

Presented at the 4<sup>th</sup> Interdisciplinary International Conference (4IIC 2017)  
August 1-4, 2017, Kyambogo University, Kampala, Uganda, East Africa  
Presenter: Ms. Jackline Kiwelu  
Under review for publication

## **Library Users' Challenges and Information Literacy Training Needs: Proposed User Friendly Programs for Online Resources and Services**

Prisca Tibenderana, Jackline Kiwelu Mayende, Dorcus Kigozi and Moses Odeke Osamai

The Iddi Basajjabalaba Memorial Library

Kampala International University, Kampala, Uganda

[ptibenderana@gmail.com](mailto:ptibenderana@gmail.com), [kiwelu1999@gmail.com](mailto:kiwelu1999@gmail.com), [dorcaskigozi@gmail.com](mailto:dorcaskigozi@gmail.com), [osamaimoses@gmail.com](mailto:osamaimoses@gmail.com)

### **Abstract**

Employing the descriptive prospective quantitative research design and stratified random sampling technique, data from a scientifically computed sample of 400 respondents (students and staff) who were users of the Iddi Basajjabalaba Memorial Library (IBML) were collected utilizing a structured questionnaire, validated and tested for reliability at acceptable levels. This study probed into the challenges with on line library resources and services and information literacy training needs of the library users. The findings on library users' challenges related to on-line resources and services in logical order in terms of percentage were: slow internet (47.8%); lack of know-how in the use of electronic catalogue (31.8%); computers in e-resources were always occupied (30.2%); the online catalogue (OPAC) was complicated and hard to use (28.1%); electronic journal articles were not easily accessible (23.8%) and no knowledge to conduct an online search (20.4%). The results on information literacy training needs were on how to: use electronic catalogue (OPAC) (59.4%); conduct online searches and use e-resources (47.5%); find books through the open shelves in relation to OPAC (33.5%). Anchored on these empirical data, the proposed user friendly on line resources services including a university wide training were thus proposed to be implemented.

**Keywords:** information literacy, library services, library users' challenges, user friendly on line resources services

### **1. INTRODUCTION**

Information and Communication Technologies (ICTs) have increasingly become indispensable tools for development. The effects of ICTs have continually been noted in all aspects. In higher education for example, ICTs have greatly influenced teaching, learning, research and all other scholarly activities (Nirmala, 2013). Communication as well as access to information in institutions of higher education have been enhanced by the application of the new technologies. Indeed, academic libraries have not been left behind in these innovative ventures.

An academic library has been described as the "heart" of the learning community, providing a place for students and faculty staff to do research and advance knowledge. Today academic libraries are providing numerous services to users addressing diverse information needs. ICTs have greatly simplified acquisition, organization, storage, retrieval, provision and usage of information in these libraries (Emmanuel & Sife, 2008). With growth of science and technology, almost all libraries in the world have experienced a number of changes that are positive in as far as information access and sharing is concerned (Tibenderana, 2010). Libraries in institutions of higher education are exploiting the advent of ICTs to make online catalogs, Compact Disc Read Only Memories (CD-ROMs), online databases, other Open Access information resources for the users. Students and faculty staff do not have to be physically in a library in order to access the services and resources in ICTs enabled environment. Online library information systems have created some independence on a user to meet his or her information needs with little effort or assistance by a librarian (Chandel & Saikia, 2012).

The Iddi Basajjabalaba Memorial Library (IBML) together with other libraries in institutions of higher education in Uganda under the umbrella of the Consortium of Uganda University Libraries (CUUL) annually subscribe to a wide range of e-resources which contain up-to-date information. The electronic resources were introduced at Kampala International University (KIU) way back in 2005 when the library was operating in a manual environment. It is

through this effort that The IBML has been able to support learning, teaching, research and social information needs of all its user community. Furthermore, faced with modernization challenges, through continuous innovations, in 2011 the IBML embarked on automating its activities and services by customizing the Koha Open Source Software according to the needs and this led to setting up an Online Public Access Catalog (OPAC). In 2014, The IBML set up an Institutional Repository using DSpace software to manage digital contents of KIU research outputs and scholarly works. These platforms enable library users to easily locate the print books on the shelves and to access the library's electronic resources.

