Journal of Information and Knowledge Management
Information Impact
ISSN: 2141- 4297 (PRINT)
ISSN: 2360 - 994X (E-VERSION)
Vol. 3(1&2), 2012

A SURVEY OF INTERNET LITERACY SKILLS AMONG PHYSICAL SCIENCE UNDERGRADUATE OF THE UNIVERSITY OF BENIN, NIGERIA

Luke Obasuyi

AND

Osahon Joseph Otabor

Abstract

This is an in-depth study of Internet Literacy Skills among physical science students of the University of Benin. Survey design was applied by using questionnaire to collect data from 265 undergraduate students in the faculty of physical sciences at 200 and 300 levels. Data collected were analyzed using frequency count and percentage, while null hypothesis test of independence was tested using chi-square. The research discovered that the students are computer; internet and ICT literate as majority of the students possess most of the required internet skills. Some area that need to be strengthened were highlighted, and the inclusion and teachingof internet and ICT literacy courses to new undergraduates in the university through orientation and workshop was recommended.

Keyword: Internet, Literacy skills, Undergraduates, Physical science, University of Benin, Nigeria.

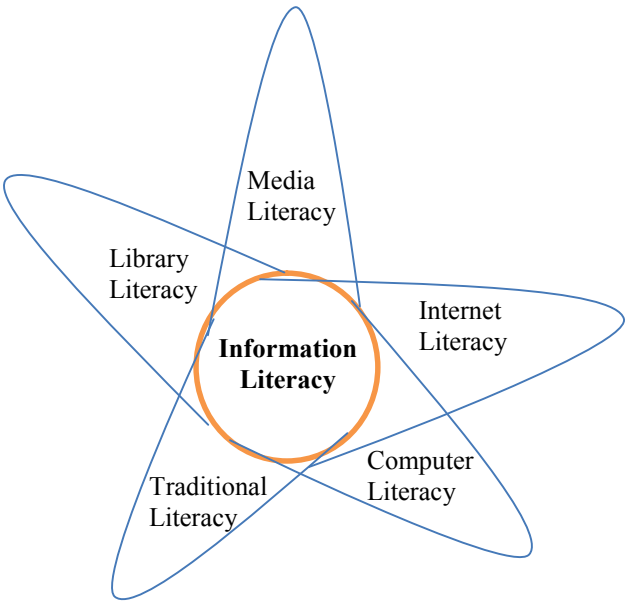
Introduction

All over the world, traditional libraries where printed books and other materials are commonly found and used are gradually giving way to electronic libraries now stocked with digital materials such as the computers, e-books, e-journals, e-databases, the internet etc. due to the recent advancement in Information Communication Technology (ICT), these digital resources are now produced and used with the help of the computers. Millions of such computer terminals interconnected in a network is called the internet. Echezona and Ugwuanyi (2010) defined the internet as a global system of interconnected computer networks including schools, government, business and other organizations while the internet and the World Wide Web play significant roles in revolutionizing access to

location and use of information. The internet, a network of networks, provides access to remote computers, electronic email, file transfer, bulletin boards, discussion lists, web logs wikis, and a variety of tools to share and disseminate information (Lou, et al, 2010). Internet users in Nigeria as at 2008 population was put at over 10 million and 19.6 percent of users in Africa (Echezona and Ugwuanyi, 2010). With the proliferation of internet access through the university libraries, cyber café, mobile phones, internet modems etc. internet can now be accessed and used anywhere and at anytime.

the use of the computer and the internet has pervaded our everyday life including library services. The computer and the internet are some of ICT resources found in libraries today. The numerous advantages of the use of the internet in the libraries such as faster means of communication, high speed in data processing and retrieval, remote access etc. has given it greater prominence in the educational sector. The university libraries are at the center of academic activities in the university. Its importance in the educational development and acheivement of undergraduates cannot be overemphasied. Since the university libraries are very useful to the students, the use of the internet becomes a must for the students. Technological literacy and integration of ICT in education have received great attention worldwide because the ability to use ICT toachieve one's goal is critical to economic, cultural and educationald development (Sarfo et al, 2011). To effectively use the internet by undergraduates, certain level of literacy skillis required of them.

