduate distance students at the University of Nairobi thus the existing gap in knowledge that the current study filled. From the foregoing literature review it is evident that very little if no study has been done in this area, more so in Kenya hencethe call for this study to assess the influence of learners' programme of the study on the utilisation of online library services at the University of Nairobi.

METHODOLOGY

The research paradigm employed in this study is the positivist approach. Positivism emerged as a paradigm in the 19[th]Century with Auguste Comte's rejection of metaphysics and assertion that only scientific knowledge can reveal the truth about reality. The positivist paradigm asserts that real events can be observed empirically and explained with logical analysis. The study adopted a descriptive survey design. Orodho (2003) defines a descriptive survey as a method of collecting information by interviewing or administering a questionnaire to sample of individuals.

The study targeted learners enrolled for Bachelor of Education Arts (B.Ed. Arts) and Bachelor of Education Science (B.Ed. Science), in the School of Open and Distance Learning (ODL) of the University of Nairobi. Learners who were in their third year of study during the April intake of 2013/2014 academic year were selected for the study. This group level was chosen owing to the length of time they had taken at the University thus would provide the relevant and necessary information required by the researcher. Records from the two programmes indicated that B.Ed. Arts had a total of 1,578 learners out of which 848 were males and730 were females. The programme of B.Ed. Science had 93 learners, which included 58 males and 35 females.

Table. 1: Population of third year learners (April intake 2013/2014) and librarians

Category	Male	Female	Total
B.Ed. (Arts)	848	730	1578
B.Ed. (Science)	58	35	93
Librarians	09	05	14
Total	**915**	**770**	**1685**

The sample size for this study was determined by using the formula, which was developed and advanced by Krejcie and Morgan (1970), as cited in Isaac and Michael (1981).

$$S = \frac{\chi^2 \, NP \, (1 - P)}{d^2 \, (N - 1) + \chi^2 \, P \, (1\text{-}P)}$$

In which,

S   =   required sample size

N   =   population

P   =   population proportion that for table construction has been assumed to be 0.50, as this magnitude yields the maximum possible sample size required.

d =   the degree of accuracy as reflected by the amount of error that can be tolerated in the fluctuation of a sample proportion about the population proportion. ρ-the value of d being 0.05 in the calculation for entries in the table, a quantity equal to $\pm 1.96\sigma$

χ^2 =   table value of chi square for one degree of freedom relative to the desired level of confidence, which was 3.841 for the 0.95 confidence level represented by entries in the table in Appendix III

Inserting the required information into the formula gives: -

The sample size for learners

N   =   1685

P   =   0.50

D   =   0.05

χ^2 =   3.841

Substituting the above values

$$= \frac{3.841 \times 1685 \times 0.50 \, (1 - 0.50)}{0.50^2 \, (1685 - 1) + 3.841 \times 0.50 \, (1 - 0.50)}$$

$$= \frac{6472.085 \times 0.50 \, (0.5)}{0.05^2 \, (1684) + 3.841 \times 0.5 \, (0.5)}$$

$$= \frac{1618.0212}{0.0025 \, (1684) + 3.841 \times 0.25}$$

$$= \frac{1618.0212}{4.21 + 0.96025}$$

$$= \frac{1618.0212}{5.17025}$$

=   312.94834

=   **312 Learners**

To confirm the above results formula by Mugenda and Mugenda (2003) was used.

$$nf = \frac{n}{1+\frac{(n)}{N}}$$

Where:-

nf = Desired sample size when the population is less than 10,000

n = Desired sample size when the population is more than 10,000 and the recommended sample size then is 384

N = Population

Therefore, the sample size for the population of 1000 learners needed for this study is denoted by nf and was calculated as follows;

$$nf = \frac{n}{1+(n)}$$
$$\frac{}{N}$$

$$=\frac{384}{1+\frac{(384)}{1685}}$$

$$=\frac{384}{1+0.2278931}$$

$$=\frac{384}{1.2278931}$$

$$= \underline{312.73083}$$

$$= \textbf{312 learners}$$

Table.2: A sample size of third year learners (April intake 2013/2014) and librarians

Category	Male	Female	Total
B.Ed. Arts	121	103	224
B.Ed. Science	47	27	74
Librarians	09	05	14
Total	**177**	**135**	**312**

Source: ODL (2014)

The researcher used two sets of questionnaires to collect data from the respondents. One set of questionnaire was developed for learners while another set of questionnaire was developed for librarians. The researcher gave preference to use of questionnaire because it eliminates bias on the side of the researcher and the respondents while the interview schedule was used to corroborate responses received from questionnaires (Kombo& Tromp, 2006).