All library patrons are registered with the IBML and their data is entered into the Koha automated system to be eligible to access the services. The patrons also locate the print library holdings using the Online Public Access Catalogue (OPAC). The OPAC is an online tool that provides directions to locate the print information material within the library's holdings on shelves. The IBML print media holdings can be located using OPAC by author, title or subject. The OPAC provides a "Library of Congress" Call Number of the library holding being sought. Through the use of the IBML's Electronic Resources Centre and wireless connectivity, one is able to utilize online library services of the university. Furthermore, the institutional repository which was set up in 2014 to capture, preserve and provide access to KIU's research, development and publications has so far a collection of 278 staff and students' publications which include journal articles, e-books, book chapters, theses/dissertations, and other research and scholarly academic works.

The number of the IBML patrons has grown from about 700 in 2001 to over 8,000 in 2015. The IBML is therefore faced with the challenge of meeting the various scholarly information needs for such a big number of patrons. Guided by its motto and vision: "Aspiring to Become a World Class State of Art Information Resource Centre of Excellence", the IBML is dedicated to providing the best library and information services to the KIU community and beyond. This is made possible through updating of print and electronic information resources and ambient facilities.

## **2. THE PROBLEM**

In a bid to provide ICTs integrated library services like any other modern library in institutions of higher education, The IBML automated its processes and services. The automation resulted into three platforms namely; Online Public Access Catalog (OPAC), e-resources access and institutional repository. However, based on the monthly user statistics and by direct observations few patrons utilize the IBML online services. This concurs with studies carried out in the University of Karachi by Ansari and Zuberi (2010), and those of Khan and Ahmed (2013) who ascertained that electronic services and resources were not adequately utilized due to lack of training. It is within this context that the researchers embarked on a study aimed at finding out challenges that patrons experience when utilizing the library's online services and resources and to elicit evidence –based data referring to training needs.

## **3. STUDY OBJECTIVE**

This study determined the library users' challenges in utilizing library online services and related training needs.

## **4. SCOPE OF THE STUDY**

The setting of the study was at Kampala International University's Main Campus, located along Ggaba Road in Kansanga, Kampala, Uganda. The study population consisted of members of staff and students of KIU during the 2014/15 academic year. The variables understudy were the library users' challenges with on line resources and services and information literacy training needs.

## **5. LITERATURE REVIEW**

### **5.1 Library Users' Challenges**

It has been observed that patrons in an ICT integrated library environment require information literacy skills to be able to access and utilize the services. According to Horton (2008) information literacy combines a number of this aspect that includes library literacy, media literacy, computer literacy, internet literacy, research literacy and critical thinking skills. However, there are enormous challenges such as infrastructure, acceptance and use as well as knowledge of how to use the information systems (Tibenderana 2010). It is important to find out how well the library information systems are utilized as recommended by Sami and Pangannaiah, (2006) and Chigbu and Dim (2012).

While the researchers strongly agree with Bundy (2004) and Tilwawala, Myers and Andrada's (2009) findings that information literacy has become a fundamental skill in modern times, there is need to recognize the fact that scholars such as Ansari and Zuberi (2010); Quadri (2012); Gakibayo, Okello and Ikoja (2013); Anafo and Filson (2014); Cilliers and Flowerday (2014); Sam (2015); Mushinga (2017); Romli (2017); only to mention but a few, point out the lack of such skills, especially amongst majority of information users in developing countries. On the same note, is the fact that illiteracy on ICT still exists among majority of the rural population (Fong, 2009 & Anyira, 2011). In fact Anyira (2011) points out that library users or patrons in the 21<sup>st</sup> century are categorized according to the level of ICT skills they possess.

