# Problems and Challenges Facing the University Of Nigeria Undergraduate Students in the Use of the Unn Digital Library

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Abstract: This paper examined the problems and challenges facing the undergraduate students of the University of Nigeria Nsukka in their use of the digital library of the institution. A sample size of 390 respondents was used, while all seven staff of the digital library in UNN were interviewed. The findings indicated that awareness of the meaning of multi-media is low. The library is being run as an internet café as against the real purpose of a digital/virtual library which should offer virtual access to other libraries, access to e-books among other crucial services. Respondents mentioned slow network as the most important problem, followed by difficulty in reaching needed e-books due to no subscription. Inability to access online books appeared more than power failure as problems. The study recommended that the university administration should show interest in ascertaining the functionality of newly established methods of learning and research to see how well they are going in view of the university's ICT goals and the general ICT policies of Nigeria. The digital library should also regularly renew subscriptions and look for ways to collaborate with other libraries on resource sharing to help students have better and greater access to books stored in other virtual libraries.

# Key terms: digital/virtual library, information/communication technology, multi-media, compuer/internet

#### I. Introduction

Digital libraries are increasingly becoming part of school systems in many countries in Africa. Even though Africa is reputed to be a late comer in the adoption of ICT in education, the continent is making strides to tap the benefits of ICT-driven education sector. A good part of the stride is to find out the challenges faced by the prime beneficiaries of technology - students.

In the case of digital libraries, it is actually uncertain how much students of universities avail themselves of the multimedia facilities of digital libraries. Araba and Michelle <sup>[1]</sup> (2009, p.2), have raised questions which researchers continue to seek data on: to what extent are they [virtual libraries] being used, what specifically do they contribute to socio-economic development, how big or small is this contribution and perhaps most critically, is this contribution worth the investment (in monetary terms but also in terms of potential negative impact)?

Another important question is: what are the impediments to the use of the facilities, and how may those impediments be circumvented? It is not enough for governments, non-governmental institutions and business entrepreneurs to invest significant amount of human and financial resources in virtual libraries. There ought also to be clear evidence on what the ultimate outcomes will be. It is necessary to give students access to technology, but there should be more than only physical access. Libraries should be used effectively; users should understand how to use technology and people should not be discouraged from using technology. These are the determining factors in whether or not people have real access to ICT.

In addition, policy makers and users must be able to critically assess which kind of technology is appropriate for the intended use. Developing countries should buy the products that meet their needs. Many foreign manufacturers flood the African market with all sorts of digital product, using incentives to coax government officials and managers of business as well as academic organizations to adopt their (foreign manufacturers') software and hardware. Many of these managers do not even know that a lot of products or brands exist for a given purpose. For instance, in one conference organized by the Education Trust Fund in Nnamdi Azikiwe University, Awka, Anambra State, Nigeria in 2006, (for lecturers in tertiary institutions) one company came around to train participants on web-mining, but used the opportunity to introduce its own web-mining software. Many participants did not know that they had been cornered to a product even though there could be better products.

It is against the backdrop of the forgoing that this study assessed the problems and challenges affecting students' use of the virtual library in the University of Nigeria, Nsukka.

## II. Statement of the Problem

Nigeria is among the countries trying to use ICT to leapfrog many stages of development. However, many problems dog the effort of the country. Nigeria is a latecomer in terms of adopting IT in educational

development. The specific problems and challenges to IT development from the viewpoint of virtual libraries in universities are yet to be investigated. Nigeria's efforts will continue to miss its targets unless specific challenges are addressed.

Digital libraries in Nigeria may be grossly underutilized or even non-functional. Such a situation will ensure that Nigeria continues to stay behind the rest of the world in information globalization, making nonsense of the laudably lofty objectives of Nigeria's National IT and educational policies.

The real impact of ICT is with awareness, access, exposure and use, all factors of media literacy. Some virtual libraries only answer that name. There are thus many problematic issues in the use of new technology such as non-functional, very slow, or non connected systems, or even connected systems put to no use. There is also the possibility of libraries with little or no access to websites and materials.