Face validity, according to Kalai (2009) refers to the subjective judgment that the test appears to cover the relevant content. It also refers to the subjective judgment of assessors about what the instrument appears to be measured on the face value. The researcher applied expert judgment to arrive at the face value of the instruments. Finally, in order to determine the validity of the whole document, a Kaiser Meyer Olkin (KMO) formula test of validity was applied. A KMO test of validity provided a figure of 0.806. This implied that the

sampled data was highly valid since the threshold is normally 0.5.The researcher applied expert knowledge in selecting essential questions to be included in the interview schedule.

The reliability of the full instrument was obtained using Cronbach's Alpha coefficient. This refers to a measure of internal consistency of set items in   a group. It is thus considered to be a measure of skilled reliability of an instrument. Cronbach's Alpha Coefficient was used to measure the inter-item reliability of the questionnaires. Each item of the questionnaire, measuring the same characteristics was treated as a mini instrument on its own. The questionnaire for learners was divided into seven sections and inter-item reliability was done for each section of the questionnaire. The result is shown in Table 3.

Table 3:Inter-item reliability test

Questionnaire section	Cronbach's Alpha	Percentage	F	No. of items
B	0.523	52.3	35.609	7
C	0.749	74.9	15.809	7
D	0.865	86.5	1.080	7
E	0.958	95.8	2.960	7
F	0.923	92.3	17.923	7
G	0.938	93.8	8.836	7
H	0.830	83.0	16.568	7

The results from Table 3 shows that Cronbach's Alpha for section B of the instrument was 0.523 (52.3 %) with an F-value of 35.609 out of the seven (7) items. In section C of the instrument, Cronbach's Alpha was 0.749 (74.9%) while the F value was 15.809 out of the seven (7) items. Section D of the instrument recorded a Cronbach's Alpha of 0.865 (86.5 %) while the F value was 1.080 out of the seven (7) items. Section E of the instruments registered a Cronbach's Alpha of 0.958 (95.8 %) and an F value of 2.960 for the seven (7) items. Section F of the instrument indicated that the Cronbach's Alpha was 0.923 (92.3%) while the F value was 17.923 for the seven (7) items. Section G of the instruments recorded a Cronbach's Alpha of 0.938 (93.8%) while the F value was 8.836 out of the seven items. Finally, section H of the instruments recorded Cronbach's Alpha of 0.830 (83.0%) and F value of 16.568 out of the seven (7) items.

The general impression of the above results is that the inter-item reliability was over 50 percent for all the sections for the entire learners' questionnaire instrument. Similarly, the inter-item reliability test was inducted for the questionnaire for the librarians. The result indicated a Cronbach's Alpha of 0.698(69.8%) while the F-value was 16.915 out of the (7) items.

Authority to conduct research was obtained from the National Commission for Science, Technology, and Innovation (NACOSTI) before setting out for data collection. The researcher also reported to the Director of Open, Distance, and eLearning (ODeL) Campus for clearance. The researcher obtained permission from the Dean, ODL to conduct research. Simple random sampling was used to gather information from respondents. In this regard, the researcher used pieces of papers written "Yes" for the number of learners required for the study sample and "No" for the remaining portion. These papers were thoroughly mixed and shuffled in a container for learners to pick to ensure that each learner had an equal chance of being selected.

First, questionnaires were personally administered to learners and librarians. Direct contacts with respondents provided the researcher with an opportunity to interact and instruct the respondents on how to complete the questionnaires and assure them of the confidentiality of their responses. Personal involvement was an important factor in motivating the participants to respond more readily than if the questionnaires had been mailed to them. An opening note was addressed to all the respondents to confirm this commitment.

RESULTS AND DISCUSSIONS

Learners Programmeof Study and Utilisation of online Library Services

The main objective of this study was to assess the influence of learners' programme of study on the utilisation of online library services by distance learners at the University of Nairobi. In order to accomplish this task, respondents were asked to indicate the extent to which learners' programme of study influenced utilisation of online library services. In carrying out this investigation, the 7 items in the learners' questionnaire were scored on a five level rating scale which was, to a very great extent, to a great extent, not sure, less extent and not at all. Respondents were expected to express their attitude towards each of the items in various subtitles by selecting only one response. The scores ranged in a continuum from 7 to 35, indicating the lowest and the highest usage of online library services. The results are presented in the preceding sections.

Learners 'Programme of Study and Utilisation of Online digital repository
The study sought to investigate the influence of learners' programme of study on the utilisation of an online digital repository. In order to achieve this objective, respondents were asked to indicate the extent to which learners' programme of study influenced utilisation of online digital repository. The results are summarised in Table 4.

Table 4: Learners 'Programme of study and Utilisation of online digital repository

Programme of study support utilisation of digital repository	Frequency (f)	Percentage %	Cumulative percent
Not at all	48	18.6	18.6
Less extent	60	21.6	39.8
Not sure	17	6.8	46.6
Great extent	42	16.1	62.7
Very great extent	92	37.3	100.0
Total	**259**	**100.0**	
Mean	**3.27**		

The results from Table 4 shows that 48 (18.6%) respondents scored in the not at all level while another 60 (21.6%) scored in the less extent category. However, 17 (6.8%) respondents said they were not sure. Similarly, 42(16.1%) and 92(37.3%) respondents indicated the great extent and very great extent, respectively. A close observation of the results further reveals that majority134 (53.4%) respondents supported the opinion that learners programme of study influenced utilisation of online digital repository whereas only 108 (39.7%) respondents denied this claim. The implication of this finding is that learners' programme of study influences the utilisation of online digital repository to a great extent. The mean score computed was 3.27

Learners 'programme of study and utilisation of online newspapers
The study further investigated the influence of learners' programme of study on the utilisation of online newspapers. In carrying out this investigation, respondents were asked to indicate the extent to which learners' programme of study influenced utilisation of online newspapers. The results are summarised in Table 5.

Table 5 :Learners 'Programme of Study and Utilisation of online newspapers

Programme of study supports the utilisation of online newspapers	Frequency (f)	Percentage %	Cumulative percent
Not at all	68	26.1	26.1
Less extent	16	6.2	32.3
Not sure	23	8.7	41.0
Great extent	45	17.4	58.4
Very great extent	107	41.6	100.0
Total	**259**	**100.0**	
Mean	**2.72**		

From Table 5, the results indicate that 68 (26.1%) respondents scored in the not at all level while 16(6.2%) respondents indicated less extent whereas 23(8.7%) respondents revealed they were not sure. Likewise, 45(17.4%) and 107 (41.6%) respondents scored in the great extent and very great extent, respectively. The findings further reveal that majority 152(59.0%) respondents supported the view that learners' programme of study influenced utilisation online newspapers. The implication of this finding is that learners' programme of study influenced utilisation of online newspapers to a great extent.

Learners' Programme of Study and Utilisation of Online Public Access Catalogue

The study sought to establish the influence of learners' programme of study on the utilisation of OPAC. In order to accomplish this investigation, respondents were asked to indicate the extent to which learners 'programme of study influenced utilisation of OPAC. The results are shown in Table 6.

Table 6: Learners 'programme of study and utilisation of online public access catalogue

Programme of study supports the utilisation of public access catalogue	Frequency (f)	Percentage %	Cumulative percent
Not at all	61	23.6	23.6
Less extent	24	9.3	32.9
Not sure	23	8.7	41.6
Great extent	44	16.8	58.4
Very great extent	127	41.6	100.0
Total	**161**	**100.0**	
Mean	**3.82**		

Table 6 shows that 61 (23.6%) and 24 (9.3%) respondents indicated not at all and less extent, respectively. On the other hand 27(16.8%) and 67(41.6%) the respondents scored in the great extent and very great extent levels. The findings further reveal that majority of the respondents, 171 (58.4%) supported the opinion that learners programme of study influenced utilisation of OPAC while another 85 (32.9%) respondents denied that claim. The implication of this result is that learners' programme of study has a great influence on the utilisation of OPAC. The mean score was calculated at 3.82.

