

ENHANCING THE USE OF ACADEMIC LIBRARY VIRTUAL FACILITIES: THE CASE OF UNIVERSITY OF BUEA, CAMEROON

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Abstract

This paper focuses on enhancing the use of academic library virtual facilities with a thrust on the case of the University of Buea Library in Cameroon. It examines the existing virtual facilities that are open to the users of the said library. The opinions of the users have been sought to know how familiar they are with these facilities, the extent to which they use them and the challenges faced in using them. The study used survey instruments (comprising of semi-structured questionnaire as well as interviews) to collect primary data relating to the use of virtual facilities and the inherent problems. While there is increasing usage of these virtual facilities, it is equally clear that there are actual problems with respect to these facilities as well as using them. The lack of the sourcing skills was one of the most outstanding of the challenges. Steps that can be taken to enhance the use of these facilities were recorded from the users. It was evident that although these resources have not been developed to speed; notwithstanding those available could be very relevant if these users were given appropriate information literacy educating that can endow them with sourcing skills. If something can be done about these challenges, there will certainly be an enhancement in the use of these facilities. Virtual facilities in library settings are a must way forward if users must have equitable access to information resources that are current.

Key words:

Introduction

The academic library like is a knowledge organization with a specific mandate that is linked to that of its mother institution. An academic library has, therefore, as the main objective, to build information collections and systems directly of value to the needs of its mother organization. It is based on this role of the academic library that Mbambo-Thata (2009) considers it as, “a citadel of knowledge” and as in the words of Agaja in Dlakwa (2011) who describes an academic library as, “one of the most valuable infrastructure in the educational system”. The academic library like all other information services in the 21st Century are seen as a platform that makes available and accessible information resources in different forms from different sources in support of the parent activities of teaching, research and outreach through acquisition of skills and knowledge for lifelong learning (Shafack, 2012).

The role of academic libraries is shifting rapidly towards supporting a knowledge-driven economy instead of the delivery of ready-made answers and books (Kiviluoto, 2015). These libraries are able to perform this role thanks to information and communications technologies (ICTs) that are evolving every day. Following the advent of ICTs, all information services including the academic library have put in place and continue to improve virtual library components besides the print collection of the information base. These virtual components are made up of various types of information resources that take different forms and equally require different technologies and, in some cases, equipment to manipulate these resources. These resources take the virtual or soft form that can only be accessed by use of requisite ICT equipment and skills. The academic library has its users who have varying information needs stretching from research, teaching and outreach needs that are expressed by all types of users including those with special needs. These users equally have varying skills from the point of view of media literacy. Some have good skills, others some skills and the rest no skills needed to navigate through the vast amounts of both information and dis-information readily available for access via the Internet and the virtual library component. It is worth noting that specific skills are needed to access specific information resources on given subject areas and thus even those users with skills need to have knowledge of these specific skills for information sourcing. In this respect therefore, this research is valued as the way of charting a possible way forward in enhancing information sourcing on virtual academic library platforms taking the case of the University of Buea Library.

Motivation and Research Questions

The emergence and fast changing face of the ICT environment and Internet has facilitated the task of the Library and Information professionals. These help in making more visible, available and accessible information resources in print form via automated systems and soft (electronic) form via Intranet or Internet. These, again, are helping to bridge the wide gap between the haves and have not especially with the movement towards open access resources which are of high quality. The above state of affairs has obliged libraries and other information services in general and academic libraries in particular to develop Virtual Library components. The academic libraries in Cameroon's Higher Education cannot be indifferent.

ICTs and Internet have led to various terms such as Google Generation (Kiviluoto, 2015) or Android generation as a result of the younger generation born in the digital age and who are prone

to using these facilities. Born into the digital age or Internet era, does not automatically make these young persons equipped with requisite skills that make access to electronic resources easy. Virtual Library components provide different platforms with varied information resources that can be accessed, downloaded and used. The term virtual refers to the soft or electronic forms that can only be used with the help of machines or electronic equipment. Virtual components are the library collections that are not in print form and can only be accessed with the use of machines.

The varying specialities in higher institutions of learning give the academic libraries special expertise and its increasing digital resources on their virtual library platforms warrants sourcing skills to access these virtual information resources. Although it is felt that the young are born in a digital environment, it is not clear that they have the requisite ICT skills or IT literacy skills needed to exploit virtual facilities for information resources. Secondly, academic libraries have as mission to support teaching, research and outreach that involve older persons born before the digital age. Varying studies have portrayed that significant variations exist amongst academic library users in overall ICT skills and use (Kiviluoto, 2015). It is on the basis of these findings that this paper draws its motivation to examine ways of enhancing the use of academic library virtual facilities with a trust on the University of Buea Library in Cameroon. In other to facilitate the task of this research, three major questions were formulated and include:

- What are the components of academic library virtual facilities?
- Why should user's skills be enhanced in using the academic library virtual facilities?
- What are the appropriate ways of enhancing the use of academic library virtual facilities?

Methodology

Primary and secondary sources of information were employed for this paper. These included humans, journal articles and books from which relevant information was acquired to address the research topic. A questionnaire was distributed to eight hundred and forty (840) respondents who were found using the virtual library facilities and this was done randomly using an accidental random sampling technique. This study covered a period of one week. 840 respondents constitutes 10.5 % of 8000 Library registered users and this percentage is considered tenable in relation to the total user population of 8000 users considering the Kregan and Morgan data table for determining the sample for a study which results can be generalized to its population. Only users who came to use the virtual library facilities were given a questionnaire. The questionnaire was mainly to know what factors encouraged or discouraged them from making use of the virtual library facilities and

how their use of these facilities can be enhanced. These data sourced through the questionnaire were analysed descriptively using proportions with the results presented in tables and figures.

Literature

Virtual Library Facilities

Virtual facilities of an academic library refer to varying components and these relate to the various Information and Communications Technology (ICT) components and information resources in various formats. The ICT components include (Celebic & Rendulic, 2011).

- Hardware which refers to all types of machinery that can be used to manipulate information, some of which include, computers, decoders transformers, satellites, to name just these. The concept of hardware includes computer components, the physical and tangible parts of the computer, i.e., electrical, electronic and mechanical parts which comprise a computer.
- Networks, which range from the Local Area Network (LAN), through Wide Area Network (WAN) to the biggest network which is the Internet.
- Lastly, Software which, unlike hardware, refers to intangible part of the computer. It consists of a sequence of commands, written according to strict rules. Programs are written by programmers, in various programming languages. Some of the softwares include; operating systems, browsers, search engines, open source, directories, the various array of protocol, to name just these.

The last aspect of virtual facilities constitutes the various information resources themselves.

The above facilities need to be combined to enable information users to attain their goals and satisfy their information needs. This is evidenced by the very definition of ICTs which is seen in one way as, “The combination of technologies that facilitate the manipulation of information” or “Unified communications and the integration of telecommunications, computers, software, middle-ware...” (TechTerms.com, 2010). This manipulation can take the form of down loading, printing, creating, cutting, pasting, saving to name just these.

The information resources handled by this paper are mainly information in virtual (soft, digital or electronic) form. Information is generated every second throughout the world at a tremendous rate. The digital facilities are evolving every day providing different techniques or skills of accessing the digital information. This has been supported by the IFLA Trend Report (2013) which holds as follows, “New technologies are transforming the global information economy”. The digital trend is seeing a rise of new or virtual information resources. There are digital books, apps, databases,

mobile and now wearable technologies that are redefining the way information is used (CISCO Visual Networking Index, 2013). Technological barriers are falling away, accelerated by increasing penetrations of mobile devices that is greatly being felt in developing countries (Internet World Stats, 2012).

