**THE ROLE OF MULTIMEDIA IN EFFECTIVE REFERENCE SERVICES DELIVERY IN UNIVERSITY LIBRARIES**

**BY**

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***Abstract***

*The paper looked at the university as a place established for the purposes of teaching, learning, research and community services, and the university library as the principal instrument of the university in the conservation of recorded knowledge. The paper emphasized that the section of the library that gives direct personal assistance to users in their quest for information is the reference section. Reference services are direct personal assistances to users in their quest for information that will lead them to knowledge. Provision of reference services must be done effective for maximum user satisfaction in the university libraries. The paper then reiterated that effective reference services in the university libraries can only be achieved with the integration of multimedia technology into reference services delivery. This is because multimedia combines data carriers, for example video, CD-ROM, floppy disks, Internet and software in which the possibility for an interactive approach is offered the Interactive component of the multimedia in reference services delivery, enables the end users of the application to control the content and flow of information. The paper then looked as ICT and how it has facilitated effective and satisfactory reference services delivery and lauded the multimedia technology for making it possible.*

**INTRODUCTION**

A university is established for the purposes of teaching, learning, research and community service. As a tertiary institution, the university offers a variety of courses leading to the award of certificates, diplomas, bachelors and post-graduate degrees. The university is generally regarded as a custodian of knowledge where every student, especially the undergraduates acquire knowledge in various disciplines. This knowledge is usually in various disciplines for self development, which in turn prepares them for future roles in the society .Universities impart knowledge which is the power to solve human socio-economic and political problems, and the power to produce and distribute goods. Many aspects of the university environment help to develop student’s learning because transfer of knowledge and information takes place there. (Ifidon, 1999; Aguolu and Aguolu, 2002)

The university library is the principal instrument of the university in the conservation of recorded knowledge. Proper fulfilment of this role provides a sound basis for the transmission and advancement of knowledge. A university library is a house of knowledge that stores various information materials, and supports the academic programmes of the universities through the provision of relevant reading materials. The library has to collect materials published and unpublished, print and non print, and in some depth and globally in almost all fields of knowledge, not necessarily in the disciplines offered by the university. The value of the records of human communication lies in the information they contain. Information can be stored in books, periodicals, technical reports, pamphlets, microforms, conference papers of learned societies and professional associations, disks machine readable databases, manuscripts, CD- ROMS, maps, archival materials and many other formats. Information required by users appear in a variety of formats as mentioned earlier and they are generally referred to as information carriers. Other information carriers acquired by libraries are cartographic materials, graphic materials, sound recordings, motion pictures, video recordings and digital materials.(Aguolu and Aguolu, 2002; Idiodi and Igbinosa, 2003; Aina ,2004; Onwukanjo (2005). The university library is a service organization and the users have of necessity to be the central focus. Adequate services should be rendered by the library staff to support the intellectual, cultural and technical development of the users in the Nigerian universities.

The section of the library that gives direct personal assistance to users in their quest for information is the reference section. Reference services are direct personal assistance to users in their quest for information that will lead them to knowledge. Reference services are undertaken to either provide or locate answers for the user. The answers may be limited or extensive, actual or citations to the information leading the user to other sources, human or material which will provide the necessary information. Reference services could range from very simple questions that take little time to very complex questions that demand the expertise and various search strategies of the reference librarian. Provision of reference services must be done effectively for maximum user satisfaction in the university libraries.

Provision of effective reference services involves supportive duties and actions, from selection of materials to adequate space and personnel. (Senna, 2003; Aina, 2004). Reference services also involve providing instruction on the use of library resources, through user education. It also includes all the functions performed by the reference librarian to meet the information needs of users in person, by telephone, or electronically including but not limited to answering substantive questions at the reference desk. The reference librarians instruct users on the selection and use of appropriate reference tools for finding information. They conduct researches on behalf of the users and direct users to the location of library resources, and assist in the evaluation of information, and refer them to resources outside the library. Effective reference services in the university libraries can only be achieved with the integration of multimedia services into reference services delivery.

**Integration of Multimedia for Effective Reference Services Delivery in University libraries**

**I**n its simplest terms, effective reference services means having the internal and external processes that would lead to the desired end result. It means having the means to produce the desired effect in reference services delivery. It implies causing a result especially the desired results, and selling the right targets to achieve an overall goal that support your mission and vision (Kumar and Surreh, 2001; Drucker 2006, Millet, 2009).

This implies that academic excellence can only be achieved when the reference staff gives out effective reference services. When effective reference services are given to the users, they would imbibe the culture of independent study which encourages (a) long term learning habits (b) makes them academic achievers (d) provides them with a wide range of materials for class projects, individual reports, and (e) provides with them up to date resources to keep them abreast of what is available in their fields or discipline to bring out the best in them.

 Multimedia access to knowledge is one of the trends in information and communication technology that has tremendously impacted on learning. The instructional media have a variety of resources, and equipment, which can be used to supplement or complement the teacher efforts in ensuring effective learning by students.