Learners'programme of study and utilisation of electronic books

The study was also interested in establishing the influence of learners' programme of study on the utilisation of electronic books. In carrying on this investigation, respondents were asked to indicate the extent to which learners' programme of study influenced utilisation of online electronic books. The results are contained in Table 7

Table 7: Learners 'Programme of study and Utilisation of online electronic books

Programme of study supports the utilisation of electronic books	Frequency (f)	Percentage %	Cumulative percent
Not at all	47	18.0	18.0
Less extent	42	16.1	34.2
Not sure	48	18.6	52.8
Great extent	92	35.4	88.2
Very great extent	30	11.8	100.0
Total	**259**	**100.0**	
Mean	**3.06**		

The results from Table 7 shows that 47 (18.0%) and 42 (16.0%) respondents scored in the not at all and less extent, respectively. The findings further reveal that 48 (18.6%) indicated that they were not sure. Likewise, another 92 (35.4%) respondents scored on a great extent while only 30 (11.8%) respondents responded by saying to a very great extent. The general interpretation that one can derive from these results is that the majority 112 (47.3%) respondents supported the opinion that learners programme of study influenced utilisation

of online electronic books. The implication of this finding is that learners' programme of study has a great influence on the utilisation of online electronic books. The mean score computed was 3.06.

Learners Programme of study and Utilisation of online electronic journals
The study also investigated the influence of learners' programme of study on utilisation electronic journals. In meeting this task, respondents were asked to indicate the extent to which learners' programme of study influenced utilisation of online electronic journals. The results are shown in Table 8.

Table8: Learners programme of study and utilisation of online electronic journals

Programme of study supports the utilisation of electronic journals	Frequency (f)	Percentage %	Cumulative percent
Not at all	48	18.6	18.6
Less extent	32	12.4	31.1
Not sure	108	41.6	72.7
Great extent	34	13.0	85.7
Very great extent	37	14.3	100.0
Total	**259**	**100.0**	
Mean	**2.92**		

The results from Table 4.58 indicate that 48 (18.6%) respondents scored in the not at all level while 32(12.4%) the respondents scored in the less extent level. On the other hand, 108 (41.6%) respondents said they were not sure. On the contrary, 34 (13.0%) respondents said a great extent while 37 (11.0%) responded by saying to a very great extent. The findings further reveal that majority 108 (41.6%) respondents indicated they were not sure meaning they were not aware. The impression one can derive from this result is that majority 80(31.0%) of the respondents did not support the view that learners programme of study influenced utilisation of online electronic journals compared to only 71(27.3%) respondents who supported the opinion. The mean score calculated was 2.92.

Learners 'Programme of study and Utilisation of electronic database
This study was interested in establishing the influence of learners' programme of study on the utilisation of an online electronic database. In order to carry out this investigation, respondents were asked to indicate the extent to which learners' programme of study influenced utilisation of online electronic database. The results are shown in Table 9.

Table9: Learners programme of study and utilisation of the online electronic database

Programme of study supports the utilisation of the online database	Frequency (f)	Percentage %	Cumulative percent
Not at all	60	23.0	23.0
Less extent	26	9.9	32.0
Not sure	97	37.3	70.3
Great extent	39	14.9	85.1
Very great extent	37	14.9	100.0
Total	**259**	**100.0**	
Mean	**2.89**		

As shown in Table 9, the majority of the respondents 86 (32.9%) did not agree with the statement that learners programme of study influenced utilisation of online electronic database. On the other hand, 76 (29.8%) respondents agreed with the statement while another 97 (37.3%) respondents said they were not sure. The general impression one can derive from the findings is that learners' programme of the study had less influence on the utilisation of an online electronic database. The mean score was computed at 2.89

Learners 'Programme of Study & Utilisation of Online Research Papers

The study sought to establish the influence of learners' programme of study on the utilisation of online research papers. In order to accomplish this investigation, respondents were asked to indicate the extent to which learners' programme of study influenced utilisation of online research papers. The results are shown in Table 10.

