

**GENDER INFLUENCE ON UNDERGRADUATES' INFORMATION LITERACY SKILLS IN THE USE OF INTERNET RESOURCES FOR LEARNING IN KWARA STATE, NIGERIA****\*Soetan Aderonke Kofo****Ominuta Itohan Mercy**Department of Educational Technology,  
Faculty of Education,

University of Ilorin, Ilorin, Nigeria

\*soetan.ak@unilorin.edu.ng

**ABSTRACT**

Information literacy skills are the ability that enables learners to successfully surf the internet in search of information to improve learning. The internet is a platform that consists of different resources where learners can search for and retrieve information. However, undergraduates do not possess the skills to surf the internet, find and use needed information and filter out irrelevant ones. This study was a descriptive research of the survey type. The objectives were to: (1) Examine the information literacy skills possessed by undergraduate students. (2) Determine gender influence on the information literacy skills of undergraduates in the use of internet resources in Kwara State, Nigeria. 294 undergraduates were purposefully selected based on school proprietorship (Federal, State and Private). Israel model (2013) was used to determine the sample size. Two research questions were raised and answered using mean, frequency counts and percentage while one hypothesis was generated and tested using t-test statistic. The findings of the study showed that: i. Undergraduates possessed task definition with grand mean of (3.54) located and assessed information with grand mean of (3.43) and synthesis skills with grand mean of (3.37). ii. there was a significant difference between male and female students' information literacy skills on the use of internet resources for learning  $\{t(292)=2.86, p<.05$  in favour of the male. Female undergraduates should be encouraged to develop interest in surfing the internet for relevant learning resources.

**Keywords:** *Gender, Information literacy skills, Internet resources*

**INTRODUCTION**

Learners require information to make certain academic decisions that would improve their areas of specialization. Ifidon (2005) posited that the need for information is the fundamental part of every human endeavour as it plays a significant role in the development of education and provides the basis for developing knowledge of learners, thereby making it vital for educational development. Without information, individuals cannot function properly in the digital era because information is necessary to discuss course contents, create social connections, enhance collaborations, and deliver course instruction using search engines that connect and organises content from all over the internet. On information literacy in higher education, Bruce, 2004; Abbas, 2014; libguides, 2014; Bruce, 2002; &

Bhatt, 2011 opined that information literacy is essential for survival in the 21<sup>st</sup> century, and is foundation for learning in the contemporary environment of continuous technological change.

Thus, this is supported by the Chartered Institute of Library and Information Professionals (2012) that skills required by an individual to be information literate requires ability to define a task and the need for information, information seeking strategies, to locate and access information, use information ethically and logically, organize information from multiple sources, evaluate information sources and said information. It infers that for individuals to be information literate and also be able to use Information and Communication Technology (ICT) tools to locate relevant information of interest which are the necessary skills for survival and productive life in this world of over flowing information to collaborate with peers across the globe.

However, it is an essential skill needed for workers to survive in a knowledge-based society, for lifelong learning common to all disciplines in all learning environments at levels of education. It implies that for information literate individual to function properly it is important that such individual acquires information literacy skills. Massachusetts College of Liberal Arts (2017) posited information literacy as the set integrated abilities encompassing discovery of information to embrace ICT skills, library skills problem solving and cognitive skills how it is valued and used to create new knowledge of learning. It is the ability to recognize when information is needed, then locate, synthesize, and apply it effectively through the use of communication networks, electronic resources and also evaluating it across a variety of media (Stambler, 2013). It is a broad concept that enables learners function effectively in the information landscape (Ministry of Education & National Library of New Zealand, 2002).

The Big6 information skills model is one of the well-known models that have been widely used in both the United States and internationally (Al-Issa, 2013). The model was developed by Eisenberg & Berkowitz (1990), that describes the process involve in solving information problems. This model describes the first stage as task definition, in which the problem-solver defines the task or problem to be solved, identifies the information needed to solve the problems. From there, the problem solver engages in information seeking strategies, location and access of information, use of information, information synthesis, and evaluation of the process and product. The process is often not linear, and stages may be repeated throughout the process. The development of the Big6 was informed by practice, but it has been employed as a conceptual framework in several studies of information problem-solving (Brand-Gruwel et al., 2009; Gerjets & Hellenthal-Schorr, 2008). For students, the Big6 provides a guide to deal with assignments and tasks as well as a model to fall back on when they are stuck. The Big6 represents "metacognition"—awareness by students of their mental states and processes (Eisenberg, 2008).

It infers that individual learners, both male and female regardless of the school proprietorship can become proficient through the use of computer to search for knowledge in the wider society to face future challenges.

