

Digital Library Enhancement for Remote Access to Library Resources in Kenya

***Wangui Mwea, Waweru Mwangi and Wafula Murialo**

*Jomo Kenyatta university of Agriculture and Technology, Kenya
P.o. Box 62000-00200, Nairobi, Kenya*

**Corresponding author E-mail: lwangui@jkuat.ac.ke*

Abstract

The rapid expansion of university education has led to a number of challenges and constraints on the available resources in the public universities. In effect the number of students enrolling for higher education has grown to a high level while the existing facilities have not been expanded to match this increase. The capacity to offer quality and relevant library services to the increased number of users has been difficult. Libraries play a core role in teaching and research and there is need to modernise their operations. As a case study, enhancement of digital library for remote access to library resources was evaluated at Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya. This was done through observations, interviews and by use of questionnaires. Findings revealed that the JKUAT digital library is still very young having been in existence for less than two years. It is limited in its scope as evidenced by very few staff who were involved in provision of digital library services. The JKUAT digital library largely depends on commercially produced resources. The findings of the study indicate possible relationship between use of digital library services and accessibility and retrieval. It is also shown that accessibility, retrieval as well as authentication regulations are still a long way in allowing ease and speed of access for users. For the library staff, identification of users is still a problem. The digital library resources are still not vast enough to cover every subject taught in the university. The study recommends that library management expand its collection of digital library resources, and formulate policies that will allow ease and speed of access to more legitimate users while the university administration to embark on improving the network coverage of the campus.

Keywords: Accessibility, network, digital library, remote, access, retrieval

Introduction

University libraries are mandated to avail information resources to all library users irrespective of their geographical location. Their primary goal is to support and compliment teaching and research programs offered by the institutions (Borgman, 2003). Initially, the existing academic libraries were established to serve the needs of an on-campus user community (Borgman, 2003). However, the increased demand for higher education has seen the rise in student enrolment (Borgman, 2003). In Kenya, there is limited financial support given to the public universities by the government which cannot sustain them (Ministry of higher education 2008). This has led to emergence of parallel degree programs as income generating units (IGU), in addition to meeting the ever increasing demand for higher education (Ministry of higher education 2008). Technological changes have brought flexibility in learning and admission rules which have placed strain on the service and have led to competition of the limited resource and space (Linda 2006). The big challenge is the space and resources that are needed to ensure equal education opportunities for all bonifide students (Charlesand Ifeoma 2009). Digitization of library services and resources makes it possible for libraries to meet the needs of all library users no matter the geographical location (ACRL 2000). There is need to have a library policy to increase access of resources available to the authorised users remotely in electronic formats. The number of students enrolling for higher education in Kenya has grown to a high level whereas the existing facilities have not been expanded to match this increase (JKUAT 2012) Consequently, this study sets out to evaluate accessibility, retrieval of information and library services remotely to identify the challenges surrounding the digital library at Jomo Kenyatta University of Agriculture & Technology (JKUAT)-Kenya.

Methodology

Exploratory research method was undertaken to study the population in depth. The target population consisted of 700 library users and 10 staff at the JKUAT library. Simple random sampling technique was used to select a sample size of 70 library users while the census method was used on all the library staff. Primary data was collected using questionnaires as the main research instrument. There were two categories of questionnaires for library staff and for users. Data analysis was done using SPSS. Descriptive statistics (Frequency analysis) was used to present data. Inferential statistics were used to assess the degree/strength of relationship that existed between them.

Results and Discussion

From the study, 61.29% of the respondents were aged between 20–29 years while 17.74% were aged between 30-39 years whereas 55.6% of the library staff were aged between 30 to 39 years. This agrees with the fact that majority of the library users are undergraduate and postgraduate students who falls into that age bracket.

The study reports 51.6% of the respondents being undergraduate students, 30.6% graduate students while 14.5% were teaching staff. Only 3.2% were non-teaching staff. The high proportion of the undergraduate and postgraduate students as the majority of the library users was in line with their proportion in the university community. However, the higher number of teaching staff as compared to non-teaching staff was opposite of their proportion in the university community but was attributed to the fact that the former are involved in teaching and research more than the latter hence their higher use of the library resources.

All (100%) of the library staff consented to the existence of an active digital library in the university when they were asked but agreed that it was still in its infancy stages having existed for 3 years.

The recent trend in academic library development is towards the establishment of digital libraries (Ogunsola and Okusaga 2006).