Table 10:Learners'programme of study and utilisation of online research papers

Programme of study supports the utilisation of online research papers	Frequency (f)	Percentage %	Cumulative percent
Not at all	60	23.0	23.0
Less extent	66	25.5	48.4
Not sure	53	20.5	68.9
Great extent	31	11.8	80.7
Very great extent	49	19.3	100.0
Total	**259**	**100.0**	
Mean	**2.78**		

The results in Table 10 shows that majority of the respondents 126 (48.5%) respondents objected to the view that learners programme of study influenced utilisation of online research papers while 53 (20.5%) said they were not sure. Similarly, a minority of the respondents 80 (31.1%) respondents indicated that learners programme of study influenced utilisation of online research papers. The impression that one can derive from the results is that learners' programme of the study had less influence on the utilisation of online research papers. The mean sore was computed at 2.78.

Mean scores on learners' programme of study and utilisation of online library services

The study also investigated mean scores on the influence of learners' programme of study on the utilisation of online library services at the University of Nairobi. In order to accomplish this investigation, scores of means on the 7 online library services were computed and compared. Similarly, the mean of means was also calculated to act as a basis of making a conclusion. The researcher assumed that any online library service that scored a mean above the mean of means (3.07) was considered high influence, while any that scored a mean below the mean of means (3.07) was regarded as of low influence. The results are shown in Table 11

Table 11: Learners 'programme of study and utilisation of online library services

Level library source	Mean	Std. Dev.
Online digital repository	3.27	1.653
Online newspapers	2.72	1.680
Online public access (OPAC)	3.82	3.552
Electronic books	3.06	1.272
Electronic journals	2.92	1.193
Online database	2.89	1.290
Online research papers	2.78	1.443
Total Mean	**21.46**	
Base Mean	**3.07**	

From the information presented in Table 11, it is evident that the Online Public Access Catalogue (OPAC) registered the highest mean of 3.82, followed by an online digital repository at 3.27 and electronic books at 3.06. Similarly, electronic journals had a mean of 2.92 while online database scored a mean of 2.89.Online research papers recorded a mean of 2.78.The general picture that emerges from Table 4.61 is that online library services that recorded high means when compared to mean of means (3.07) consists of online public access catalogue (3.82) and online digital repository (3.27) while online electronic books had a mean of (3.06) and online electronic journals (2.92). The other online services that registered low means when compared to mean of means included online newspapers (2.72) and online research papers (2.78). The implication of this result is

that utilisation of OPAC is highly influenced by learners' programme of study. This finding is in agreement with the finding from the interview schedule, for example when asked to give their opinion on whether student programme of study influenced utilisation of online library services, one of the librarians from Chiromo library had this to say;

> The programmes in which the learners are enrolled might play a role, for example, learners in science related courses take most of their studies online and are familiar with the technology. On the other hand, learners enrolled in art based courses might do better in traditionally based on instruction"

The relationship between learners' programme of study and utilisation of online library services was further investigated using the linear regression analysis. The null hypothesis stated as follows;

H_oThere was no significant relationship between learners' programme of study and utilisation of the online library services at the University of Nairobi.

The results are shown in the Table 12

Table 12: Regression analysis on learners' programme of study and utilisation of online library services

Model	r	R^2	Adj.R^2	Std.err. of Estimate	R^2 Change	F change	df1	df2	Sig change
1	0.567	0.322	0.276	1.105	0.322	7.027	10	148	0.00

The results from Table 12 indicate that the coefficient correlation r = 0.567 which means there was a positive relationship between independent and dependent variables. R^2 is the coefficient of determination which is R^2 = 0.322 which implies that there was a positive linear correlation. The significance of change also referred to as ρ-value is ρ<0.000. This value is pegged on the study putting the limit at 0.5 or 95percent degree of interval. Since ρ value (ρ<0.05), we, therefore, reject the null hypothesis and accept the alternative which states that there was a significant relationship between learners' programme of study and utilisation of online library services at the University of Nairobi. The findings support the findings of an earlier study by Crystal (2008) who conducted a study on the effects of personal characteristics on learners' readiness in Australia. The results of the study revealed that the programme which the learners are enrolled in might play a role in their usage of the online library services.

The findings of the present study further confirm the results of an earlier study by Ganiyu (2013) who conducted a study on the influence of demographic factors on the use of online library resources by the undergraduate learners in Nigeria that indicated a strong relationship between the learners' programme of study and utilisation of online library resources. Further analysis was done using ANOVA to test how the regression model statistically significantly predicts the outcome variable (the significant relationship between the dependent and independent variable). Table 13 shows the results.

Table 13: Analysis of Variance

Model	Sum of square	Df	Mean square	f	sig
Regression	85.748	10	8.575	7.027	0.000
Residual	180.592	249	1.220		
Total	**266.340**	**259**			

Table 13 shows that the F statistic is 7.027 which means that 70.27 percent of the model fits the linear line and; therefore, has been explained by the independent variables. This implied that the model fits interpretation.

Variation in Utilisation of online library services and learner's Programme of Study
The results presented in Table 14 show that of the 259 learner respondents 105(40.5%) utilised online library services to a great extent, while 71 (27.4%) used the services to a very great extent. The results further show that 50 (19.3%) utilised online library services to a less extent, while 21 (8.1%) never used it at all.

Cumulatively, the results show that up to 176 (68.0%) learners reported above average utilisation of online library services. Based on the programme of study, the results show that among learners B.Ed Arts learners 84 (41.4%), utilised online library services to a great extent, 57 (28.1%) indicated a very great extent, 37 (18.2%) stated to a less extent, while 16 (7.9%) never utilised online library services at all.

Among B.Ed Science learners, the results show that 21 (37.5%) utilised online library services to a great extent, 14 (25.0%) utilised the services to a very great extent, 13 (23.2%) indicated less extent, while 5 (8.9%) never used the services at all. Cumulatively, 141 (69.5%) B.Ed Arts learners and 35 (62.5%) B.Ed Science learners reported above average utilisation of online library services. Based on this, the analysis obtained a computed F (4.1) statistic of 4.047, with a ρ-value of 0.113, which suggests that there was no significant variation among B.Ed Arts and B.Ed Science learners regarding utilisation of online library services.

Table 14: Cross-tabulation of the utilisation of online library services and programme of study

Aggregate perception on utilisation of online library services	B.Ed Arts		B.Ed Science		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Very great extent	57	28.1	14	25.0	71	27.4
Great extent	84	41.4	21	37.5	105	40.5
Not sure	9	4.4	3	5.4	12	4.6
Less extent	37	18.2	13	23.2	50	19.3
Not at all	16	7.9	5	8.9	21	8.1
Total	**203**	**100.0**	56	100.0	**259**	**100.0**

Further analysis indicated that B.Ed Arts learners had about 1.2 times the odds of utilising online library services as their colleagues in the B.Ed Science programme (ρ-value = 0.117, β = 0.046, odds ratio = 1.152, 95% C.I. = 0.089-2.174). The results suggest that there was no significant difference in the odds of utilising online library services between B.ED Arts and B.ED Science learners. Generally, the results suggest that learners in both programmes were equally motivated to utilise online library services. These findings are inconsistent with those reported by Crystal (2008). Whereas this study reports lack of significant variation in utilisation of online library services between B.ED Arts and B.ED Science learners, Crystal (2008) found that Master of Business Administration (MBA) learners and Master of Science in International Business (MSI) learners were likely to vary in the extent of online library service utilisation.

CONCLUSION

The study concluded that there was a significant influence of learners' programme of study on the utilisation of online library services by distance learners at the University of Nairobi. This implies that the programme a student is enrolled in positively influenced their use of online library services.

RECOMMENDATION

The University of Nairobi management should come up with a distance learning policy that ensures all programmes offering distance learning have online learning as a component of their curriculum,. This will enable all learners enrolled in these programmes acquire the necessary skills for accessing the online library services provided by the university.

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