Literacy implies confidence, competence and acceptance. Students entering college are bringing very disparate computer skills and attitudes. While some are demanding, some are reluctant to embrace new technology. Oliver and Towers (2000) defined ICT literacy of a student as a relative measure of the students capacity to make use of ICT for educational and learning purposes. For the purpose of thisstudy therefore, internet literacy skill of undergraduate is defined as a relative measure of the undergradaute students capacity to make use of the internet for educational and learning purposes.lou, et al (2010) opined that the concept of internet literacy emerged in the era of internet technology, and it is a part of information literacy involving basic computer literacy figure 1.



Fingure 1: Conceptual map of information literacy

Internet literacy is not just about website analysis. It includes the skills it takes to read, disseminate and evaluate online sources in order to socialize, network and collaborate with people. Katz and Macklin (2007) identified seven components of ICT literacy to include-defining, accessing, managing, integrating, evaluating, creating and communication infromation. Ali et al (2010) identified information literacy skills that students need to improve upon to include efficient search strategies, evaluation of internet information and websites, and using information ethically. While the current generation of students has access to a multitude of infromation on the internet search. Oliver and Tower (2000) identified four distinct areas of skills and expertise that are very important and essential attributes of ICT literate tertiary students to include

1 Ability to independently operate personal computer system.

2 Ability to use software for preparing and presenting work.

3 Abiility to use the internet and its various features as a communication devices.

4 Ability to accept and use information from the world wide web

To ascertain the ICT literacy level of tetiary students, before areas identified above were used to create skills for each of the four scales. To possess internet literacy skills therefore, tertiary education students should perform tasks listed under internet skills as follows;

1. Capability to use the WWW
2. Sending e-mail message
3. Using the WWW to find specific information
4. Taking part in anonline discussion group and chating
5. Sending an attachment with e-mail meassge
6. Downloading a file from the internet or WWW
7. Saving an image or graphic from WWW pages
8. Creating a WWW page

These eight tasks when independently performed effectively by tertiary education students will make them internet literate. They were then used to design a questionnaire that was administered to physical science students of the university to find out their levels of internet lietracy skills

The university of Benin: Background Information

The university of Benin was founded in 1970 as the institute of technology and was accorded the status of a full-fledged University by National University Commission (NUC) on 1st July, 1971. It was taken over as a Federal University on 1st April 1975. The university offers courses at various levels: postgraduate, Undergraduate, Diploma and Certificate. Presently, the total students enrolment stands at over 40,000 made up of both full time and part-time students shared among the various faculties of Agriculture, Arts, Education, Engineering, Law, Life Sciences, Pharmacy, Physical Sciences, Social Sciences, and the college of Medicine. The faculty of Physical science is made up of Chemistry, Computer Sciences, Geology, Mathematics and Physics departments.

The university of Benin library known as John Harris Library is an academic resource centre established to cater for new developments in information delivery in the University. Apart from the central library, there are 10 faculty libraries with about 200 staff both professional and para-professionals. The library is engaged in

teaching students in the use of library students in the use of library and literature in different disciplines to help them in their self-study, project work and research activities. The library is well stocked with over 211,000 volumes of books, 344 journals titles and presently subscribed to 172 journal titles, and various electronic full-text databases. The library has fast internet access for both students and staff usage. Over 100 computers are available at the ICT center with additional 128 computers in MTN internet center to browse the internet including numerous cyber cafes that dotted the university campuses. The university also organized orientation and a two credit unit general studies course on library use for fresh students to acquaint them on how to use infromation resources in the university (John Harris Library, 2011 and UNIBEN, 2012).

Statement of Problem

Though internet facilities abound in the university libraries, ICT centers and cyber cafes within the university campuses, it has been observed that many undergraduate students could not use it to perform some registration procedures during the current registration exercise thus depending on cyber café operators and other persons for assistance. It was also observed that internet literacy skill was not listed in the 2011/2012 orientation brochure among the GST courses to be taught in the university. This study will find out the strength and weakness of the students in terms of internet literacy skills.

Objectives of the STudy

1. To find out the level of computer literacy of the students
2. To determine the frequency of internet usage
3. To ascertain the level of internet literacy
4. To discover the purpose of internet usage
5. To establish the pattern of internet usage
6. To find out the level of participation of students in library orientation programme
7. To determine any relationship between orientation programme and internet usage.

