Micro factors influencing use of electronic information resources among postgraduate students in institutions of higher learning in Kenya

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Introduction

Historically, libraries are powerhouses of information and knowledge. This gives academic libraries the capacity to influence learning, research and teaching in institutions (Bature, 2009). Academic libraries acquire, preserve, organize, distribute and manage information resources in relation to research, teaching, learning and community services of universities. In addition, libraries administer and provide quality information services to students, staff, researchers and the general academic community so as to enhance higher customer satisfaction and better return on investment. This escalates the efficiency and proficiency of research activities, teaching, learning and personal scholarly enhancement, which in turn fosters development nationally and institutionally.

In the knowledge-based economy, the expansion of literature has lead to the revolution and advancement of technology in information communication technology (ICT) solutions resulting to introduction of innovative and new products and services like electronic information resources). Computer-based communications have gone further beyond merely widening access to information into helping in establishment of linkages with remote professional colleagues and friends elsewhere, and broadly enhancing access, use, retrieval and distribution of information (Thachill, 2008). Libraries, first and foremost, exist for the sake of patrons who are both users and promoters, whose major interests are that desired information materials should be readily made available when needed, and in the appropriate format (Khan and Rubina, 2009).

Kenyan universities are creators of knowledge in society and the modern digital environment implies that both libraries and clients depend largely on electronic information resources. There is a need to shift some of the energy devoted to various aspects of collection building to best practices that are more practical to help students make better use of electronic resources. This may result in making informed decisions resulting to well-researched scholarly academic work by postgraduate students in the university.

Digital information in higher education

Far from traditional and classical philosophical approaches, the modern collective source of memory is built on electronic information resources, mediated through ICT solutions and systems. The evolution of ICT has also led to electronic realities where information resources are now digitized as e-books, e-journals, electronic purchasing (e-purchase), Web sites, e-commerce and mobile devices. Focusing on the indispensability of ICT to the students of Niger Delta University, Etobu (2010) says that ICT is part and parcel of the entire nutstell of the institution, as a learning resource to the students and teaching aids to the lecturers. Ayorinde and Oyegbami (2009) observes that, ICT is the instrument of a social economic renaissance and if properly used it could prevent a stem of national and international calamity. If properly used it will assist growth and development of libraries in African higher education institutions. It has created a revolutionary journey from traditional to the digital environment. With new technology it has been possible to access a variety of information and knowledge sources in a manner that would be simple, easy to use and independent of time, place and subject disciplines. Today, we are living in virtual realities as opined by Omekwu and Echezona (2008), where library services are now in cyberspace and are not affected by when the physical library is open. Ajigboye (2010) found out that users have control of what to learn and from which location to learn and at what time.

Exponential growth of electronic information resources has caused socio-cultural, political, educational and economic change in the world. The paradigm shift from traditional to multidisciplinary collections has increased the quantity of information passing through the library (Okore, 2009). Electronic resources play vital roles in all fields of study, and access and use of these materials is fundamental to the clients of any university library. Then Internet revolution has witnessed thousands of journals and publications made available electronically, thereby facilitating access to online articles free of charge. Access to library and information services has moved beyond local and geographical locations to universal or global platforms where technology has helped to solve and mediate the problems clients face in using electronic materials.

Kenyan higher education

Higher education and training opportunities in Kenya began in 1963 and grown tremendously due to an increased number of students. With the establishment of the Commission for University Education in 2012, the number of charted universities is almost 50 including both public and private institutions. In addition, the universities have established affiliate colleges or campuses within the country or in the East African Community. Public universities include University of Nairobi, Moi University, Kenyatta University, Egerton University, Jomo Kenyatta University of Agriculture and Technology, Maseno University, Masinde Muliro University of Science

and Technology, Technical University of Kenya, Technical University of Mombasa, Laikipia University, Kisii University, Multimedia University, University of Kabianga and University of Eldoret among others. Private universities are University of Eastern Africa – Baraton, Catholic University of Eastern Africa, Daystar University, USA International University, Africa Nazarene University, Kenya Methodist University, Adventist University of Africa and Aga Khan University among others (Commission for University Education-Kenya, 2013).

In Kenya, the University of Nairobi is the top leading institution of higher learning. Historically, as the oldest academic institution it is well established and provides education and training programs in various fields of specialization. With the quest for academic and education, the government plans to establish an Open University to expand and increase education and training opportunities both nationally and locally.

The ICT revolution has brought great changes in the way libraries are providing services. Kenyan university libraries in conjunction with related organizations access and use electronic information resources under the leadership of the Kenya Library and Information Services Consortium in partnership with INASP, the International Network for the Advancement of Scientific Publications. The University of Nairobi library has implemented a very successful institutional repository, integrated with open information services from the academy. In the same note, university libraries of Kenyatta University and Strathmore University among others have also implemented repositories. The University of Nairobi digitization project was a deliberate move by the university management to increase their online presence and the visibility of the library and university, as well as to reduce plagiarism and avoid redundant research.

Internet services in Kenya have developed over the years since 1996 leading to the introduction of a fiber optic cable in 2009. Internet connectivity has also improved tremendously through initiatives supported by the Kenya Education Network and mobile service providers (Safaricom and Airteil).

Even with inroads in library digital initiatives, several authors have identified challenges within African such as inadequate human resources, rigid education structures and lack of innovative learning methods, and technological, social and financial constraints. Lack of technological skills and competencies are no longer challenges, since virtually all university libraries have independent computing and information systems although financial constraints is still a major hindrance.