Daniel (2002) pointed out that there were over 150,000 national and international virtual libraries worldwide and this should be the thinking and direction of African university libraries and the various countries concerned.

It was further revealed that only a mere 22.2% of the library staff were involved in provision of digital library services owing to the fact that the digital library in the university has not been fully developed and therefore only a few staffs were involved, however, this was expected to change with its growth.

In the JKUAT library 56% of the users reported that 61-80% virtual collections of the digital resources are from outside the university while 45% of the respondents reported that 21-40% actual collections were produced within the university.

This is a considerable ratio for a library that is transforming from the traditional to a digital library because unlike the actual collections, virtual collection do not require much space.

On whether the digital library covered all the disciplines taught in the university, 56% of the library staff disagreed because only 10% of the library users could use the digital library for registration and orientation while only a few (21%) inquiries were successful.

Majority (87-94%) had successfully searched for materials and reserved them respectively while only 43% successfully borrowed the materials.

From the study, 58.1% of the respondents learnt about the existence of the digital library from colleagues/friends followed by 25.8% who learnt from a workshop held by the library, followed by 10.5% who learnt from the university website and finally 6.3% learnt from the university journals.

Colleagues and friends also accounted for the most of the awareness on existence of the electronic resources at 67% followed by website and news media.

On accessibility and retrieval of information and library services remotely, two thirds of the respondents (77%) mostly visit the library physically for services while only 23% access the library services and resources online.

These results agree with the Online Computer Library Centre OCLC report of 2005, which also noted that 87% of college students had visited a college library in person and 27% had visited an online college library.

The location of digital library users and usual point of remote access to library resources showed that majority (69%) still accessed the services from inside the library while only 10% and 21% accessed the digital resources from outside the library but inside the university and from outside the university. These results are contrary to the expected consequences of the digital library because it beats its purpose when majority access the services from inside the library.

If remote access to the library services from outside the library is encouraged, then this would give room inside the library to those who for one reason or another have to physically visit the library.

Deng (2009) reported that less than 50% of the users access electronic resources in the library.

Most respondents reported that the digital library services targeted to a large extent (56%) off campus remote users and distance learners while on campus remote users were targeted only to small extent.

On the authentication of library users, 78% of the staff were able to correctly identify the authentication method used by use of usernames and passwords based on their student or staff administration numbers, nonetheless, the major limitation of remote access to electronic resources was lack of full access to all the resources when off campus as a result of the current authentication process which requires users to be under the campus intranet to gain full access to electronic library resources. This can be corrected by using a proxy server.

Library staff, students and faculty staff had access to digital library material by a large extent(45%) while non-teaching staff reported to accessing the materials to some extent.

On the rate of access of the electronic library resources by users 58.1% of the respondents accessed digital library resources 2–3 times a week while 22.6% accessed the resources every day and 12.9% accessed them once in a week. A further 4.8 % accessed them in a fortnight while 1.6 % accesses them only a few times in a year. This implies that the resources are popular among the majority and they are making good use of them in their academic work.

The study found 74% of the respondents reporting using a desktop computer to access digital library services and resources. The use of desktop computers by the majority perhaps explains the reason as to why majority access electronic resources from inside the library. Those with laptop computers and other mobile devices can access the resources from outside the library and off campus. The JKUAT library and the university management should devise a way through which students and staff can own laptops and other internet enabled mobile devices.

We found 33% and 27% of the respondents connecting to the internet from Ethernet and wireless access points respectively while 15% and 25% connected through their modems or visited a cybercafé respectively. Ethernet connection is normally used on desktop computers and its use by the majority is in line with the earlier findings that majority used desktop computers as their devices to access electronic library resources. Increase of laptops and other internet enabled mobile devices will therefore form an important milestone towards realization of an effective digital library.

On the user experience with the digital library 60% reported that that the digitized material is usually relevant to what they needed and that navigational assistance was available and helpful, while 56% were not sure whether the digital library was easy to use and whether they found the information that they needed quite quickly. Since digital library is gradually becoming more prominent it would also be necessary for the university administration to embark on improving the infrastructures.

Conclusion

The study found out that enhancing digital library for remote access to library resources was correlated to status of digital library at 1% significance level (.398). The findings of the study indicate possible relationship between use of digital library services and accessibility and retrieval. The study recommends the management to expand its collection of digital library resources due to the high increase in student enrolment which has not been complimented by corresponding increase in learning facilities including library services.

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