It is now clear that conventional media technologies can no longer meet the needs of our teaching and learning, as a result they are being complemented by multimedia technology. This technology provides a learning environment that is self-paced, learner-controlled and individualized.

**Multimedia Conceptualised**

 Multimedia is method of communication incorporating a combination of media, such as audio, video, as for entertainment or education, combination of communication media, such as television, newspapers, and radio, used in an advertising or publicity campaign. According to Vaughan (2006) Multimedia involves a combination of text, data, pictures, sound, video, etc., as on a CD-ROM compact disc, for interactive access through electronic computer. It is the usage of more than one form of communication at the same time. The combined use of media, such as movies, music, lighting, and the Internet for education, entertainment, or advertising and more importantly for the dissemination of knowledge. It uses computers for applications that integrates different media, such as text, graphics, video, and sound. This includes the use of different [media](http://www.yourdictionary.com/media) to convey [information](http://www.yourdictionary.com/information); [text](http://www.yourdictionary.com/text) ; together with [audio](http://www.yourdictionary.com/audio), [graphics](http://www.yourdictionary.com/graphics) and [animation](http://www.yourdictionary.com/animation), often packaged on [CD-ROM](http://www.yourdictionary.com/cd-rom) with links to the [Internet](http://www.yourdictionary.com/internet) . **Multimedia**  refers to [content](https://en.wikipedia.org/wiki/Content_%28media_and_publishing%29) that uses a combination of different [content forms](https://en.wikipedia.org/wiki/Content_format). According to Willey(2010), this contrasts with media that use only rudimentary computer displays such as text-only or traditional forms of printed or hand-produced material. It includes a combination of [text](https://en.wikipedia.org/wiki/Writing), [audio](https://en.wikipedia.org/wiki/Sound), [still images](https://en.wikipedia.org/wiki/Image), [animation](https://en.wikipedia.org/wiki/Animation), [video](https://en.wikipedia.org/wiki/Footage), or [interactive](https://en.wikipedia.org/wiki/Interactive) content forms. Multimedia can be recorded and played, displayed, dynamically interacted with or accessed by [information content](https://en.wikipedia.org/wiki/Information) processing devices, such as computerized and electronic devices, but can also be part of a live performance. Multimedia devices are [electronic media](https://en.wikipedia.org/wiki/Electronic_media) devices used to store and experience multimedia content.

**Effective Reference Services in University Libraries and Multimedia: An Interplay.**

It is pertinent for university libraries to engage multimedia technology for effective reference services delivery if the users are to be maximally satisfied. This is because unlike the traditional paper and books medium, networked electronic multimedia allows many people simultaneous access to the same materials at the same time. These resources are according to Reisman (2010) are available all the time, from office or home to university libraries. More sources can be consulted and relevant information can be obtained immediately. Widespread use of multimedia technology has implications for the learning, studying, teaching, local network capabilities and the services provided by university libraries. It adds new dimensions to the learning experience, most concepts are easier to present and comprehend when words are complemented with images and animations. Learners retain more when a variety of senses are engaged in delivering information. The intensity of the experience aids retention and recall by engaging social and emotional as well as intellectual responses.

 Conventional media technologies can no longer meet the needs of our teaching and learning processes, and consequently, they are being beefed up by multimedia and its technology. Multimedia and its technology, are increasing in popularity, because its instructional and service delivery system, provides a learning environment that is self-paced, learner-controlled, and individualized.

 This paper focused on concerned  *computers as a major part of multimedia* that integrates different media, such as text, graphics, video, and sound. This includes the use of computers to convey [information](http://www.yourdictionary.com/information); [text](http://www.yourdictionary.com/text) ; together with [audio](http://www.yourdictionary.com/audio), [graphics](http://www.yourdictionary.com/graphics) and [animation](http://www.yourdictionary.com/animation), often packaged on [CD-ROM](http://www.yourdictionary.com/cd-rom) with links to the [Internet](http://www.yourdictionary.com/internet) . multimedia makes “an individual or a small group using a computer to interact with information that is represented in several media, by repeatedly selecting what to see and hear next” (Agnew, Kellerman and Meyer, 1996) as cited in Oshinaike and Adekambi(2012) This makes it very relevant for effective reference services delivery for maximum users satisfaction in university libraries.

Reisman (2010) described multimedia as a ray of “computer-driven interactive communication system, which create, store, transmit and retrieve, textual, graphic and auditory networks of information. This makes it an excellent aid in effective reference services delivery in university libraries, because of the usage of CDROM, floppy discs, internet and, Internet and software in which the possibility for an interactive approach is offered (Smeets, 1996; Jager and Lokman, 1996). All these attest to the fact that it is needed for excellent reference servicesdeliveryfomaximum satisfaction of the users.

Fetterman (1997) also viewed multimedia as those resources used for instruction that include one or more media such as graphics, video, animation, image and sound in addition to textual information. He identified four important characteristics of multimedia as:

* Multimedia systems are computer controlled
* Multimedia systems are integrated
* The information content must be represented digitally
* The interface to the final presentation of media.

The power of multimedia lies in the fact that it is multi-sensory, stimulating the many senses of the audience. It is also interactive, enabling the end users of the application to control the content and flow of information. This has introduced important changes in the educational system and library services and impact the way we communicate information to the users and learners for excellent and satisfactory reference services.

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Multimedia combines various digital media types such as text, images, sound and video, into an integrated multi-sensory interactive application or presentation to convey a message or information to an audience. In other words, multimedia means “an individual or a small group using a computer to interact with information that is represented in several media, by repeatedly selecting what to see and hear next. This makes it indispensable for effective reference services delivery, according to Adekambi (2012).

**Application of information communications technology (ICT) Multimedia for reference services effectiveness in University Libraries**

With the invention of Information and Communication Technology, libraries now use various types of technologies to aid the services they render. Everyday new technological advances affect the way information is handled in libraries and information centres. The impacts of new technologies are felt by libraries in every aspect. Computing technology, communication technology and mass storage technology are some of the areas of continuous development that reshape the way that libraries access, retrieve, store, manipulate and disseminate information to users. The academic library has been from its inception an integral part of institutions of higher learning, rather than an appendix or adjunct.

 Concerning teaching and research processes in over the past twenty seven years, academic libraries have been affected by changes in information and communication technology. The rate of changes is still accelerating in this area. The introduction of various information technology (ICT) trends has led to reorganization, change in work patterns, and demand for new skills, job retraining and reclassification positions. Technological advancement of the past twenty five years, such as the electronic database, online services, CD-ROMs and introduction of internet has radically transformed access to information. Rana (2009) opines that ICT holds the key to the success of modernizing information services. Applications of ICT are numerous but mainly it is used in converting the existing paper-print records in the entire process of storage, retrieval and dissemination system, develop institutional repositories of digital local contents, and digital libraries: and initiate ICT based capacity building programmes for library users. Information and Communication Technology (ICT) has brought unprecedented changes and transformation to academic library and information services, conventional LIS such as OPAC, users services, reference services, bibliographic services, current awareness services, Document delivery, interlibrary loan, Audio visual services and customer relations can be provided more efficiently and effectively using ICT, as they offer convenient time, place, cost effectiveness, faster and most-up-to-date dissemination and end users involvement in the library and information services process. The impact of ICT characterized on information services by changes in format, contents and method of production and contents and and delivery of information products. Emergence of internet as the largest repository of information and knowledge, changed role of library and information science professionals from intermediary to facilitator, new tools for dissemination of information and shift from physical to virtual services environment and extinction of some conventional information services and emergence of new and innovation web based.

Information communication technology (ICT) has greatly impacted on reference services delivery to make it more effective. It has revolutionized access to information retrieval in the university libraries. The introduction of various (1CT) trends has led to reorganization, change in work pattern, and demands for new skills, job retraining and reclassification positions. The electronic data base, online services, CD-ROMS, and the advent of the internet has radically transformed access to information .This is because online catalogue terminals, indexes and abstracts on CD-ROM work stations allow users to search data bases in their entirety. This saves the users the task of searching numerous catalogue drawers or annual volumes of printed indexes. Reference librarians now answer reference questions by email and this boosts the competence of the librarian before their users. University libraries are using modern ICTs for their core functions, implementing effective and efficient library cooperation, and resource sharing networks, implementing management information systems, developing institutional repositories of digital contents, and digital libraries, and initiating ICT based capacity building programmes for library users.

Information and communications technology (ICT) that has affiliation with multimedia technology has brought unprecedented changes and transformation to university libraries. (Bopp and Smith,2001;Fabunmi, 2010; Krubu and Osawaru, 2011) all agree that conventional library and information services (LIS) services such as OPAC, user services, bibliographic services, current awareness services, selective dissemination of information services, in-depth literature searches, inter library loan services, audio-visual services, document delivery services and customer relations can also be provided more effectively and efficiently, using ICTs as posited by Bopp and Smith (2001), Krubu and Osarawu (2011). In recent times, as part of global shift from the hard copy information prints to electronic based ones, university libraries now subscribe to a number of electronic databases consisting of journals and monograph reports. Some of these databases are JSTOR, AGORA, HINARI, and OARE. This means they can be accessed by logging into the university’s website while on campus but needs passwords outside the campus. (Bopp and Smith,2001;Fabunmi, 2010; Krubu and Osawaru, 2011). A great percentage of all these emergent trends in information storage, retrieval dissemination are hinged on the multimedia technology.

**Conclusion**

It is clear that conventional media technologies and traditional references delivery methods can no longer satisfy the globalised library users in the university libraries. As a result they are being complemented by the multimedia technology. This technology provides a learning environment that is self-paced, learner-controlled and individualized. This is because multimedia combines data carriers, for example video, CD-ROM, floppy disks, Internet and software in which the possibility for an interactive approach is offered. The Interactive component of the multimedia in reference services delivery, enables the end users of the application to control the content and flow of information. This has introduced important changes in the reference services as an aspect of library services and the educational system in general, and consequently impacted the way information is communicated to the users.

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