Empirical and intellectual studies

Academic libraries are increasing the number of e-journals in developing collections. Based on accessibility, convenience and irrespective of the problems and risks, electronic resources provide easy access to information (Fortini, 2007). Electronic resources fit within the emerging international and political ethos and provide access to timely research information, knowledge and communication among stakeholders. North American university libraries spent several years preparing for electronic-only journal access by studying the usage statistics of bound periodicals, developing licensing guidelines for electronic resources, and exploring products such as link resolvers, which connect users to full-text content.

In India, students and faculty are aware of e-resources and the Internet (Kumar and Reddy, 2014), although the majority of the academic community still uses print. Many of the students and faculty learned about electronic information sources either by trial and error or through the advice of friends. In addition, various constraints are experienced in the search for information using these resources (Sridevi *et al.*, 2009). Within the Kenyan context, numerous projects and initiatives about deployment and use of electronic information resources in institutions of higher learning have been successfully implemented evidenced in the literature.

Myths about utilization of e-resources

Research indicates that societal change is never welcomed no matter what the benefits might be for development. Introduction of electronic information resources is one of the aspects of modernity being witnessed in universities, and resistance to change is a norm rather than an exception. The author's professional experience indicates that, in the university library, young people pursuing bachelors degrees are usually the proud owners and users of electronic information resources as compared to postgraduate students. Young generations belong to the digital age where information and communication services depend upon technological solutions.

Fancovicova (2008) notes that older individuals are subject to common myths, like being unwilling to learn new things. Consequently, a study conducted in Britain, Italy, Germany and Norway indicate that, age distinguishes the behavior especially in respect of new technology (Kivunike *et al.*, 2013).

Access to electronic information resources is also based on information literacy skills and competencies. Students sometimes lack technical, research skills and professional expertise that are necessary to access and use electronic resources (Thachill, 2008). In 2011, Aspagia conducted a study that indicated that most participants used Internet search engines rather than specialized databases and full-text article resources. Martzoukou (2008) asserts that, search engines users have poor query formation skills leading to unstructured queries that are typically short and ambiguous. International postgraduate students at the University of Malaya lack library and information skills due to differences in educational background and previous experiences in other countries where vital library routines are still performed manually (Ogbonnaya *et al.*, 2011). The level of Internet skills with which students enter higher education might influence utilization and non-utilization of electronic information resources in libraries. In the modern knowledge society, technological tools including mobile devices are widely used, although the majority of students lack the skills and competencies needed to use these vital resources.

The gender-based myth postulates that males prefer using electronic information resources than females. This affects many culturally conservative societies in developing countries in Asia and Africa where low enrolment of women in science and technology impedes their ability to use electronic information resources (Suriya, 2009). In the University of Zimbabwe, librarians noticed that male students were outnumbering female students in the library computer lab by far, although the facilities are accessible to all students (Buskens and Anne, 2009).

Postgraduate students have a more negative view toward a more learner-centered environment based on ICT due to previous knowledge and experience (Yang, 2008). The author's interaction indicates that, the use of electronic resources has been positive, with some of the postgraduate students using e-resources and finding relevant information. The above findings

indicate some of the myths associated with the use of electronic resources by graduate students.

Innovative approaches to e-resources

There are various strategic measures needed to enhance and improve the use of e-resources by postgraduate students. These include:

- *Consultative or partnership meetings*: Regular meetings involving faculty members, library staff and postgraduate students provide excellent opportunities to share and exchange information. At the University of Nairobi, the Faculty of Arts has been holding these meetings with students in which the need for students to use electronic information resources in the library are discussed and communicated.
- *Information literacy and learning skills*: Library and Information staff provide information literacy and learning skills tailored to suit the needs and demands of various groups of students in various disciplines. Presently, general orientation is offered to all new students at the beginning of each academic year, although this approach may not be best, especially as it related to e-resources. The best approach may be to provide separate programs for postgraduate students and undergraduate students.
- *Portable brochures*: During orientation and other sessions, portable brochures and student booklets that provide comprehensive information regarding e-resources are distributed to new students. In addition, these vital resources are put in high traffic areas such as reception and service delivery areas for students to pick and refer to on a regular basis.
- *Guides*: A wide range of guides to information services are offered by the university libraries to inform clients about specific e-resources. Guides provide updated information on how to access and use library information services including e-journals, databases and books, database search skills and online catalogs and remote access to library resources when away from campus.
- *Seminar and workshop training*: The University of Nairobi library and information staff regularly design and conduct seminars that promote the use of e-resources.
- *Public relations*: The processes of creating and maintaining a positive image with clients is an effective way to create awareness of the available library e-resources and other services and products (Kamar, 2008).

Conclusion

Electronic information resources are extremely important in the success of research, teaching, learning, academic administration and resource support in any university library. Factors leading to non-utilization must be addressed by all stakeholders. The Internet provides excellent opportunities for postgraduate students to benefit from online communities for publishing theses and dissertations, leading to the creation and dissemination of knowledge. Digital institutional repositories are major breakthroughs that connect and link students with research findings and open sources of information. Information literacy and learning skills are essential in imparting competencies and knowledge on how to access and use electronic information resources in the university learning environment.

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http://library.ku.ac.ke
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