Literature Review

Dangani and Mohammed (2009) research on ICT lieracy among academic at Ahmadu Bello University, Zaria concluded that ICT literacy is necessary in the schemes of things in the 21st century. Adomi and Kpangban (2010) opined that the adoption and use of ICT in schools have a positive impact on teachning, learning and research. Oliver and Towers (2000) reported on a study undertaken among Australian university students that ICT skills level appear quite high in the university sector but there are still many university students whose access to ICT and use of ICT would likely impede their learning and progression in courses and program. Shanahan (2007) investigation of information lietracy skills of second year undergraduate medical radiation students at RMIT university in Austrialia revealed that the students demonstrated substantial improvement in online electronic infromation skills development ability and continued use of databases to access scholarly information in their discpline. Assessment of ICT literacy of undergraduates in the western United states. Katz and macklin (2007) findings showed that despite coming of age with the internet and other technology, many college students lack the infromation and communciation technology literacy skills necessary to use the abundance of infromation available today. Ali et al (2010) investigated infromation literacy skills of engineering students in a Malaysian college and finding reaveled that the students usage of electronic scholarly resources in their course assignments was minimals and bibliographies showed that most of them are not aware of the proper format of citation. Sinha (2012) study of internet literacy skill at Assam University library users in india revealed that the use of the internet has created a great impact upon the users in their research work especially by the younger generation. However, frequency of e-resources usage was optimals as many respondents are not aware of using the internet for their day to day activities.

In africa, Sarfo et al (2011) explored tha attitude of 324 males and female senior high schools students in Ghana towards ICT and the result revealed that students from urban areas have more positive attitudes towards technology than students from rural areas, and locality and gender did not influence their attitudes. In Nigeria, Adomi and Kpangba (2010) opined that despite the roles ICTs can play in education, secondary schools in Nigeria have yet to extensively adopt them for teachning and learning. This tend has contributed immensely to low ICT skilss at the point of entry of undergraduates into the university. Fatoki (2004) findings of

undergraduate use of the internet for research revealed that two third of univesity of ibadan students used internet for their academic research work, which was mainly accessed from cyber cafes. He recommended that university librariesshould facilitate access to electronic resources and design infromation literacy programmes to develop the skills to effectively and intelligently find, evaluate, manage and retreive infromation for life long learning. Ani and Ahiauzu (2008) findings show that the internet has been the major source of developing electronic infromation resources in Nigerian university libraries as 89 percent of libraries surveyed have internet connectivity. Issa, Blessing and Daura (2009) study the effect of information literacy skills on the use of e-library among the university of Ilorin students and found that most of the students are aware of the e-library resources but do not use them because they lacked the skills, and thus concluded that information literacy skills have not taken firm root among the students. In terms of gender, Sanni et al (2009) study of internet use at the Olafemi Awolowo University, Ile-Ife revealed that there was gender difference in the use of the internet, and the present level of internet assisted research was encouraging as there was an improvement over previous studies on levels of internet usage and frequency of use. Omotayo (2010) surveyed of internet access and use at the Obafemi Awolowo University, Ile-Ife revealed that despite the over-whelming accessibility of internet access, it is worrisome that not all undergraduate of the institution is using the internet. Ani (2010) study of internet access and use of undergraduate students in three Nigerians Universities revealed that the internet is extensively use by the students of the university of Oyo, University of Calabar and River State University of Science and Technology. Inspite of the extensive internet usage in these three universities, there exist poor level of electronic resources usage essential for learning and research thus calling for effective users education to address the inadequacies. Udende and Azeez (2010) study to investigate the extent to which students of University of Ilorin use internet revealed that the students access the internet at regular intervals mainly for academics purposes but expressed some deficiencies and structural inadequacies in the use of the internet. Chete, Oruoghor and Chete (2008) did analysis of internet usage by Physical and Life Science undergraduate students of the Unievrsity of Benin and the result revealed a high percentages of internet/world wide web use from cyber café mostly for conducting research for academic purpose, and e-mail communciation. This

present study will go beyound what chete, Oruoghor and Chete did in 2008, by probing further into the necessary skills needed by the students to effectively use the internet. From the literature review above, it clear that despite access and usage of the internet, most undergraduates lacked internet skills to take ful advanatge of the resources and services thus needed one form of orientation or the other.

Methodology

The survey method was used in the study. The questionnaire was administered to collect data from a population of 875 physical science students currently at 300 and 400 levels in the departments of chemistry, computer science student, geology, mathematics and physics of the University of Benin. The questionnaire covered demographic information of students, computer literacy, internet usage, orientation programme attended, etc. the questionnaire was administered to the students during their departmental classes. The students were made to fill the questionnaire and return immediately. Out of 300 questionnarie administered to 60 student in eaach of the 5 departments, 265 usable responses were returned resulting in 88.3% usable response. Data collected were tabulated and analyzed using percentage. Chi-square test of indepence was used to test the null hypothesis using SPSS version 16.0

Results and Discussion

Computer Literacy

Ability to independently operate and use personal computer is one of the competencies a student must possess to become computer literate. The students were asked: Do you have the ability to independently operate and use personal computer? The answer is as presented in table 1.

Table 1: Ability to Operate Personal Computer

Can you personally operate and use personal computer	No. of respodnents	Percentage
Yes	265	100
No	0	0
Toal	265	100

Result in table 1 shows that all respodnents can successfully operate and use personal computer without any assiatnce. This result means that the students can enjoy the positive impact of computer use in their studies. Ani and Ottong (2010) obtain similar result in their survey of IT literacy among undergraduates of the University fo Calabar that majority of the students have basic knowledge and skills to work with computers.

If you can operate a personal computer independently, the students were further asked: Do you also have the ability to personally use computer software to prepare and present your work?

Table 2: Ability to independently use word processing software

Ability to use word processing software	No. of students	Percentage
Expert	74	27.92
Intermediate	159	60.00
Novice	32	12.08
Total	265	100

Result in table 2 revealed that majority of respondents had intermediate level or skill in using word processing software usage. The above result in table 1 and 2 are very encouraging which goes to affirm that the students are computer literate. Similar result by Ani and Ottong (2010) revealed high use of word processing and excel software in typing their assignments, seminar papers and projects thus reducing the level of grammatical errors in their presentation.

Internet Literacy

To be internet literate, students must be able to use the internet and its various features. On the use of the internet, the students were asked to indicate whether they use the internet or not.

Table 3: Use of the Internet

Use of the internet	No. of students	Percentage
Yes	265	100
No	0	0

Total	265	100

Result in table 3 shows that all the studient can use the internet. Similer results by chete, oruoghor and chete (2008) and sanni (2009) revealed that a high percentage of physical and life sciences student of the university of benin, and undergraduate studient of obafemi awolowo university respectively use internet while Ani and Ottong (2010) findings shows that vast majorityy (78.1%) of students affirmed that they have basic knowledge and skills to use the internet to search for informations to support their educational activities as the internet is readilly accessible than the traditional university libraries at the university of calabar.

How frequently do the students use the internet to access information?

Table 4: Frequency of the use of internet

Frequency of internet usage	**No. of students**	**Percentages**
Everyday	148	55.85
Few times a week	106	40.00
Once a month	11	4.15
Total	265	100

Table 4 result shows that the respondents uses the internet every day.this result goes to show the level of students' familiarity with the internet. Udende and Azeez (2010) obtained similer result that University of ilorin students use the internet at reguler intervals.

In order to determine the internet literacy skills of the undergraduate students, the students were ask to rate their level of skills of internet usage.

Table 5: level of skill in internet usage

Internet usage	**No. of students**	**Percentage**
Very skillful	127	47.92
Skillful	106	40.00
Novice	32	12.08
Total	265	100

Table 5 result show that majority of the student are very skillful in internet usage. This meens that they can can apply the internet for their academic benefits. Similar result by sinha (2012) shows that over 80 of Assam university liberary users in the india are ICT/internet literate.

Table 6: internet skills possess by the students N=265

Internet skills required	Response yes (%)	Response no (%)
Can you use the WWW to find specific infromation	201 (75.85%)	64 (24.15%)
Can you download a file/document from the internet/WWW	198 (74.72%)	67 (25.28%)
Can you send e-mail message	191 (71.08%)	74 (27.92%)
Can you save an image or graphic from a WWW	190 (71.70%)	75 (28.30%)
Can you send an attachment with e-mail message	185 (69.82%)	80 (30.18%)
Can you take part in discussion/chat on the net	159 (60.00%)	106 (40.00%)
Can you create a WWW page	11 (4.15%)	254 (95.85%)

The general results in tables 3, 4 and 5 are good but there is also the need to find out the different abilities in terms of internet skills possess by the students as shown in table 6.

Result in table 6 shows that majority of the students possess the ability to access and use most of the internet skills required except in creating web pages. The over all results goes to show that physical science undergraduates students of the university of Benin are internet literate. The above result may not be unconnected with the fact that some of the students are studying computer science and other science abased courses that requires mathematical calculations that thecomputer can be applied. Similar results by Udende and Azeez (2010) shows that despite many University of Ilorin students are goods users of internet, some have deficiencies and structural inadequacies in the use of the internet.

On the purpose of using the internet, the students were asked to indicate what they use the internet for. This is to ensure that they are using it for the right purpose.

Table 7: Purpose of Internet Usage N=265

Purpose of Internet Usage	No. of Students	Percentage
Communication	175	66.03
Academic studies	95	35.85
Searching (subject) databases	95	35.85
Games/Entertainment	85	32.08
Office automation	42	15.85
Job opportunity	32	12.08

Result in table 7 revealed that communciation is the mainpurpose the internet was used for. The studentsalso used the internet for academic studies and searching subject databases. Earlier result by Chete, Oruoghor and Chete (2008), revealed that most physical and life sciences students of the university of Benin were attracted to use the internet for communication purpose mostly through email while usage for research purpose was also very high. Other critical compentencies required of an ICT literate person as prepared by Oliver and Towers (2000) which are also very important for internet literacy skills include the ability to use and evaluate web information on the internet by undergraduate students. Three questions were asked.

Table 7: Evaluation of Web Skills

Variables	True %	False (%)	
Most internet infromation has undergone rigorous peer review process and so can be used for research writing	233 (87.92)	21 (7.92)	11(4.15)
Most of the information on the internet has not been checked for accuracy of content, and so should not be used without careful screening and evaluation	106 (40.00)	148 (55.85)	11 (4.15)

One should use infromation on the web offered by a recognized authority on the subject and can be verified	212 (80.00)	53 (20.00)	0 (0)

The result of the answer given in Table 7 revealed that 87.92 percent of the students agree that most information available on the internet has undergonerigorous peer review process, 40 percent of the respondents also concur with the careful screening and evaluation of internet-based information while 80 percent of the respondents agree to the use of authorize web information offered by a recognized authority in the subject. The above result have shown that the students were not right in their decision about the first two questions as most information posted on the internet may not have undergone peer reviewed and not accurate. They were only right about their decision on using information from recognized authority whose information cannot be misleading to the public. Therefore, students should watch the infromation they use from the web. Chete, Chiemeke and Oboerhiri (2010) study on web deception and misinformation opined that the web is truly deceptive and misinformation exists on the internet, and cautioned that users should take time to check the authorship/source of information obtained from the web.

Table 8: Ability to use the WWW N = 265

WWW skills required	No. of students	Percentage
Ability to use electronic information on the WWW	265	100
Ability to find useful information from WWW search	201	75.85
Ability to use known WWW address to find useful information	180	67.92
Ability to copy and paste information from WWW to your document	175	66.03
Abilty to use search engines e.g. Yahoo, Google	159	60
Ability to use keywords to search for information	117	44.15
Ability to use databases on the WWW	32	12.08

Ability to use advance search techniques (Boolean operators)	11	4.15
Ability to use bookmark to recall uefull WWW address	11	4.15

Apart from possessing the ability to evaluate the information on the WWW, ability to access and use the information from the WWW is also very important. Results in table 8 revealed that majority of the students possess the ability to use most of the resources of the WWW. All respodnent claimed they use electronic information on the web by visiting websites using search engines such as Yahoo and Google to copyuseful documents to meet their infromation needs. However, ability to carry out WWW search by keywords and Boolean operations was low. This has to be strengthened. Similar study using some of the above parameters among academic librarians in Enugu state revealed low ICT literacy skills due to very poor ICT infrastructural facilities (Ugwuanyi, 2009). Infrastructural access to ICT is very important in encouraging ICT literacy.

Impacting Internet Literacy Skills

To be able to strenthen the observed inadequacies in internet usage of the students information literacy skills had to be impacted in them. This can be achieved by giving them orientation and users education training. When asked if they participated in orientation and users education programme organized for them in the university, their response are presented in Table 10.

Response	**No. of students**	**Percentage (%)**
Participated	223	84.15
Not participated	42	15.85
Total	265	100

Participation in library orientation and user education programme organized by the university is an avenue to impart necessary library and infromation skills in the students to enable them access and use infromation resources effectively within the university, and it is compulsory for all new undergraduates to participate. Data in Table 9 shows that majority (84.15%) of the students participated and believed the

orientation organized by the university was very useful, but there were no much emphases on ICT literacy skills. The importance of ICT literacy cannot be overephasized in orientation. Shanaha (2006) post-intervention internet use survey showed that medical radiation students in the US had their internet literacy skills level improved dramatically after the training.

Table 10: ICT Literacy skills/mode of imparting it in users. N = 265

Organizing infromation literacy skills	**No. of students**	**Percentage**
Should ICT literacy skills be organized for students	265	100
Mode of imparting ICT literacy skills		
Integrated into course curriculum	170	64.15
Printed information literacy instructions	74	27.92
Online IL instructional module via university website	32	12.08
Online IL instructional modules via library website	32	12.08
Organizing IL workshops at the library	21	7.92

The students were then asked if they would want ICT literacy skills organized for them; the result as presented in Table 10 shows that the entire respondents supports the introduction of ICT lietracy skills programme in the university, and majority want it integrated into their course curriculum. However, this is not the case on ICT lietracy or internet literacy skill is omitted from the students 2011/2012 orientation brochure and it is not part of the GST courses offered to the students in the university. The oversight should be incorporated into the next programme. Ani (2010) opined that undergraduate students in three Nigerian University extremely use internet but they need effective user education on internet access and usage for optimal usage of e-resources.

The students were asked to suggest areas where they need ICt Literacy skills.

Table 11: Suggested Area where information literacy skills are required N =265

Suggested area where ILP are required	No. of students	Percentage
Computers	159	60
Internet	95	35.85
Online databases	74	27.92
Use of electronic sources	52	19.62
Library catalogues and classifications	42	15.85
Digital library	42	15.85
E-mail	32	12.08
CD-Rom databases	21	7.92
OPAC	11	4.15
Institutional repositories	11	4.15
Specific application sources	11	4.15

Result in table 11 indicated computer and internet related skills were needed most. This should be used to form the basic course outline for the intended ICT course in future.

Test of Null Hypothesis

To test the effect of library orientation programme on internet usage table 12, test of independence using Chi-square was carried out as follows:

Table 12: Library orientation versus library use

Variables	Yes	No	Total
Library orientation	223	42	265
Internet use	265	0	265

Ho: Library use is independent on participation in library orientation

Hi: Library use is not independent on participation in library orientation

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-square continuity	45.615[a]	1	.000		
Correction[b]	43.468	1	.000		
Likelihood Ratio	61.844	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	45.529	1	0.000		
N of Valid Cases[b]	530				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 21.00

b. Computed only for a 2x2 table

Result indicates a calculated chi-square value of 45.615 against table value of 3.841

Since there is a significant difference in chi-square calculated value and chi-square table value, we reject Ho and accept Hi, and conclude that internet use is dependent on library orientation. This result has revealed the imnportance or orientation and users education on internet usage ability of the undergraduate students. Therefore, to enhance internet use among undergraduate students, orientation and users' education programmes on ICT literacy skills must be included in their curriculum, and students should be encouraged to actively participate to acquire the necessary internet literacy skills to support their studies.

Conclusion

After careful analysis of the responses from the students who participated in this study, it can be inferred that most physical science students of the university of Benin are not only internet literate but ICT literate as they were able to meet most of the requirements postulated by Oliver and Towers in their 2000 benchmark for ICT literacy in tertiary learning settings. ICT lietracy courses should be

incorporated into the GST courses in the university to strengthen any deficient areas among the students population on the use of ICT and the internet.

References

Adomi, E.E and Kpangban E. (2010). Application of ICTs in Nigeria Secondary Schools. *Library Philosophy and Practice (e-journal)*. Paper 345. Accessed on 20th April, 2012. Available at http://digitalcommons.unl.edu/libphilprac/345

Ali et al (2010). Information Literacy Skills of Engineering Students. *IJRRAS,* 5(3): 264-270.

Ani, O.E (2010). Internet access and use : A study of undergraduate students in three Nigerian Universities. *The Electronic Library,* 28(4):555-567

Ani, O.E and Ahiauzu, B. (2008). Towards Effective Development of Electronic Information Resources in Nigerians University Libraries. *Library management,* 29(6/7): 504-514

Ani, O.E and Ottong E.J. (2010). Information Technology Literacy and Information Utilization in Nigerian Universities: A study of undergraduate students in University of Calabar, Calabar, Nigeria. *The Information Technologist,* 7(2): 85-92

Chete, F.O, Chiemeke, S.C and Oboerhiri .O (2010). Web deception:misinformation on the internet. *The Information Technologist,* 7(1):75-90

Chete, F.O, Oruoghor O. and Chete F.C (2008). Analysis of Internet Usage by University of Benin students. *The Information Technologist,* 5(1):74-86

Dangani, U.B and Mohammed .Z (2009). Information and Communication Technology Literacy among academics in Ahmadu Bello University, Zaria. *Samaru Journal of Information Studies.* 9(2); 15-22

Echezona R.I and Ugwuanyi C.F (2010). Africa University Libraries and Internet

Connectivity: challenges and the way forward. *Library Philosophy and Practice at* http://www.webpages.uidaho.edu/mbolin/echezona-ugwuanyi.htm. Accedded 9/2/11

Fatoki, O.C (2004). Impact of Library Resources and the Internet on undergraduate students's research: University of Ibadan, Nigeria. *Nigerian Libraries,* 38(1):21-33

Issa, A.O Blessing, A. and Daura, U.D (2009). Effects of Information Literacy Skills on the Use of e-library resources among students of the University of Ilorin, Kwara State, Nigeria. *Library Philosophy and Practice (e-joirnal).* Accessed on 28thMarch, 2012. Available at http://www.webpages.uidaho.edu/-mbolin/issa-blessing-daura.html

Katz, I.R and Macklin, A.S (2007). Information and Communication Technology (ICT) Literacy:integration and assessment in higher education. *Systemics, Cybernetics and Informatics,* 5(4): 50-55

Lou, et al (2010). The influence of the sixth grader's parent internet literacy and parenting style on internet parenting. *The Turkish Online Journal of Educational Technology,* 9(4): 173-184

Oliver, R and Towers S (2000). *Benchmarking ICT Literacy in tertiary learning settings.* In:R. Sims, M.O'Reilly and S.Sawkins (eds). Learning to choose: choose to learn. Proceeding of the 17th Annual ASCILITE Conference. Lismore, NSW: South Cross University press. Pp 381-390

Omotayo, B.O (2010). A survey of Internet Access and Usage among undergraduates in an Africa university. *The International Journal of library review38: 215-245*

sanni,, et'al (2009) Harnessing the potentials of interent technologyfor research and development among undergraduates in Nigeria: a case study of Obafemi Awolowo University*, International of Computing and ICT Research, 39(1):10-17*

Sarfo, F.K. et al (2011). Technology and gender equity : rural and urban students

attitudes towards information and communication technology. *Journal of Media and Communciation Studies,* 3(6):221-230

Shanahan, M.C (2007). Information Literacy Skills of undergraduate medical radiation students. *Radiography,* 13:187-196

Sinha, M.K (2012). Internet literacy skills and internet usage patterns to access e-resources by Assam University Library users: an evaluative study. *International Research Journal of Library, Information and Archival Studies,* 1(1): 010-126

Udende, P. and Azeez A.L (2010). Internet access and use among students of the University of Ilorin, Nigeria. *Journal of Communication and Media research,* 2 (1):33-42

Ugwuanyi, F.C (2009). Information and communication technology literacy among academic librarians in Enugu state. *The Information Technologist,* 6 (1): 123-132

University of Benin (2012). *Orientation Brochure 2011/2012 session.* Benin City Students Affairs Division. 89p.