Some ICT staff exhibit ignorance or amateurism in the field of modern communication technology when confronted with questions from students and researchers. Some students on their part are ICT illiterates. Students may neither know the uses of the facilities in the libraries, nor can they report their frustrations and suggestions to the managers of the libraries. When this is the case, there will be perpetuation of the confusion, contradictions and systemic failures that characterize some public facilities in Nigeria.

# **Research Questions**

- 1. How much do students know of available and unavailable services in the digital library?
- 2. Which facilities are not offered to students by the UNN digital library?
- 3. What are the problems encountered by students in their use of multi-media facilities in the UNN virtual library?

#### III. Theoretical Framework

This work is based on the Technology Acceptance Model.

Technology Acceptance Model (TAM) implies belief in an active audience or users who rationally take decision on whether or not to use a given medium depending on the benefits derivable from the medium. TAM looks specifically at the predictions of an information system. Davis (1989) [2] developed the TAM whose purpose "is to predict the acceptability of a tool and to identify the modifications which must be brought to the system in order to make it acceptable to users". This model suggests that the acceptability of an information system is determined by two main factors: perceived usefulness and perceived ease of use.

The importance of this theory is that technology use depends on ease of use and usefulness of the system. This study was interested in assessing the degree of awareness, use, perceived usefulness and factors that might limit students' use of the virtual library in UNN. This helped to predict the acceptability of the virtual library and to identify the modifications which must be brought to the system in order to make it acceptable to students.

## IV. Problems of Virtual libraries in Nigeria

Over the years, libraries in Nigeria have remained deficient in stocking relevant books and literature particularly in the academic institutions. This was partly why the digital library became a veritable alternative to providing students with access to educational material. Ya'u (2003<sup>[3]</sup>) notes, however, that poor ICT infrastructure, inadequate ICT skill and the financial implication of connectivity and access to electronic database are a hindrance to use of ICT. He recommended that Nigeria's national virtual library project should integrate the entire virtual library scheme in the country so as to avoid duplication of cost and efforts.

While examining the implications and opportunities of ICT as a solution for the poor state of academic libraries in Nigeria, Ogunsola (2004) [4] identified shortage of manpower, frequent computer breakdown due to electric power surge, erratic power supply and lack of spare parts as the major problems Nigerian libraries face in the implementation of ICT. Ashcroft and Watts (2004) [5] note that in recent years, there is shortage of technology literate staff in libraries, lack of skilled human resources to install and manage technology and networks for electronic resources. There is also lack of collaboration amongst the information agencies that should coalesce to share the cost of electronic resources. Igwe (2005) [6] studied school libraries in Nigeria to ascertain how they harness information and communication technology for their teaching and research. The author identified inadequate infrastructure, outdated curricula, poor human and financial resources, lack of access to necessary information and resources for learning, and communication among key players in the library schools as contending issues faced by the library schools in Nigeria.

Igwe also noted that UNESCO (1998b) stated that to effectively harness the power of the new information and communication technology to improve library education in Nigeria, the following essential conditions must be met: students and teachers must have sufficient access to digital technologies and the internet in their classrooms, laboratories and workshops; high quality, meaningful, and culturally responsive digital content must be available for teachers and learners; and teachers must have the knowledge and skills to use the

new digital tools and resources to help all students achieve high academic standards. Araba and Michelle (2009, p.1) <sup>[7]</sup> have observed that limitations in the use of virtual libraries range from infrastructural constraints to an individual's ability to convert access to information and communication technologies (ICTs) into tangible benefits in light of other environmental constraints. In this context, shared use models of access such as telecenters, libraries and internet cafes are important means of making ICTs available. Not only do they bring the technology closer (physically and financially) to people who would otherwise have no access, but they may also provide additional value in the teaching and learning environments they foster.

Rosenberg (2005) <sup>[8]</sup> investigated the status of university libraries, focusing on digitalization. He found that library automation started early in the 1990s but majority of institutions were unable to complete the process. Rosenberg observes that in many libraries, many computers were found to be in working order but connectivity to the Internet was very low. "Only 35% of libraries have 75% or over of their computers connected to the Internet, whilst 15% are not connected at all" Rosenberg (2005 p.7). <sup>[9]</sup> Connectivity was poor, and server speed was very low. Rosenberg observes that a wide range of e-resources was accessible in many libraries, but, generally libraries had little capacity to maintain subscriptions.

Aduwa-Ogiegbaen and Iyamu, (2005) [10] analysed the problems and prospects of using Information and Communication Technology in Secondary Schools in Nigeria. They concluded that to integrate computer into teaching and learning in Nigeria, there must be proper and adequate funding and financing of education by government with international bodies. Okonedo (2004) [11] observes that over 60% of Nigerian universities have web presence and facilities for staff and students for Internet transactions. He notes that 50 percent of the Federal budget on education in 2004 was allocated to federal universities, which has helped in the development of ICT in Nigeria universities.

Okebukola identified some problems with the implementation of ICT projects in Nigerian high institutions, namely, a general lack of project-management skills, unstable electric power supply and tendency to invest in equipment rather than human capacity. Okebukola forecasts that by the end of the year 2015, Nigeria would have a forward-looking national policy on e-education in place. His forecast was based on the expectation that the federal government, local government and development partners such as the UNDP, UNESCO and the African development Bank would help to fund the initiative (cited in Okonedo 2004, p.2). [12]

UNESCO and the African development Bank would help to fund the initiative (cited in Okonedo 2004, p.2). [12]

Odusanya and Bamgbala (2002) [13] found that the majority of final year students at the College of Medicine, University of Lagos had limited computer skills and only 23 percent of the students had used the Internet for medical research. They concluded that the Nigerian student population is computer deficient. Folorunso, Ogunseye and Sharma (2006) [14] posit that mass unawareness, low computer literacy level, and cost are the critical factors affecting the acceptability of e-learning by students and lecturers of Nigerian universities. In addition, access to connectivity to internet remains one of the major challenges in many developing countries such as Nigeria. Darkwa and Mazibuko (2000) [15] noted that students would need access to computers that can send and receive messages using web browsers.

Odusanya and Bamgbala's (2002) [16] study revealed that the majority of final year students at the college of medicine, University of Lagos had limited computer skills and only 23 percent of the students had used the Internet for medical research. They concluded that the Nigerian student population is computer deficient. Similarly, Adomi and Anie (2006) reported that Nigerian industry asked universities to deepen the current existing knowledge levels of ICT skills of university graduates. According to them, industry was concerned about levels of graduate skills in online / Internet searching, systems management and computer keyboarding. However, despite this unsavoury state of affairs in students' access to e-learning in universities, National Universities Commission (NUC) of Nigeria, the government agency responsible for registering and regulating universities has prescribed personal computer ownership as follows: 1 PC to 4 students, 1 PC to 2 lecturers below the grade of Lecturer 1, 1 PC per Senior Lecturer and 1 notebooks per Professor/Reader (cited in Okonedo 2004). [17]

#### V. Methodology

This study was focussed on the entire undergraduate students of the University of Nigeria, Nsukka. The University of Nigeria, Nsukka is a first generation university with a virtual library, which has hardly been studied in terms of use of the MTN-sponsored virtual library therein. Undergraduate students were used because the pilot study done revealed an almost exclusive use of the digital library by undergraduate students. According to Ogbodo Stephen, a Masters Degree Student in the Department of Mass Communication, UNN, many post graduate students are non-resident in school. When the post graduate students are around, they rarely desired to struggle with undergraduate students for the 'limited facilities' in the digital library. They instead use private cyber cafes.

According to the Academic Planning Unit of UNN, the total number of registered undergraduate students of the UNN as at the 2010/2011 academic year stood at 15, 382. The study used a sample size of 390 derived using the Yamane (1967) [18] formula. The sampling technique used was the stratified random and simple random sampling techniques. The University was first stratified into nine faculties. Then each of the

faculties was stratified into departments and two departments were chosen from each faculty. The departments were selected using the ballot system of random sampling. There was however a questionnaire return rate of 97.4% as 380 copies were returned.

The research adopted the questionnaire and interview schedule as its instruments of data generation from the respondents. Data were presented using simple percentages and frequency tables. The sample was shared equally among the departments because there was no significant difference in their sizes. In addition, the seven members of staff of the digital library were interviewed.

#### VI. Discussion

Majority of the students do not yet know the range of facilities that can be called multi-media facilities. Only 3 responses out of 380 on the meaning of multi media were correct answers. Other responses danced inaccurately around the correct answer. Generally, respondents' ideas about multi-media revolved around computer and the internet, which were almost the only pieces of equipment they were using. The respondents did not know why a certain facility could be described as multi-media. The problem though was rather semantic because they had been tapping from the multi-media capabilities of different gadgets even outside the UNN virtual library. However, their inability to distinguish the qualities that can define a gadget as multi-media later affected their responses on other subjects because they were not aware that certain services on offer in the library were multi-media services. They also did not know that there were some facilities not on offer, but which were as well multi-media.

The library staff indicated in the interview section that there were projectors for design of multi-media presentations, training for students, and optimal search techniques to obtain uncommon results in digging up resource materials. The respondents did not yet know of any of these multi-media facilities. The few who mentioned projectors as part of the facilities in the digital library had not made any use of it. The issue then is: to what extent do the staff of the digital library present the facilities for students' use, or how well does the library inform students about the availability of such services? This indeed was a major problem affecting knowledge and use of the library: students are not aware of the facilities on offer and the library staff do little to inform them about them. The real issues with technology are awareness, access, exposure and actual use.

Respondents were neither aware of, nor exposed to the many multi-media resources boasted of by the staff of the UNN digital library. As indicated on the digital library web site (www.unn.edu.ng/node/1), there are websites and links composed as a bond to information reserves from different affiliates and this creates an immense connection for students and other users who may require their services but are not aware of their online presence.

Subsequently, the UNN digital library web page gave websites, which included full text database sites used to access *The Academic Search Premier*, for active full text peer-reviewed journals. There were also web sources for academic content on health, biodiversity, environment, conservation and international development. *African Index Medicus* gives access to information published in or related to Africa and encourages local publishing. No respondent indicated having used any of these services. The respondents were also not aware of electronic cataloguing, electronics acquisition/serials control, deep web and surface web searches as multimedia facilities of a digital library.

Majority of the respondents indicated that they visited the digital library often. Coming close to the *often category* were those who visited very often. Few respondents indicated that they visited rarely and very rarely. However, the question that inquired the last time respondents visited the digital section of the UNN library produced answers that contradicted the respondents' indication that they visited the digital library often as noted above.

Thus, on the question of the last time respondents visited the digital library, the greatest number indicated that they never visited the digital section of the library, especially because they did not even know of the existence of such a facility. Two-thirds of these numbers were in first and second years, and one-third of the numbers were in the Faculty of Arts. Initially, this finding was a surprise because when these researchers visited the digital section a number of times to observe things, the hall was always filled beyond capacity, with some students waiting to take their turn for want of computers. Later findings suggested that most first time visitors hardly returned due to problems they encounter on their first visits.

However, the respondents who had never visited the library noted that non use of the digital library was not because they could not use the facilities therein. Perhaps, it is as indicated above, that they did not know of the existence of the digital section of the library. Also, as part of suggestions on how to improve the services of the library, some respondents suggested awareness creation for the students who were not yet aware of the existence of the digital section as well as its benefits. In addition, some non users said they had not thought it necessary to use the library, and that was because they were not aware of the benefits they could derive from using the facilities.

The respondents indicated that they had other options for accessing multi-media facilities. Obviously, the UNN digital library is not the only option open to students. What is interesting is that students make greater use of cyber cafes where they pay to use the services available. The respondents revealed that the cafes are less crowded, and that it was possible to seek out those cafes with high speed servers. Some respondents also said that students feel a measure of greater freedom to socialize while making internet searches in the private cyber cafes than they were able to do in the UNN digital library.

The specific task performed in the UNN digital library was term papers and assignments. This point still confirmed the computer-related applications with regard to knowledge and use of multi-media facilities in the library. One expected to see responses on projections, practicals, virtual communities and link with other libraries through the UNN network. Focus group and survey research indicates that undergraduate students typically turn to popular web search engines when they need to find information, Ashraf, Swatman and Hanisch (2008). Some scholars (Fillipe and Colle, 2002) have argued that government investment in public access digital libraries is redundant because there are many cafes offering the same services though at a profit. But the rate at which students use the school-based public access digital library such as in the case of UNN shows that the investment is worthwhile.

Additionally, digital libraries offer special sites that hold enormous amounts of books on all disciplines, a service that is rare in private cyber cafes. School-based digital libraries also offer library inter-loan systems and document delivery services that allow digital libraries to exchange books although these services are non-existent in the UNN digital library. But no student even betrayed any tendency to knowledge of these.

The findings of this study are in line with the theoretical framework analysed in chapter two. The computer and the internet as the new media are driving major changes in education and society given the revolutionary way information is obtained and shared. Respondents had no idea that networked multi-media facilities could help them join other libraries or join reading groups in virtual communities. Those who said they were connected to other libraries indicated that the connection is through self-funded modems rather than through the UNN network.

Respondents noted that they have high level of access to the digital library. As earlier noted, all the time that this researcher visited the library, the place was filled to the brim, with some (standing) students waiting to take their turn. The digital section of the library is not in the mode of many such facilities in government establishments, where public facilities are left to rot without use. Thus, the concern raised in the statement of the problem about many facilities that are put to no use in Nigeria did not arise in the case of the UNN digital library. Unfortunately though, respondents complained that many computers are not functional, thereby confirming another concern raised in the statement of the problem about non-functional facilities in government establishments.

Most respondents spoke glowingly about the staff of the library, but complained that more staff were needed to provide much needed guidance to students. Very many praise words were used to describe staff attitude. Only 49 respondents made negative comments about the staff in the digital section of the Nnamdi Azikiwe Library, UNN. Majority of those who had never used the library were the ones who made negative comments about the library staff who were not supposed to have ever served them. Their comments can as well be ignored.

Other problems indicated by the students are concerns about non-promotion of the services of the digital library and limited multi-media facilities. Some respondents did not report any problem but that was because they had not gone to the digital section before. Three respondents reported that they did not encounter any problems. Only in 11 out of 333 cases did respondents mention problems that were not related to computer use, suggesting again that the most important use of multi-media facilities were internet-related. Slow network was mentioned the most (101 times), followed by (98) difficulty reaching needed e-books due to no subscription. Inability to access online books appeared more than power failure as problems. A few non-internet-related problems were also mentioned such as bad attitude of staff and risk associated with leaving bags outside (users do not enter the library with their bags).

On the basis of basis of problems noted by the respondents, they made suggestions. The suggestions ranged within what students knew about the services of the digital library. No one mentioned connections with other libraries, formation of reading groups in virtual communities, use of other multi-media other than the computer. Only one respondent suggested training for students to acquaint them with how to use the digital library. The suggestions include:

- There should be ease in storage of generated data (allow the use of flash drive) (7)
- Acquire more multi-media facilities (the facilities were not specifically mentioned) (11)
- Improve access to their staff (7)
- Improve access to the internet (53) one respondent suggested improving access, but first said they 'heard' that the cyber is slow. The respondent had not used the digital section, but has heard things. That means that the slow pace of the internet is a loud concern.
- Get more computers (35). With only 121 computers

- Repair the computers (28)
- Stable power supply (18)
- More staff (11)
- Sensitize people more (21). One respondent added that most students do not know about the digital library and its benefits.
- Provide more and better staff assistance to students (21). All the respondents that supplied this response were concerned about the non-literate students who often needed help, but got little of it.
- Have schedule for departments to avoid overcrowding and monopoly of the digital library (13). Perhaps this was in confirmation of what the library staff said in the interview section; that is, that engineering students make the most use of the digital library relative to other faculties.
- More training for staff (25)
- Increase the size of the library (1)
- More printers (1)

#### VII. Conclusion

Based on the discussions so far, this study concludes as follows:

The respondents are sufficiently aware of the existence of a digital library in UNN. However, they do not know what multi-media facilities are, especially in terms of precise definition of the term multi-media. The respondents cannot isolate the qualities of multi-media facilities for which they are called multi-media. They therefore find it difficult to define the term multi-media.

The students ask for, and use only the multi-media facilities, which they think is available in the digital library. The UNN digital library is run mainly as an internet café. Thus, UNN students can only type on, and browse the internet, yet they do not know how to make optimal use of search engines to obtain special results in locating e-resources. The UNN students do not know of the existence of many multi-media facilities in the UNN digital library. The internet facilities and their allied multi-media interfaces are therefore grossly underused. Many facilities they (internet facilities) offer are not tapped.

Students have not been challenged by the library staff to make use of certain services that are yet unexplored by students. Access to the digital library and attitude of library staff are not obstacles to the use of the digital library. The students however do not make regular use of the digital library. They are therefore not sufficiently exposed to the digital library. Insufficient exposure is caused by some problems encountered by first time users of the digital library.

Too many non-functional systems, crowded space, slow network and inability to locate e-books are the most important problems faced by students in their use of the digital library. In real terms, the digital library does not offer link to virtual communities (reading groups), other digital libraries and e-books. The students want the many faulty systems to be fixed as well as improvement on cyber speed and provision of more guidance to them in the use of multi-media facilities.

## VIII. Recommendations

The recommendations given in this study are a follow up from the problems encountered by UNN students in their use of the multi-media facilities. Attention was also given to the suggestions that the respondents made as remedies to the obstacles to optimal use of the digital library. Other recommendations are based on the findings of the study as encapsulated in the conclusion above.

- 1. The university administration should show interest in ascertaining the functionality of newly established methods of learning and research to see how well they are going in view of the university's ICT goals and the general ICT policies of Nigeria.
- 2. The library staff should also do more training sessions to upgrade students' skills in using the multi-media facilities.
- 3. Library staff as well need to upgrade their skills as the digital library install newer technologies.
- 4. Lecturer should direct their students to the digital library for specific assignments, and use it as a way to evaluate the relevance of the e-library and subsequently arm the university administration with information on ways to equip and generally position the digital library to serve the students better.
- 5. The library can do electronic sign posts as part of public relations to alert students to the services on offer in the digital library.
- 6. The library can also pre-programme pop ups on the internet to remind students all they can do with the facilities at their disposal.
- 7. Better ways of storing information should be adopted to make it easier for students to store soft copies of information sourced. The digital library can use separate networked computers to offer paid services of storing information for students.

- 8. Students are often frustrated when they cannot find functional, free systems to use, yet there are many systems not in use as a result of being faulty. As such, the library should fix the many faulty systems in their possession and increase the cyber speed of their servers to make searches meaningful and faster.
- 9. The library should obtain a stand-by power generator as obtains in private cyber cafes.
- 10. The digital library should also regularly renew subscriptions and look for ways to collaborate with other libraries on resource sharing to help students have better and greater access to books stored in other libraries.
- 11. The library should acquire more computers.
- 12. The library should provide more and better staff assistance to students. There are many non-literate students who often need help.
- 13. The library should have schedule for departments to avoid overcrowding and monopoly of the digital library. There were complaints that some people monopolize the library.

#### References

- [1] Araba S. and Michelle F. (2009). Literature review on the impact of public access to ICTs, a working paper of the Global Impact Society. Washingtonp. Center for Information and Society, University of Washington.
- [2] Davis, F.; Bagozzi, R.; and Warshaw, R. (1989). User acceptance of computer technologyp. A comparison of two theoretical models. management science, 35, 982-1003.
- [3] Ya'u Z.Y (2003) Towards a virtual library for Nigeria. Retrieved httpp://portal.unesco.org
- [4] Ogunsola, A.L. (2004). Nigerian university libraries and the challenges of globalizationp. The way forward. electronic journal of academic and special librarianship V.5 no. 2-3. Retrieved on 04/21/2005, fromhttpp.//southernlibrarianship.icaap.org/content
- [5] Ashcroft L. and Watts C. (2004). ICT skills for information professionals in developing countriesp. perspective from a study of the electronic information environment in Nigeria . Retrieved on 04/30/2005 fromp. httpp://ww/.ifla.org
- [6] Igwe O.U. (2005). Harnessing information technology for the 21st centuryp. library education in Nigeria. Retrieved on 04/30/2005 from <a href="httpp://www.webpages.uidaho.edu/~mbolin/igwe.htm">httpp://www.webpages.uidaho.edu/~mbolin/igwe.htm</a> Adomi, E. E. & Anie, S. O. (2006). An assessment of computer literacy skills of professionals in Nigerian university libraries. Library HiTech News, 23, 2-32.
- [7] Aduwa-Ogiegbaen E.S and Iyamu S.O. (2005). Using information and communication technology in Secondary schools in Nigeria: problems and prospects. Retrieved on 04/28/2005, from httpp://www.ifets.info/journals
- [8] Okonedo, B. (2004). Okebukola draws roadmap for ICT in higher education, BusinessDay. Retrieved on 05/03/2009, from httpp://www.businessdayonline.com
- [9] Odusanya, O. O. & Bamgbala, O. A. (2002). Computing and information technology skills of final year medical and dental students at the College of Medicine, University of Lagos, Nigeria. Nigerian Post Graduate Medical Journal, 9, 4-21.
- [10] Yamane Taro (1967). Statistics: An introductory analysis, 2<sup>nd</sup> edition. New York: Harper and Row.

#### **Appendix**

Table 1: Respondents' Awareness Level of the Multi-media Facilities in UNN According to Gender

Gender	Responses			
Male	Yes	%	No	%
	163	42.9	39	10.3
Female	146	38.42	32	8.4
Total	309	81.329	% 71	18.7%

**Table 2: Respondents' ideas about the multi-media facilities of the UNN virtual library.** Responses came from an open-ended question and the following responses were isolated from respondents' answers.

VARIABLE	Frequer	ncy %	
Computer and internet	254	82	
Projectors	41	13	
Computer web camera	1	0.3	
CPU and monitor	2	0.7	
Printers	11	4	
Total	309	100	

Table 3: What is a multi-media facility?

Table 3 analysed a question that further tested respondents' knowledge of the meaning of multi-media facility beyond what they saw in the UNN digital library. The following responses appeared in respondents' answers.

Options	Frequency	%
Computer and the internet	312	82
Those facilities that can handle multiple tasks	50	13
ICT	2	.5
Facility for global communication	3	.7
Phone for music and calls	4	1.05
A facility that makes the library digital	4	1.05
with different applications	5	1.75
A device for browsing	380	100
Total		

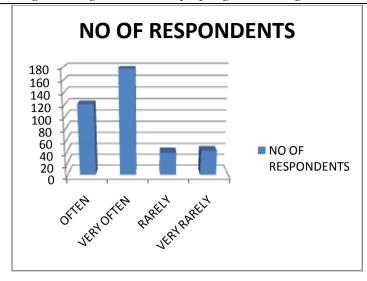


Figure 1: How often UNN students visit the digital section of the UNN library?

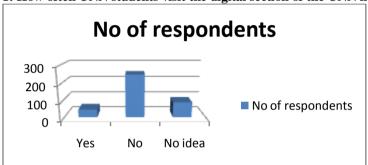


Figure 2: Connection to Other Digital Libraries

Table 11: The last time respondents visited the digital section of the UNN library?

Variable	Frequency	%
Within the past two days	3	1
Within the past five days	5	1
Within the past 1 month	27	7
Within the past 3 months	79	21
Within the past six months	91	24
Within the past one year	57	15
More than a year ago	44	12
Never	71	19
Everyday	3	1
Total	380	100

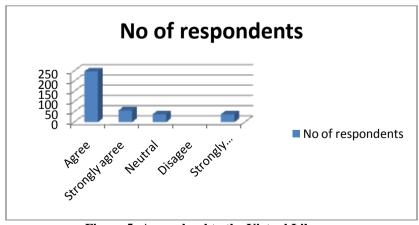


Figure 5: Access level to the Virtual Library

# Figure 6: Non-promotion of the multimedia services of the library is negatively affecting access and use Open-ended question 12: What problems did you encounter the last time you visited the library?

The problems mentioned are:

- Difficulty storing information obtained in a flash or DVD/ I needed to buy a CD from the library to store my information; I could not use my flash (7 times)
- Bad network/Slow internet (101 times)
- Many systems that are no longer working (18 times)
- There was no free system (7 times)
- Request for students receipt (once)
- No guide on how to use the internet (11 times)
- Power failure (28 times)
- Overcrowded (21 times) one respondent added that the same people are always using the internet facilities.
- Bad attitude of staff (4 times)
- Could not reach internet books because of no subscription (once)
- Faulty printer (3 times)
- Dropping of my bag outside which was very risky (3 times)
- Did not know how to access the books I needed (38 times)