According to Kinengyere (2007), Tilwawala, Mylers & Andrade (2009) there is a close relationship between online library resources and services usability and information literacy. The term "information literacy", also referred to as "information competency" as the ability to identify an information need, locate and access the required information, evaluate, organize and apply it to address the need in question (Bundy, 2004) and (ACRL, 2016). IL encompasses knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is a prerequisite for participating effectively in the information society, and is part of the basic human right of lifelong learning (USNCLIS, 2003). Being information literate requires knowing how to clearly define a subject or area of investigation; select appropriate terminology that expresses the concept under investigation; formulate a search strategy that takes into consideration different information sources and the various ways information is organized; analyze the data collected for value, relevancy, quality and suitability; and subsequently turn them into knowledge.

### **5.2 Information Literacy Training Needs**

Information literacy (IL) as derived from the Alexandria Proclamation of 2005 and adopted by UNESCO, Horton (2008), points out that the phrase means the capacity for someone to recognize his/her information needs, locate that information, evaluate its quality, retrieve it, use it ethically and apply it to create knowledge. The Association of College and Research Libraries (ACRL) (2016) defines IL as "the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued and the use of the information in creating new knowledge and participating ethically in communities of learning."

An empirical study on the use of electronic resources by postgraduate students at the University of Ibadan in Nigeria, Adeleke and Nkechi (2016) established the existence of a strong relationship between information literacy skills and the use of electronic resources. Similarly, Bhardwaj and Walia (2012) revealed that 74.64% of their respondents needed training to enable them use formal portals in St. Stephan's College, University of Delhi, India. Among their recommendations is that librarians mount extensive training programmes for library users in the utilization of electronic resources.

Mushinga (2017) argued that the lack of IL skills lead patrons to look for quick fixes when searching for information as they pay little attention to evaluation and ethical issues. According to Chen (2011), user training can shape beliefs, foster favorable attitudes and facilitate use of online resources. Chen (2011) further asserts that intuitive, interactive and responsive online support and services have to be in place to cultivate positive user

Corresponding author.

E-mail address: kiwelu1999@gmail.com

experiences and attitude to online resources. In fact, Gakibayo, Okello and Ikoja (2013); Anafo and Filson (2014); ACRL (2016) and Boger, Dybvik and Norheim (2016) recommended that IL be integrated in Research Methods Curriculum for postgraduate students and as a standalone cross cutting course for undergraduate students.

Information literacy as an important concept in the 21<sup>st</sup> century has been a subject of discussion amongst information providers, especially amongst librarians. The lack of such skills amongst library users especially in developing countries should not be underestimated. Indeed, further studies to establish specific training needs to enable the development of friendly measures for specific categories of library users was found necessary.

## 6. METHODOLOGY

The study employed a descriptive prospective research design to retrieve information that would help The IBML to improve its online library services. The target population for the study was estimated to be 8,000 library users during 2014/2015 academic year which includes; 7,500 students and 500 staff from all departments at KIU Main Campus. A sample size of 400 participants from a population of 8,000 was arrived at through a sample size formula proportion for large population proposed by Yamane 1967 (as cited in Israel, 1992) as calculated in Figure 1 below. The students' responses were represented by 93.75% and staff respondents comprised 6.25% of the total study sample.

**Figure 1. Sample Size Computation (Yamane Formula, 1967 as cited in Israel, 1992)**

$$n_0 = \frac{N}{1 + N(e)^2} = \frac{8000}{1 + 8000(0.05)^2} = 399.95 \sim 400$$

Where by  $n_0$  = Sample Size,  $N$  = Population Size,  $e$  = A level of precision

(Tolerable error of 5% or 0.05 level of significance)

The study employed stratified random sampling. The population was divided into two strata, faculty staff and students whereby each respondent was selected randomly proportionally according to the population size of the strata to realize a sample size of 400 library users (Amin, 2005 & Cauvery, 2009). A questionnaire-based survey method was used for the study. A structured questionnaire was used to elicit the information on library users' challenges and training needs. A pilot study comprising 50 relatively knowledgeable respondents was carried out to pre-test the instrument. Thereafter, the research team met to evaluate the responses and errors discovered were corrected before the final distribution of the questionnaire. All respondents in the main study were informed about the confidentiality of the responses and their consent was sought before filling out the questionnaire. To collect primary data, the structured questionnaire was distributed to the 400 respondents at two points, namely: at respective departments and at the entrance of the library (IBML). This data were required to ascertain that the research was carried out systematically.

Documentary analysis was carried out to extract secondary data from quarterly and annual library reports. KIU admission register for 2014/2015 was consulted to establish the total number of students while information concerning the number of staff was sought from the Human Resources Directorate. Meanwhile day to day observation was used to see how library users were accessing the online library services.

After carefully retrieving the entire 400 questionnaire, there were 15 invalid ones and only 385 were found valid. The gathered valid data were collated, encoded, edited and statistically analyzed using the Statistical Package for Social Scientists (SPSS).

Corresponding author.

E-mail address: kiwelu1999@gmail.com

## 7. RESULTS AND DISCUSSIONS

The demographic profile of the respondents showed that more than half were male, 259 or (67.3%) and 126 or (32.7%) were female. These findings reveal that KIU has more male students than female. The study results' statistics are in line with the general enrollment trends in Uganda's tertiary institutions, where male students surpass the female in numbers. As provided by the country's tertiary institutions enrollment figures of 2009, 10, 461,514 or (57.3%) were male and 343,565 or (42.7%) were female (Uganda Bureau of Statistics, 2012).

### 7.1 Library Users' Challenges with Online Library Resources and Services

Electronic library system users' challenges gathered in this study are summarized below in Table 1.

**Table 1: Library Users' Challenges with Online Library Resources and Services**

No	Challenges	Frequency	Percent
1	The Internet is always slow when accessing online services	180	47.8
2	I do not know how to use the electronic catalogue	143	31.8
3	Computers in e-resources are always occupied	108	30.2
4	The online catalogue (OPAC) is complicated and hard to use	91	28.1
5	Electronic journal articles are not easily accessible	77	23.8
6	I don't know how to conduct an online search	66	20.4
7	Reasons not listed	18	5.6

As reflected in Table 1, it can be notably observed that the highest number of respondents, 180 or 47.8% cited slow internet as the biggest challenge. This is in line with Ejibuwa (2005) and Ansari and Zuberi (2010) whose studies were carried out in Nigeria and India respectively, both in developing countries. Internet connectivity ranked the highest challenge faced by the study respondents. These findings are not different from what happens in other developing countries especially those in Africa where studies of university libraries with similar findings are reported by Echezona and Ugwuanyi (2010). These authorities emphasize that though internet connectivity was poor in most African Universities, it could not be ignored because internet facilitates information usage for development in Africa and therefore requires that connectivity remains viable in the present ICT environment

The challenges cited in Table 1, numbers 2, 4 and 6 are closely related; "do not know/hard to use" are signs of lack of searching skills. When combined, the three have a total percentage of 80% respondents, thereby posing a big challenge to the IBML. This is in line with the studies carried out by Sam (2015); Mushinga (2017) and Romli (2017) and the only way to tackle this challenge as recommended by Anafo and Filson (2014) and also Boger, Dybvik and Norheim (2016) is to intensify library user training programmes.

The findings in Table 1 imply that The IBML ought to critically analyze its online resources, services and systems, and make them user friendly.

One of the cited challenges faced when using online library services at KIU is lack of knowledge on how to use the services. Respondents were also tasked to be specific in the areas where they needed training. Results on information literacy training needs are presented in Table 2 below.

### 7.2 Information Literacy Training Needs

The study reveals that the library users had various information literacy training needs that the IBML needs to address as shown in Table 2 below.

**Table 2: Information Literacy Training Needs**

<b>Training Area</b>	<b>Frequency</b>	<b>Percent</b>
How to use electronic catalogue(OPAC)	229	59.4
How to conduct searches and use e-resources	183	47.5
How to find books through the open shelves in relation to OPAC	129	33.5

Definitely, as Kinengyere (2007) puts it, for library users to become electronic information literate in a university setting, calls for more coordinated efforts from all stakeholders. This includes university administrators to provide the means (infrastructure and equipment) and librarians to provide appropriate e-resources and services and training users, and lecturers to be involved with users in research and communication skills. The need by patrons to be trained in electronic information literacy skills agrees with the findings by Ansari and Zuberi(2010) from the University of Karachi. Over the years, the IBML has been involved in user orientation and training. However, with the above findings, it is clear that more efforts and solidarity from all KIU stakeholders are needed to create a very strong and sustainable information literate community.

## **8. CONCLUSIONS**

Based on the findings of the study, there is a low level of usage of The IBML's electronic services, more especially electronic resources which include electronic journal databases, e-books and the institutional publications in DSpace. Therefore, there is need for the users to become more competent in using new communication technologies to be able to benefit from electronic resources offered by KIU IBML.

On the premise that the study findings are only confined to KIU, further studies may be required to determine their generalizability. Indeed, to internationalize higher education for sustainable development in the 21<sup>st</sup> century, institutions of higher education especially those in developing countries, trends taking place in libraries and information services cannot be ignored, hence the necessity to be more proactive to develop a better understanding of electronic services, users training needs and in the adoption of the concept of information literacy as paramount in the utilization of online information resources.

## **9. RECOMMENDATIONS**

### **9.1 Proposed User Friendly Programs for Online Resources and Services in Higher Education Settings**

- Academic Libraries should be proactive and develop stronger understanding of electronic services learning needs and future electronic resources learning environments;
- Incorporate continues information literacy trainings in all university wide programs. According to Dodd, 2015 & ACRL 2016, this requires collaborative efforts between University Administration, librarians and lecturers of institutions of higher education;
- Enhancement of Library ICTs infrastructure including internet connectivity. Institutions of higher education should have a deliberate effort to equip libraries with ICT infrastructure that enhances the usability of the online resources within campus environment;
- Implement off campus access of all online library resources to increase usability of the costly and up to date scholarly e-resources paid for by universities. These days' time spent at the university is limited because most researchers, university staff and students concentrate when they are at home or in their hostels. Initiatives such EZ-Proxy connections, Mobile Technology Applications can go a long way to create flexibility in accessing the online resources to enhance research and innovation in university settings;
- Integration of library systems to one university platform will make access to the library electronic services easier and simpler. For instance, the case of KIU where three systems are logged in differently in fact students in the study sample reported finding them very complicated;

Corresponding author.

E-mail address: kiwelu1999@gmail.com

- Social media should be used as a tool for advocating the use of the online library resources. Today, universities staff, students and researchers are engaged in so many activities, some of them are employed, some are parents and hold many responsibilities. They may not have time to check on library notice boards for current awareness; however they have some time to check on social media platforms (Harrison, 2017). Libraries in institutions of higher education in developing countries should create awareness using social media platforms such as whats app, Facebook, Twitter and so forth;
- Several international bodies such as ANZIIL 2004, IFLA 2006, UNESCO 2008, SCONUL 2012, and ACRL 2016 have developed IL standards and there is need for it then to be adopted and implemented. What is required to be done is to tailor the IL international standards to specific environments. By implementing some of the IL International Standards, users will be empowered with competencies to use variety of information sources to expand knowledge beyond university education systems for sustainable development.

## REFERENCES

- ACRL (2016). Framework for Information Literacy for Higher Education <http://www.ala.org/acrl/standards/ilframework>. Accessed on 17<sup>th</sup> May 2017.
- Adeleke, D.S. &Nkechi, E.E. (2016). Relationship between Information Literacy and Use of Electronic Information Resources by Postgraduate Students of the University of Ibandan, 2016. *Library Philosophy and Practice* (e-journal) at <http://digital.commonss.unl.edu/libprac>
- Amin, E.M. (2005). Social Science research: concept, methodology and analysis. Kampala: Makerere University p. 284-296
- Anafo P. &Filson C. (2014). Promoting Information Literacy among Undergraduate Students of Ashesi University College. *Library Philosophy and Practice* (e-journal). Paper 1032. <http://digitalcommons.unl.edu/libphilprac/1032>. Accessed on 22<sup>nd</sup> May 2017
- Ansari, M. N. &Zuberi, B. A. (2010). Use of Electronic Resources Among Academics at the University of Karachi. *Library Philosophy and Practice*. June Issue.
- Anyira I. E (2011). The anatomy of library users in the 21<sup>st</sup> Century. *Library Philosophy and Practice* (e-journal) paper 535.<http://digitalcommons.unl.edu/libphilprac/535>. Accessed on 14th June 2017.
- Bhardwaj, K. &Walia, P.K. (2012). Web-based Information Sources and Services: a case study of St. Stephan's College, University of Delhi. *Library Philosophy and Practice* at <http://unl.edu/libprac>.
- Boger, T. S., Dybvik, H., Eng, A. L., and Norheim, E. H. (2016). An assessment of library instruction: its influence on search behaviour of first- and third-year students. *Journal of Information Literacy*, 10(2), pp. 64-77. <http://dx.doi.org/10.11645/10.2.2135>. Accessed on 22<sup>nd</sup> May 2017.
- Bundy, A. (2004). Australian and New Zealand Information Literacy Framework: principles, standards and practice. Adelaide: Australian and New Zealand Institute for Information Literacy (ANZIIL) [www.anziil.org/index.htm](http://www.anziil.org/index.htm)
- Cauvery R., Nayak S., Girija M. &Meenakshi R. (2009). Research methodology. New Delhi: S.Chand p.99-100
- Chandel A.S. &Saikia M. (2012). Challenges and opportunities of e-resources. *Annals of Library and Information Studies*, vol.59 pp.148-154. Accessed on 1<sup>st</sup> June 2017.
- Chen, Y. (2011). Undergraduates' Perceptions and Use of the University Libraries Web Portal: Can Information Literacy Instruction Make a Difference? ASIST, New Orleans. At <http://www.asis.org/asist2011/>

Corresponding author.

E-mail address: kiwelu1999@gmail.com

Chigbu, E.D. & Dim, C. L. (2012). Connectivity and Accessibility in Nigerian University Libraries: A survey of access, usage and problems in the University of Nigeria, Nsukka. *Library Philosophy & Practice*. 2012. <http://unli.unl.edu/lpp/>. Accessed 15<sup>th</sup> April, 2016.

Cilliers, L. & Flowerday, S. (2014). User Acceptance of Telemedicine by Health Care Workers: A case of the Eastern Cape Province, South Africa. *EJISDC*. 65, 5: 1-10.

Doddy L. (2015). Embedding information literacy through critical skills, collaboration and a new curriculum; SCOUNL.

Echezoma & Ugwuanyi (2010) Echezona R.I & Ugwuanyi C.F.(2010). African University Libraries and Internet Connectivity: Challenges and the Way Forward *Library Philosophy and Practice (e-journal)* pp.421. <http://digitalcommons.unl.edu/libphilprac/421>

Ejibuwa, A.S. (2005). Information and Communication Technology in university libraries: The Nigerian experience. *Journal of Library and Information Science* 7(1) 23-24

Emmanuel G. & Sife A. S.(2008), Challenges of managing information and communication technologies for education: Experiences from Sokoine National Agricultural *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 2008, Vol. 4, Issue 3, pp. 137-142 [https://www.ideals.illinois.edu/bitstream/handle/2142/8375/librarytrendsv49i4e\\_opt.pdf](https://www.ideals.illinois.edu/bitstream/handle/2142/8375/librarytrendsv49i4e_opt.pdf)

Fong, M. W. L. (2009). Digital Divide between Urban and Rural Regions in China. *EJISDC*. 36, 6: 1-12.

Gakibayo a., Okello O. & Ikoja R. (2013). Electronic information resources utilization by students in Mbarara University. *Library Philosophy and Practice* (e-journal). Paper 869. <http://digitalcommons.unl.edu/libphilprac/869>. Accessed on 22<sup>nd</sup> May 2017

Harrison A, Burrell R., Velasquez S. & Schreiner L.(2017) Social Media Use in Academic Libraries: A Phenomenological Study: Abstract. *The Journal of Academic Librarianship*, Volume 43, Issue 3, Pages 248-256 <http://www.sciencedirect.com/science/article/pii/S0099133317300198> Retrieved on 25<sup>th</sup> June 2017

Horton Forest (2008). Understanding information literacy: a primer. Paris: UNESCO, 2008

IFLA (2006). Guidelines on information literacy for lifelong learning <https://www.ifla.org/files/assets/information-literacy/publications/ifla-guidelines-en.pdf>. Accessed on 25<sup>th</sup> June 2017.

Israel, G. D. (1992). Sampling the evidence of extension program impact: Program Evaluation and Organizational Development, IFAS, University of Florida. PEOD-5. October <https://edis.ifas.ufl.edu/pd006>

Khan, A & Ahmed, S. (2013). The Impact of Digital Library Resources on Scholarly Communication: Challenges and Opportunities for University Libraries in Pakistan. *Library Hi Tech News*, 30, 8: 12-20. <http://dx.doi.org/10.110/LHRN-07-2013-0046>. Access on 14<sup>th</sup> May, 2017.

Kinengyere A.A. (2007). The effect of information literacy on the utilization of electronic information resources in selected academic and research institutions in Uganda. *The Electronic Library*, Vol. 25 Iss 3 pp. 328 – 341 <http://dx.doi.org/10.1108/02640470710754832>

Mushinga, C. (2017). Information Literacy and the Google student. *The Sunday Mail*. Harare. At <https://www.pressreader.com/zimbabwe/the-sunday-mail-zimbabwe/200170326/281900183040089>. Accessed on 24<sup>th</sup> May, 2017.

Nirmala M., Tesfazghi T., Appalabatl S., & Karthikeyan K. (2013), Education for ICT' to 'ICT for Education' : Case Study of North East African Schools. *International Journal of Scientific & Engineering Research*, Volume 4,

Corresponding author.

E-mail address: kiwelu1999@gmail.com



Issue 5. <http://www.ijser.org/researchpaper%5CEducation-for-ICT-to-ICT-for-Education-A-Case-Study-of-North-East-African-Schools.pdf>

Quadri, G. O. (2012). Impact of ICT Skills on the Use of E-Resources by Information Professionals: a review of related literature. *Library Philosophy and Practice*. <http://unllib.unl.edu/LPP/>

Romli, R.M. (2017). E-Government Implementation Challenges in Malaysia and South Korea: a comparative study. *EJISDC*. 80, 7: 1-26.

Sam, Steven (2015). Exploring Mobile Internet Use Among Marginalised Young People in Post-Conflict Sierra Leone. *EJISDC*. 66, 5: 1-20.

Sami L.K. &Pangannaiah N.B (2006). Techno stress: a literature survey on the effect of information technology in library users. *Library Review*, vol. 55 issue 47

SCONUL (2012). Information Literacy Good Practice Informing Common Practice. <https://www.sconul.ac.uk/sites/default/files/documents/Members%20Briefing%20IL%20good%20practice%20to%20common%20practice.pdf> Accessed on 24<sup>th</sup> June 2017

Tibenderana P. K. G. (2010). Model for measuring levels of end-users' acceptance and use of hybrid library services and its applicability to universities: PhD thesis. Kampala: Makerere University.

Tilwawala, K., Myers, M.D. &Andrada, A. D. (2009). Information Literacy in Kenya. *EJISDC*. 39, 1: 1-11.

Uganda Bureau of Statistics (2012). Education Sector: gender statistics profile. Kampala <http://www.ubos.org/onlinefiles/uploads/ubos/gender/Education%20Sector%20Gender%20Statistics%20Profile.pdf> Accessed on 13<sup>th</sup> June, 2017.

UNESCO (2008). Information for All Programme (IFAP). Towards Information Literacy Indicators. <https://unesdoc.unesco.org/>. Accessed on 24<sup>th</sup> June 2017

USNCLIS (2003). The Prague Declaration: "Toward an Information Literate Society", USNCLIS, Washington, DC. [http://portal.unesco.org/ci/en/files/19636/ ...](http://portal.unesco.org/ci/en/files/19636/...), 2003.



© 2017, Tibenderana, P., & Kiwelu, J., et al. This work is under a Creative Commons Attribution 4.0 International License Non-Commercial-No Derivative Works.