Tsado (2012) defined ICT as facilities or resources that could be used in processing storing, preserving, accessing, retrieving and disseminating information with ease. It is an effective medium of communication. ICT is students centre tools that opens up new possibilities for information seeking in the educational sector, and also facilitating development through interaction with the use of technologies like cell phones, personal digital assistants, digital notebooks, personal computers and the internet for people to work collaboratively at different locations. It also accommodates resources like electronic mail (e-mail), chat rooms, newsgroups, and audio and video transmission which can be accessed electronically, Internet Resources are electronic information sources that can be accessed electronically by users through a computing network or library (Shim, 2001). Electronic information sources can be viewed as the latest advancement in information technology and they are among the most powerful tools ever devised in history (Kumar & Kumar, 2008). This is corroborated by Ogunlade (2015) that through ICT cooperative learning that assists students in gaining more knowledge and technics as they interact with others is encourage.

Students' and lecturers use internet resources to carry out research, improve course contents, facilitate effective teaching and learning, and improve themselves academically. Available resources on the internet comprises e-mail, world wide web browsing, telephoning, telex/video conferencing, audio broadcasting, news and discussion/chat group, social tools (Face-book YouTube, Twitter, etc.) instant messaging, file transfer protocol (FTP), Telnet or remote login, Search engines (Google, Mamma, AltaVista, Ask,) the online scholarly publications among others (Ikoro, 2002; Yusuf, 2006). It can be deduced that effective utilization of internet resources make it possible for undergraduates to access a wide range of materials that are relevant to every discipline regardless of location, time and the number of people accessing the materials. However, these internet resources cannot be used effectively if an individual does not possess the necessary information literacy skills.

Gender has been identified by Weiser (2000) to be a strong predictor of attitude and behaviour in internet information seeking and a demographic factor that strongly influences information behaviour. Understanding gender differences allows for the development of better approach in assisting individual learners to acquire needed Information Literacy skills and contribute to better learning experience and academic success (Macpherson, 2004). In view of this, the objective of Information Literacy and related skills must be made clear in education policy documents to guide students to be information literate towards choice of career in the digital age. (Partnership for 21<sup>st</sup>Century Skills, 2013).

Ford, Miller and Moss (2001) found gender to be a major predictor of Internet use and attitudes. Female students experienced more difficulty finding information on the Internet, and felt less competent and comfortable using the internet. They used the Internet less frequently than male students and used fewer Internet applications. Tella and Mutula (2008) found that male undergraduate students in Botswana were more experienced and used computers more than their female counterparts. Odell, Korgen, & Schumacher, (2000) reported that male undergraduate students are more digitally literate, aware and use information resources on the internet more than female students

## **STATEMENT OF THE PROBLEM**

Lack of literacy skills is an obstacle to the efficient utilization of information resources particularly digital resources in developing countries. Most students especially females are aware of the e-library resources but do not use them because they lack the skills. Influence on the use of internet resources for learning among undergraduates gender is seen as a possible factor influencing the use of electronic information resources and ICT (Steinerova and Susol 2007). Also, undergraduates who lack Information Literacy Skills experience delay and frustration when attempting to complete course-related work that requires research (Oakleaf & Owen, 2010). However, study on gender issue on differences on using digital resources has not been widely research to in Nigeria hence the gap this study hopes to fill.

## **RESEARCH QUESTIONS**

1. What are the information literacy skills possessed by undergraduate in the use of internet resources for learning?
2. Is there any difference in Undergraduates Information Literacy skills on the use of internet resources for learning based on gender?

## **Research Hypothesis**

HO<sub>1</sub>: there is no significant difference between male and female undergraduates' in their Information Literacy skills on the use of Internet Resources for learning.

## **Methodology**

The study is a descriptive research design of the survey type aimed at finding out gender influence on undergraduate's information literacy skills in the use of internet resources for learning in Kwara State, Nigeria. Researcher's designed questionnaire was employed to gather information. It consisted of

sections A and B. Section A contained the respondent's basic information such as institution, gender, and department; Section B assessed undergraduates' Information Literacy skills in the use of internet resources for learning. B was rated on a modified likert scale of strongly agree to strongly disagree ranging from 4-1. In determining the face and content validity of the research instrument, the questionnaire was subjected to corrections and constructive criticism by expert in the field of Communication Sciences and Educational Technology, University of Ilorin. Their corrections were used to modify the research instrument.

The reliability of the research instrument was determined by administering twenty copies of the research instrument on twenty students of Ladoko Akintola University of Technology, Ogbomosho outside the researcher's area. Cronbach's alpha reliability statistic was used to determine its reliability coefficient which yielded 0.870.

## DATA ANALYSIS AND RESULTS

The descriptive analysis (percentage and mean) was used to answer the research questions while independent sample t-test was used to answer the research hypothesis. Data collected was coded and analysed using Statistical Package for Social Sciences (SPSS) version 20.0 at a 0.05 level of significance.

### Results

Table 1

*Percentage Distribution of Respondents by Institution*

S/N	Institution	frequency	%
1.	University of Ilorin	100	33.3
2.	Kwara State University	96	32.7
3.	AL-Hikmah University	98	34.0
<b>Total</b>		<b>294</b>	<b>100</b>

Table 1 showed that respondents from University of Ilorin 100 (33.3%), Kwara State University, Malet were 96 (32.7%), and AL-Hikmah University, Ilorin were 98 (34.0) respectively. In all, the total number of respondents sampled for this study was 294

Table 2

*Percentage Distribution of Respondents by Gender*

S/N	Institution	Gender		
		Male %	Female %	Total
1	University of Ilorin	46 (46.0)	54 (54.0)	100
2	Kwara state University	49 (51.0)	47 (49.0)	96
3	Al-Hikmah University	46 (46.9)	52 (53.1)	98
<b>TOTAL</b>		<b>141(48.0)</b>	<b>153 (52.0)</b>	<b>294</b>

As reflected in table 2, out of the 100 respondents from University of Ilorin 46 (46.0%) were males while 54 (54.0%) were female. 49(51.0%) out of 98 respondents from Kwara State University, Maletewere male while 47(49.0%) were female. In AL-Hikmah University, there were 46(46.9%) and 52(53.1%) male and female respectively. In all the total number of male and female respondents in the three universities were 141 (48.0%) and 153(52.0%) correspondingly.

## FINDINGS

This part presents the result of the analyses on gender influence of information literacy skills on the use of internet resources for learning among undergraduates in Kwara State.

Research Question 1. What are the information literary skills possessed by undergraduate students

Table 3

*Mean Distribution of Respondents Based on Task Definition Skills*

S/N	Task Definition	Mean Score
1	I can find information needed to solve a task (an assignment, report writing, etc.) using internet resources for learning	3.77
2	I am able to identify the information I need for solving a task using internet resources for learning	3.57
3	I know the difference between various domains (.org, .com, .ng, .net) on the internet	3.29
<b>Grand mean</b>		<b>3.54</b>

Table 3 showed that undergraduates can find information needed to solve a task with a mean score of 3.77. This was followed by the ability to identify the information needed for solving a task using internet resources for learning and knowing the difference between various domains (.org, .com, .ng, .net) on the internet with mean score of 3.57 and 3.29 respectively. However, the grand mean score task definition was found to be 3.54. Using 2.5 as the average benchmark, it can then be inferred that undergraduates possess task definition skills which allows them to carry out their learning tasks easily.

Table 4

*Mean Distribution of Respondents Locate and Access Skills*

S/N	Location and Access	Mean score
1	I can locate information on the internet using search engines (google.com, ask.com, Altavista, mamma.com, Google scholar e.t.c)	3.59
2	I have the ability to access information on blog sites and news rooms	3.31
3	I can use mailing list to locate and access information	3.26
4	I have the ability to view and read information from any source on the internet	3.46
5	I know where to find the information I need on the internet	3.51
<b>Grand mean</b>		<b>3.43</b>

Table 4 showed that I can locate information on the internet using search engines (Google, Ask, Altavista, Mamma, Google scholar e.t.c) ranked highest with a mean score of 3.59 out of 4. This is followed by I know where to find the information I need on the internet, I have the ability to view and read information from any source on the internet, I have the ability to access information on blog sites and news rooms and I can use mailing list to locate and access information with a mean score of 3.51, 3.46, 3.31 and 3.26 respectively. However, the grand mean score for location and access was found to be 3.43. Using 2.5 as the average benchmark, it can then be concluded that undergraduates possess the skill to locate and access information from any source on the internet.

Table 5  
*Mean Distribution of Respondents Synthesis Skill*

S/N	Synthesis	Mean Score
1	I can organize information for practical application	3.24
2	I am able to summarize information in my own words for my use	3.44
3	I can organize information from different sources on the internet with pre-existing knowledge.	3.42
<b>Grand mean</b>		<b>3.37</b>

Table 4 indicated that I am able to summarize information in my own words for my use ranked highest with a mean score of 3.44. this was followed by I can organize information from different sources on the internet with pre-existing knowledge and I can organize information for practical application with a mean score of 3.42 and 3.24 respectively. However, the grand mean score for synthesis was found to be 3.37. Using 2.5 as the average benchmark, it can thus be established that undergraduates possess the skill synthesize information for their own use.

### