CHALLENGES OF VIRTUAL REFERENCE SERVICES IMPLEMENTATION BY NIGERIAN ACADEMIC LIBRARIES IN THE 21 ST CENTURY IN NIGERIA

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CHALLENGES OF VIRTUAL REFERENCE SERVICES IMPLEMENTATION BY NIGERIAN ACADEMIC LIBRARIES IN THE 21ST CENTURY IN NIGERIA

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Abstract

Growth in technology, research and innovation as well as increased user information needs have affected library services in in recent time. The traditional library reference services are being transformed through the application of internet and electronic devices. This study is a review on the implementation of virtual reference services by Nigerian academic libraries and the challenges. The concept of reference and virtual reference services, types and need in the 21st century was clearly defined. Also, the possible hindrances to implementation of virtual reference services in Nigerian academic libraries such as poor internet connectivity, poor implementation of information technology policy, inadequate power and energy, digital illiteracy and incompetence among some librarians as well as inadequate funding were noted. Conclusion and recommendations were made at the end of the study.

Keywords: Reference services, Virtual reference, Library services, Academic libraries, Reference librarian, Information and communication technology.

Introduction

Academic libraries have changed from the traditional roles of acquiring books and information resources to meet the educational, reading and research needs of the clientele, to a dynamic roles in information dissemination. One of such ways to accomplish this is through effective and efficient reference services that is intended to assist the users' query, access to and use of information in their areas of need. Reference services are regarded as "All the tasks and processes involved in assisting patrons to get the information they want from the archives" (Singh, 2004). This "includes question-answering service, search service and search help, bibliography service, and information and referral services, selective

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dissemination of information (SDI), current awareness services" etc., within and outside the library. In recent time, technological presence has enabled access to library resources from outside the physical library building through computer and other electronic terminals known as digital or virtual reference services. Virtual reference services have recorded significant progress in an electronic or digital environment with adequate internet facilities, this especially is most prevalent among academic libraries in the developed countries.

Virtual Reference services

Information services in the twenty-first century holds a lot in stock for the academic library considering the dynamic opportunities which information and communication technology has created and reference services have had a fair share of the innovation. There is evidence of dynamic technology driven reference services among the developed countries, and like epidemics, it has gradually infected the reference services in the developing countries with some remarkable presence in some university libraries. According to the American Library Association's Reference & User Services Association (RUSA, 2004) defines it as:

> "Virtual reference is reference service initiated electronically, often in real-time, where patrons employ computers or other Internet technology to communicate with reference staff, without being physically present. Communication channels used frequently in virtual reference include chat, videoconferencing, Voice over IP, co-browsing, e-mail, and instant messaging".

Janes, (2008) revealed that the development of digital to virtual reference service of the present time has been transient with technological development and according to Stormant, (2007), the first email reference project began sometime in the 1980s. The "patron only engages the librarian via e-mail or in a virtual chat over the internet" (Schwartz, 2014). Development in technology, especially the Internet and user driven demands, have enabled the libraries to created electronic or computerized reference services so as to give productive and powerful reference and information services to benefactors within and outside library environment (Cheng, 2008; Ina Fourie, 2003). As a result, VRS have become the digital compliments or alternative to traditional face-to-face reference services in the libraries. Virtual reference service (VRS), includes synchronous services like instant messaging and online chat as well as asynchronous service like e-mail etc. (Radford, Connaway & Dickey, 2008:4). E-mail is a form of asynchronous reference service, that is not live or real time while chat or instant messaging in the other hand is synchronous services, providing real time computer enhanced system that allows simultaneous chat generated by instant messaging software (Taher, 2002).

Library's Virtual reference services has been defined variously by researchers and information organisations, what is common among them is the application of electronic devices either in real time or offline situation and need to meet users information need without much ado. Online Computer Library Center (2007) defined VRS as the application of computer and information communication technology to provide reference services to the patrons, anytime and anywhere while Lankes, Goodrum and Nicholson (2003) sees VRS "as the use of human intermediation to answer questions in digital environment". Wikipedia (2012) says it is "a library reference service conducted online, and the reference transaction is a computer mediated communication by library professionals to" user "who cannot access or do not want face- to face communication". Reference and Users Services Association (RUSA 2010), however defined Virtual reference from a broader perspective, saying, "it is reference service initiated electronically where patrons employ computers or other technology to communicate with public services staff without being physically present. Communication channels used frequently in virtual reference include chat, videoconferencing, Voice-over-IP, co-browsing, e-mail, and instant messaging". It classified virtual reference service to services "such as chat, videoconferencing, co-browsing, instant messaging (IM), voice over Internet protocol (VoIP) or email, conducted electronically through computers or the Internet".

Need for virtual reference services in 21st century in Nigeria

Innovations as a result of technological development, coupled with changing users' aspiration have changed the primary responsibilities if the libraries from mere collecting and organizing information resources mostly in books and journals formats to include pragmatic marketing and dissemination of information. More so, the global trends in library and information has affected the archival and passive nature of the library to a dynamic service institution in the 21st century. The National Universities' Commission (NUC) Virtual library project among the Nigerian public university libraries in January 2002 (Gbaje, 2007) seem to set the footing for virtual reference experience irrespective of poor implementation that characterised the project (Ogunsola, 2004). It is therefore expected that every library should comply with the digital move and get on board the electronic reference services.

Notwithstanding the advantages which technologies like the internet and social media have presented to transform library services, more especially the reference services, most libraries in the developing countries still glued to the traditional face-to-face reference service at the reference desk. Growth in knowledge, technological transfer and globalisation has put a demand on the citizens' institutions and organisations to cooperate and collaborate. There is need to expand in scope as the users information needs increases. Moreover, innovation

in library services globally has strong signal that any uncompliant libraries will remain in the dark while the others continued to advance.

The challenges posed by the internet technologies such as the social media, web 2.0, and goggle generation which has become a phenomenon in information landscape has place the libraries and information on the edge. So to say that the libraries must contend with huge number of formal and unlicensed information brokers in digital environments (Zabel, 2011), and vigorously enough to maintain relevance in addition to gain trust and loyalty from the users (Bala, Madu & Adamu, 2017). Electronic correspondence is incredibly well known with the 21st generation users also known as the Millennial Generation, those conceived between the years 1982 and 2000. (Lee, 2006) This set of young generation is once in a while called the Net Generation for their inclination toward electronic correspondence, utilization of the Internet, and web based gaming. They incline toward IM via phone and this incorporates the phone app (Kern, 2009). Utilisation and users satisfaction of the library services is one factor that justifies expenditure and further budget allocation, they are regarded as major return on investment (ROI) (Bala, Madu & Adamu, 2017) by sponsoring body. Reference services, especially virtual references are the windows through which the library contact and attract and interact with its' users.

Types of virtual reference services
Virtual reference services are divided into two broad categories, these include the synchronous and asynchronous reference services.

Synchronous reference services:
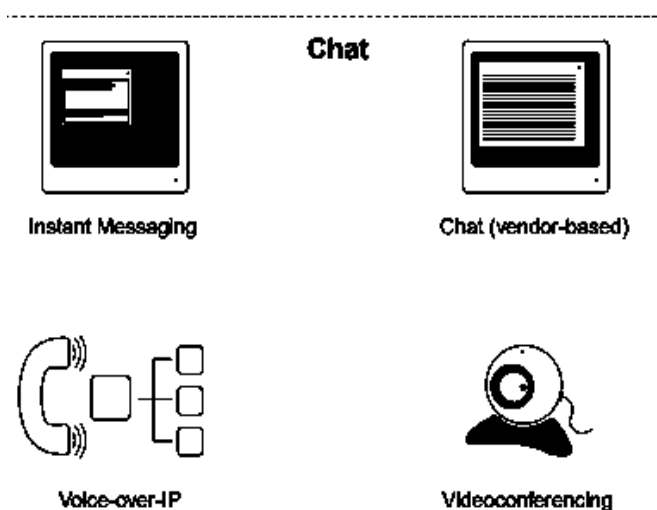
Fig. 1: Synchronous Reference

Synchronous virtual reference services can be referred to visit, IM, videoconferencing any PC interceded correspondence that happens in real time. Albeit exact, it is an unwieldy term. This exchange happens 'Continuously' with a quick reaction to the question i.e. the connection between the client and reference librarian is live in this manner it is additionally called Real-Time Digital Reference service to type a message back to the reference librarian immediately and receive a response immediately. Reference librarian can attend multiple users simultaneously, and when the computer is connected to voice over internet protocol (VoIP) the reference can librarian to talk to users and hear them while searching to locate the information they requested.

Virtual or digital reference librarians have a tendency to favour online or electronic sources in light of the fact that these sources are simpler to access and share with the client. The vast majority of the client now days need to get to on the web, full text sources. A case is the Live Help benefit offered by Gates head open libraries, which utilizes Swiss programming, Click and care. Reference interview or chat begins with a sing-in to the screen by the client. At the prompt of salutation or introduction by text, the programme puts the standby librarians who are online to attend to the clients according to the cue. A few libraries request the clients' identity if their services are restricted to the registered users. Reference librarian can use various types of software with the ability to browse simultaneously, "prewritten messages, typical greetings, sign off texts to save time and typing involved in reference interview". Also, professional expertise is required by the reference librarian to keep the interview from dragging unnecessarily and boring to avoid the clients from logging off intermittently while the search for the needed information is on-going.

  a. *Text based Chat/Instant messaging*
     Text based chat and instant messaging can be completed with all sorts of electronic devices, the common qualities include "live" (ongoing or synchronous) nature of the correspondence and that it is electronically encouraged, by and large, utilizing wrote content conveyed from PC to PC. Conversation is a two-way correspondence, therefore, a patron would have the capacity

  b. *Video Conferencing or web cam services*
     Video Conferencing is developed as a cure with the correspondence issues natural in text based service. This advanced frame incorporate visual components where client and the librarian can utilize text and speech in conversations, and they can and hear each different just like face-to-face personal interactions. This service is helpful in distance learning, research and reference applications. This type of virtual reference services incorporates transmission of a live video of every individual (as long as both have the important camera equipment) alongside the composed content. It

can be joined with VoIP (Voice-over-Internet Protocol) so both picture and sound are sent through PC. Videoconferencing is the more conventional phone in addition to video, which requires rather one of a special equipment on the two terminals of the correspondence.

Asynchronous virtual reference services.

Asynchronous reference is a type of digital reference services that are not conducted in real time, this means that the interaction between the reference librarian and the patron is not instant. The patrons could leave message or messages behind via test message using hand phone, e-mail or fill up web form at the library's website. The librarian will reply the messages immediately of later after clarifying the requests. Some examples of asynchronous virtual reference services include text messaging/SMS, E-Mail, and web form.
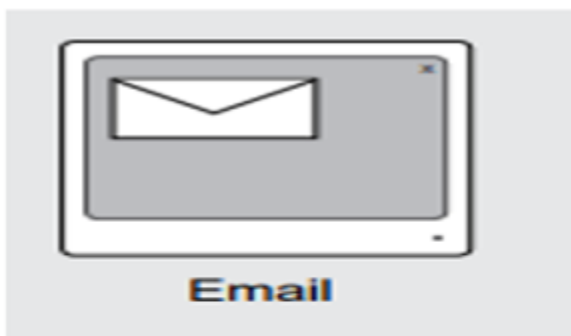
NAME:	
E–MAIL:	
INSTITUTION:	
COUNTRY:	
ZIP/CODE:	
TYPE YOUR QUESTION	

SUBMIT   Web Form

Fig. 2: Asynchronous Reference services

a. **Text Messaging/ SMS**

Text messaging is correspondence by means of written message to or from a cell device. It can be received by a user in a remote environment through hand phone, other portable devices such as iPad, personal computer etc., through electronic mail or an Instant Messaging account. The interoperable capacity permits clients to access and send messages from all kinds of

devices from various locations simultaneously. SMS, or Short Message Service, is written content transmitted to or from cell phone or other devices. The SMS convention confines "the length of an each message to 160 characters, including spaces". Messages sent through instant messages or SMS is sent by one individual and got at an alternate time by the beneficiary. The space in-between the sending time and the time of receipt distinguishes it from the synchronous type of virtual reference services.

b. **E-mail,**
The client sends a question or requests to the librarian or a specifically designated reference service section through via regular e-mail. The librarian may reply the mail to clarify the users' need or send the answer in a return e-mail if the requests are stated clearly by the clients. He may use telephone or fax too. The answer is not as spontaneous as the real time chat and it does not require additional software. E-mail-based reference is easy to implement, and no extra training is required (Diljit, 2004).

c. **Web forms,**
Web forms is another form of asynchronous virtual reference service whereby the users click on a button on the library's web site, which pops up a form where the question can be typed in. The users profile are requested as a condition to complete the form. The completed form is then sent to the library by clicking on a "send" or "submit" button. Web forms provide a structured format, and facilitate the framing of a question.

The challenges to implementation of virtual reference services in Nigerian Academic libraries
Despite the presence of electronic devices in most academic libraries in Nigeria, Virtual reference services are yet to be implemented in any significant level. This is as a result of many issues which have a milestones which the libraries are struggling to overcome. Some among these factors include;
Poor internet connectivity: one of the major hindrances to implementation of virtual reference services among academic libraries in Nigeria poor internet connectivity. Up on till now, Nigeria digital space is somehow dislocated geographically, this accounts to why Nigerian lags behind in open access. More so, virtual reference services can only be possible in digital environment. It is common to experience a fluctuating and unsteady internet connectivity due to inadequate bandwidth. According to Olabude (2007) poor internet connectivity is one of the many constraints to internet development in sub Saharan Africa, this according to the author was caused by inadequate initial funding plan to install internet facilities. Chigbu and Dim (2012) further linked inefficient telecommunication and power supply to poor development of internet services in Africa. According to them, these the cost of these factors provides another huddle where they are available.

Digital literacy: Some professional librarians lack the requisite technological literacy and competence needed for a 21st century library service. The services of a digital or virtual reference librarian demand a high level of digital literacy and technological competence, someone who is capable to manipulate various digital devices in an online environment. This seem to be a mirage among Nigerian reference librarians. It is surprising to note that while the globe is drifting towards innovation through information technology, most library staff remain adamant to change. These set of librarians without an all-around developed ICT expertise can't render successful library services, in this way, absence of aptitudes among librarians forms a noteworthy obstruction to service delivery in the 21st century academic libraries according to Anyira (2011). The availability of the electronic and internet devices is one requirement while availability of competent librarian to use them is another major requirement in virtual reference services. RUSA guidelines states that a virtual reference librarian should possess online communication skills during chat session. These include Maintain word contact', Personal greeting, User person's name, Look for self-disclosure, Complex search – indicate time, Building Rapport, Compensate non-verbal cues and Closing (Duinkerken, Macdonald, & Stephens, 2009). Online chat such as *Ask-A-Librarian* or *QuestionPoint* strange to most academic library while the ones that have website are deficient in skill personnel to anchor such programme.

Inadequate power and energy: It is clear that Nigeria is still experiencing fluctuating power supply. This is due to inadequate megawatts which is necessary to drive technology application in various aspect of the nation's economy. Most virtual reference services such as Ask the Librarian runs for 24 hours, no library so far has the required amount to spend on alternate power supply to meet with the 24 hour online reference services. Adepetun (2012) opined that Poor national power and energy plans have exposed the organisation to unnecessary expenses on alternative source of energy.

Poor funding: most academic libraries are suffering from poor funding which, virtual reference services is capital intensive, therefore, inadequate fund will amount to ineffective services where they are available. Among various problems that bedevil electronic reference library services, Nwalo (2000) stated that issues repressing IT applications by African libraries incorporate poor commitment and deficient government financing which is fundamental to brilliant library administrations, especially in the digital age.

Non-functional library website most academic library websites in Nigeria are characterised by dud links and inconsistent updates. Virtual reference services have become ubiquitous for libraries with an online presence, no wonder virtual reference services receives lip services among the university librarians. A library website that is capable to run virtual reference services must be designed adequately and attractive enough to encourage clients. Various social media and web 2, 0 platforms such as Facebook, printest, MSM, Help etc., should run live on the website to be able to function in real time situation with clients online

***Poor policy Implementation*:** policy decisions and enactments are often regular in various aspect of the Nigerian governance, one of the issues about these policies and decisions is inadequate or improper implementations of such policies. This has made such good intended decisions regarding information technology implementation among academic libraries in Nigeria unrealistic. In spite of the noble objectives of the National Information Technology Development Agency (NITDA) and resources invested, studies have outlines its performance as a colossal failure due to "unstable nature of Nigeria's economic and political environment; government apathy towards information services; weak and uncoordinated information professional associations in the country; oral medium of communication and high illiteracy rate; and underdeveloped and deficient information facilities in the country's information institutions" (Uhegbu, 2003). Similarly, Oyesanya (2004) noted that NITDA's failure is reflected in its change of focus and diversion of activities from the original objectives which according to Gbaje (2007) also "contributed to unsuccessful implementation of the Virtual Library initiatives"/

Conclusion

Implementation of Virtual reference services among academic libraries in Nigeria in the 21ˢᵗ century remained a mirage despite the promises held by information and communication technology. Notwithstanding the availability of some information technology devices and some level of information infrastructure, the digital literacy and competence required to manipulate these information resources toward effective virtual reference services is still lacking. Among other factors that have formed a hindrances to this objective include poor connectivity to internet due to low bandwidth, irregular power and energy to drive the technology necessary for online reference services. Inadequate expertise and funding are among the problems that have bedevilled the development of virtual reference services among academic libraries in Nigeria, the competence and finance to set up a vibrant website is in short supply.

Recommendations

For proper implementation of functional and effective virtual reference services in the academic library, this study recommends the following:

i. The academic libraries should consider staff appointment based on computer literacy and competence. This must be examined through a practical exercises on various computer and online assignments and not only on possession of certificate in computer.

ii. Technological development must be place on priority list among all academic libraries, these includes designing and constant website updating. There should be regular workshops and seminar on technological compliance by the reference librarians.

iii. Funding of academic libraries should be taken very seriously by both government, university and the library management. Moreover, the individuals and corporate organisations should be involved in funding for the academic library.

iv. The parent institutions of the academic libraries should as a matter of urgency start periodical review of the activities of the libraries with view to service quality and staff competence. This will encourage regular website update for optimum service delivery.

v. ICT Policy in the academic libraries should be revisited with aim to evaluate the implementation, expertise and professionalism should be considered when ICT contracts are to be signed.

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