The above analysis go to provide evidence that the academic libraries have a great challenge to decide which of the technologies will constitute their virtual facilities in a fast growing digital environment. This is made even more challenging given the multiplicity of mobile devices especially in the hands of the young. The questions: are which of these digital facilities are appropriate for the exploitation of the virtual information resources available to users? Which of them are easy to manipulate? One of the roles of the academic library is to make available and accessible quality information resources to its users in a very user friendly manner. In playing this role, this library type must pay attention to the type of digital or virtual facilities accessible to its users.

Why User's Skills Should be Enhanced

Academic libraries are compelled in the 21st century to build viable virtual libraries as more and more quality information resources appear in virtual forms. The fast evolving digital environment is making it easier for information users to use information resources on virtual platforms. There is equally the great effort to bridge the information gab through the Open Access drive with the help of open publishing. This is providing quality and free information resources in virtual form. Again academic libraries in an effort to cut down on cost are subscribing to subject databases and adding these to Open Access resources available for free and signing memoranda with different organizations to gain access to different quality and specialized licenced information resources all in electronic form. These information resources constitute part of the virtual library facilities. Some of the licenced information resources include: AGORA, HINARI, OARE, to name just these.

The above information resources need sourcing skills to exploit them. It is true that a bulk of academic library users are of the younger generations and born into the Internet era. Notwithstanding, this does not automatically make these generations information or technology literature. Information literacy skills are taught (Kiili, 2012). Kiili carried out a study on Internet search actions and information evaluation, and found out substantial variations in the skills of the

information users. It is equally important to note that in many parts of the developing countries, like Cameroon, there are many students who come to higher institutions of learning like the university from the rural areas and who have never had access to the Internet at all although born in the Internet age. There is equally the older generation that is involved with academic activities but is quite “technophobic” or illiterate with respect to the use of ICTs. From Kiili’s research it is equally clear that there are variations in skills amongst the users with ICTs or information sourcing skills, some of which may not even be appropriate for information sourcing. All these go to reinforce the need to enhance the skills of information users to enable them exploit virtual facilities in academic libraries.

The shift from a print information environment to a digital one, supported by the advent of new Internet technologies such as mobile or broadband, is changing the means and mechanisms of information delivery and access in libraries IFLA (2015). It is therefore necessary to enhance the skills of users to facilitate the exploitation of these resources. This provides the potential that leads to improve, more relevant services and programmes for users. It has been observed generally that information users face problem in formulating adequate search queries, understanding how search engines work, analysing search results and regulating search activities (Kiili, 2012: 43). Again these users lack skills relevant to evaluate information resources. This is an indication that there is a heterogeneous group of information users whose skills and knowledge in both ICTs in general and information skills in particular vary greatly (Margargan, et.al, 2011).

The above challenges with respect to digital skills needed for information sourcing highlight the importance of paying great attention to the issue of information literacy in the ICT-driven world and how the literacy skills can be enhanced with an ever growing demand for information and fast changing media world. This is very important because an ever-expanding digital universe is bringing a higher value to information literacy skills and competences with tools. Persons who lack these skills will face challenges of inclusion in a growing range of areas (IFLA Trend Report, 2013). Academic libraries therefore need to take the issue of information literacy very seriously.

Appropriate Ways of Enhancing the Use of Academic Library Virtual Facilities

“The library is regarded as a platform on which information resources packaged in different forms and format are made available and accessible to different categories of users irrespective of their

background and physical challenges” (Shafack, 2012). This implies that libraries are knowledge organizations mandated to facilitate the mission of its parent organization as is the case with the academic library. It is important to note that libraries like all information services today are no longer just buildings but platforms like the definition above holds that facilitate access to information resources out of its physical facility thanks to the Internet.

For the academic library like other information services to be able to play its requisite role, it must put in place ways of enhancing access to the various information resources on its platform. There are varying challenges associated with accessing or sourcing for information as discussed already above. These challenges stem from the continuous churning out of a multiplicity of information resources in various forms and formats needing different techniques and technologies to use them. Varying digital skills by the information users are required to access and find appropriate information to meet different needs.

Given these challenges, it becomes incumbent on the libraries and academic libraries specifically to do all to facilitate the use of its information resources by enhancing the information sourcing skills of its users. To enhance something is to put in place the means to make that thing happen (Ahenkorah-Marfo, 2012). There are various ways through which this can be done. Some of these have been reviewed for this work.

- The first way is to build an information collection based on the needs of the library user community. In the case of the academic virtual library facilities, the virtual or digital information resources must correspond to the teaching, research and outreach needs of the mother institution and with requisite virtual equipment needed to exploit these information resources including Internet connectivity and reliable electricity. The virtual library collection or platform should be such that it is able to meet the ever growing demands for information (Kiviluoto, 2015).
- The second way of enhancing access and utilization of information resources is through proper organization of the various information resources that will facilitate easy access and identification of specific needed resources. Thus in the academic library, collection building and proper organization of the collection of information resources constitute the beginning of the knowledge access facilitation process (Ahenkorah-Marfo, 2012). The Library and Information Professionals (LIS) make use of all available tools both in print and electronic form to facilitate access to various information resources alongside their professionalism. Some of them include various softwares such as browser, search engines, array of protocol, directories, open access and open source softwares, to name just these. Others include

controlled vocabulary such as thesauri (Menard, 2010; Hudson, 2006 and Chu, 2005); access points which are normally names, codes, terms through which bibliographic data are searched and identified and finally an online public access catalogue.

In summary, therefore, when the academic library is able to efficiently organize its resources properly even in virtual form, providing the requisite tools with which to access and use these resources, then it is going a very long way to enhance access.

- The third and last way to enhance access relating to this paper is information literacy education and usually referred to as user education. User education also called information literacy skilling has been defined differently. Specifically, the Harrods Librarians' Glossary (1977) sees user education as, "A programme of information provided by libraries to users to enable them to make efficient, independent use of the library stock and services which include tours lecture exercise and provision of support materials".

The above definition shows the need to beef up information users' skills, providing them with the capabilities of maximally exploiting the information resources available. The contrary will make the effort of building an information resource platform vain. These resources need to be optimally used if the mission of the academic institution and the supportive role of the academic library must be met. Using the library collection optimally requires appropriate skills.

Teaching information literacy skills will equip users with skills to ICT tools as well as surfing the Internet for information resources. This will help in decision taking regarding how teaching can be based on a deeper understanding of how technologies and virtual information resources on the Internet platform could actually improve the process and outcome of learning in a fast evolving digital environment (Margarejan, et.al., 2011). The way to actually doing this is by experimenting it with the information users through an information literacy programme.

Literacy education is quite primordial in a digital age with academic libraries spending energy and expensive resources in building virtual library components given that, there seems to be a big gap between how students and other information users use new technologies in leisure and in learning. Relating to this, Kolikant (2010:1389) talks about students living within two value systems wherein *"the one hand the Internet is seen as a user friendly, fun and easy way to access and retrieve information, yet on the other hand when facing a 'serious or important' assignment student felt they should incorporate books in various formats..."*

This goes to show that the Internet is regarded and used by many as a platform for leisure and fun and not a place to get quality information resources for learning and academics. It is therefore urgent for libraries such as academic libraries to provide users with skills on how to find, download and use quality information resources on the Internet. The Internet is the major platform for the academic library virtual information resources spread out the entire world.

The above supports information literacy education as a way of enhancing access to information. Thus academic libraries should use their expertise and develop a library literacy programme for its users from which they will acquire skills for sourcing and using information resources to facilitate teaching, learning and lifelong skills for outreach.

Presentation of Results

This section presents the results obtained in relation to the level of usage of virtual library facilities in the University of Buea and the associated challenges faced by users and providers alike. The first part of this section assesses the background characteristics of participants in terms of their gender, fields of specialization as well as level of stage of education particularly for undergraduate and postgraduate students (Table 1).

Table 1: Response Rate to Questionnaire

Variable	Value Label	Frequency	Percentage
Gender	Male	400	47.6
	Female	440	52.4
Total		840	100
Subject Area	Agriculture	20	2.5
	Education	100	11.9
	Engineering	30	3.6
	Health	100	11.9
	Sciences	240	28.6
	Social Sciences	230	27.4
	Technology	10	1.2
	Translation	10	1.2
	Languages	100	11.9
Total		840	100
Level of Study	200	100	11.9
	300	150	17.9
	400	375	44.6
	500	50	6
	600	110	13.1
	700	15	2
Total		800	100

The respondents for this study as indicated on Table 1 included 47.6% males and 52.4% female Library users who are basically students. The subject backgrounds included, Agriculture (2.5%), Education (11.9%), Engineering (3.6%), Health (11.9%), languages (11.9%), Sciences (28.6%), Social Sciences (27.4%), Technology (1.2%) and Translation studies (1.2%). These fields of specialization were studied by students of levels 200 (11.9%), 300 (17.9%), 400 (44.6%), 500 (6%), 600 (13.1%) and 700 (2%).

Familiarity with the Virtual Facilities

This study considered it very important to determine how familiar library users are with the existing virtual library facilities equipment and information resources). Table 2 reveals the results gotten in response to the aspect of familiarity. There are significant differences in the levels of familiarity of users with the different virtual facilities present in the university library. While a considerable proportion (72.3%) of the participants are familiar with the computer, few of them indicated to be familiar with others such as online public access catalogue, optic fibre backbone and wifi which are equally provided by the university library.

Table 2: Familiarity with Virtual Library

Variable	Value Label	Frequency	Percentage %
Virtual Library Facility	Computer	650	72.4
	Online Public Access Catalogue	100	11.9
	Optic Fibre Backbone	50	6
	Wifi	50	6
	Total	850	100
Virtual Library Information Resources	AGORA	175	9.0
	American Corner Resource	500	25.8
	EbscoHost Databases	400	20.6
	HINARI	300	15.5
	JASTOR	10	0.5
	LandTeal	25	1.3
	OARE	30	1.5
	Open Access Resources	500	25.8
Total	1940	100	

Virtual Library Equipment and Accessories

With respect to virtual equipment and accessories, Table 2 shows that 72.4% of the respondents are aware that the library has computers available for library users. Of the 840 respondents, 11.9% were familiar with the online public access catalogue (OPAC), 6% knew about the optic fibre

backbone that the library Internet connectivity is linked to and 6% were knowledgeable about the availability of the Library WIFI.

Virtual Information Resources

With respect to familiarity with the library virtual information resources, 59.5% of the respondents were very familiar with the electronic information resources on the Library-American Corner platform, 48% were familiar with the electronic information resources subscribed to by the library from the service provider – EbscoHost, 35.7% knew that the library has licenced resources packaged under the Research 4life package and include; HINARI and AGORA among others. These resources are highly specialized resources in the area of applied sciences, agriculture and veterinary medicine, and pure sciences to name just these. Less than two (1.2) percent were familiar with the availability of JASTOR, 3% knew of Land Teal, 4%, were aware of OARE, 59.5% were conversant with the Open Access Resources and 59.5% said they could access open source resources via the Library Internet facility.

Even though 59.5% of the respondents sampled are familiar with the virtual information resources on the American Corner platform of the Library, this proportion is not very encouraging given the enormous study resources found in the centre which can significantly enhance knowledge uptake by students especially from virtual sources. This shows that several users are still not aware of these valuable information resources. This becomes even more discouraging when it is evident that of the various databases that cut across the various subject areas offered by the university departments subscribed from EbscoHost, only 48% are familiar with these resources. These are resources on which a good chunk of the library's budget is spent and it will not be proper if less than 90% of the library users are not familiar with such resources. It becomes worst when the results in relation to the licensed resources show that only 35% are aware of these specialized resources. The signal here is that the library management still has a long way to go with respect to the building and use of its virtual library component and this is the thrust of this study. IFLA (2015) holds that, "There is a shift from print Information environment to a digital one, supported by the advent of the new Internet technologies... which is changing the means and mechanisms of information delivery and access in libraries". If the University of Buea Library must stay current and relevant, then it must transform its virtual component from the perspective of value and use by its users.

Utilization and Satisfaction

In relation to the use and satisfaction of the library Virtual Library facilities, Figure 1 reveals that 58.5% of the 840 respondents indicated that they use the facilities and resources very frequently, 24% said they do so frequently and 13% said they do so sparingly.

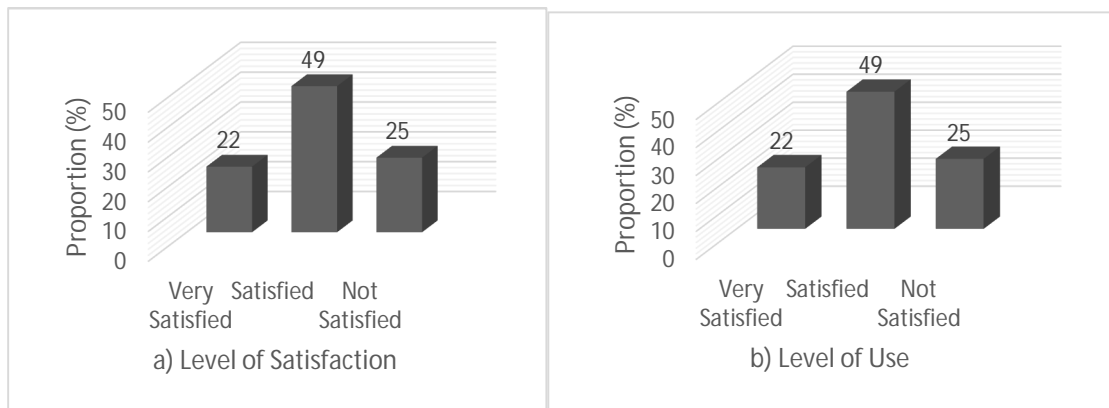


Figure 1: Utilization of Electronic Information Resources and Satisfaction

With respect to how satisfied they were with using the facilities 22% of the 840 said they were very satisfied, 49% said they were satisfied and 25% said they were not satisfied.

Enhancing Skills Used in Accessing Virtual Library Facilities

Enhancing the use of the virtual library facilities of the University of Buea Library constituted the thrust of this study. In order to this, the opinions of the users were sought in order to ascertain precisely what needs to be done to make it easier for them to use these facilities. From the results gotten, 83.3% of the respondents indicated that they need specific skills to access the electronic resources of the library, 10% stated that they do not build their own skills which should facilitate the use of the said resources and 96% indicated that their sourcing skills need to be enhanced.

With respect to ways through which such skills could be enhanced, workshops, tutorials and information Literacy education programme were suggested as shown on Table 3. Discussing with the respondents, they equally proposed the following as ways of improving their skills for the enhancement of the use of the library virtual facilities:

Table 5: Ways of Enhancing Information User Skills

SN	Items	Frequency	%	Rank
1	Workshop	350	41.6	2
2	Tutorials	28	3.3	3
3	Information Literacy Education programme that can provide lasting skills	472	56.1	1
	Total	850	100	

- Guidelines should be placed on the entrance to the Library, notice boards directing students on how to use virtual library facilities.
- Internet connectivity should be improved upon so as to facilitate the use of virtual library facilities.
- Library staff should be frequently trained in order to properly guide students on how to use virtual library facilities.
- Internet connection should be provided round the clock and should be provided for free to students.

The responses gotten from the users are very relevant and if efforts are made to implement these the use of the library's virtual facilities will be enhanced tremendously. The essence of having information resources is for them to be used. If they are not used they are useless. It is worth noting that facilitating access to information is the reason why information services such as the library exist in the first place. More so access to information is a fundamental human right as emphasized by the IFLA Lyon Declaration (2014).

Discussions

Results on Table 2 show that the level of familiarity with respect to virtual facilities is 72.4% with respect to computers. Although this level is high, the use to which these computers are put is not very encouraging as only 11.9% use the computers to search for information resources using the OPAC which is an important sourcing tool. Only 6% of 840 respondents are familiar with the Library WIFI. The WIFI makes it possible for information users to access the virtual platform easily and in great numbers and even using their own ICT tools. If only a tiny fraction is familiar with it, then this is a sign that there is a problem. It is clear that no library can afford to provide all its users with a computer linked to an Internet node. Thus the availability and great use of the WIFI is a great solution. If new technologies are transforming the global information economy as revealed by the IFLA Trend Report (2013), then there is need for the University of Buea Library to familiarize its users with the availability of its WIFI because these users cannot be left out of this scenario.

Secondly a milliard of information resources are now becoming more and more available in electronic form and if the library users must have what they need, there is need for WIFI. The University of Buea has thousands of information resources on its virtual space and more than its print resources. These recourses are current of high quality. If a great number of its users is not making use of these resources then this is a great concern.

A 82.5% level of use may seem high but 24% of sparing use and 13% of no use at all is a rate to worry about for an academic library is considered by Mbambo-Thata (2009) as a, “Citadel of knowledge” and by Agaja in Dlakwa (2011) as the, “most valuable infrastructure in the academic system”, then it becomes worrisome to have up to 37% of the users of this facility not to have the use of its resources as priority in their academic activities. This is made worse by only 22% stating their satisfaction in the use of the resources. The library and university administration need to go to the drawing board to see how 88% of the users sampled can be brought on board. Let alone the entire user population. If only 22% of 840 respondents are satisfied, it means that if the entire user population is surveyed, the situation will be worse. There is therefore a need for urgent strategies to be put in place to motivate the use of these resources. Such strategies should align with the needs of the users and should equally be inclusive for any meaningful results to be obtained in future studies.

Furthermore, regarding the challenges in the use of virtual facilities and resources, the users of the University of Buea Library electronic resources face challenges as a result of lack of sourcing. The rate of 96% is very high and this explains why the low rate of familiarity and use of these resources were recorded as discussed above. Kiviluoto (2015) has express clearly that studies on the use of electronic resources have revealed, variations amongst academic library users in overall ICT skills and use. There is a shift from the print to the electronic form of information resources and the ICT equipment and accessories are changing every day. These constitute the tools for using electronic information resources. This therefore implies that if information users must find and make appropriate use of needed information resources, they must acquire skills that can facilitate access to these resources. There is therefore a need for the university library in question to put in place a literacy programme to enhance the skills of its users. Even if such a programme does exist, from the results of this study it is clear that the programme needs to be made more effective.

Conclusions

This paper has highlight to an extent of the use of the University of Buea Virtual facilities, the challenges and ways to enhance the use of these resources. Although libraries are custodians of knowledge, it is evident that its users find it challenging to gain access to all the forms of resources on their plat forms. These challenges are becoming more glaring with the fast changing ICT environment. Librarians are thus called upon to drive access to knowledge more forcefully than ever before by equipping themselves with new skills. This is because they must demonstrate at all times that they have the capacity to perform their required role. Note should be taken that we are in the world where one has to learn at all times and keep pace with development trends. It is even more so with persons who are information custodians and concluding in the words of Bannerman (2012), “Our dream should be, at the click of the button, any citizen should have access to information and knowledge without any restrictions”.

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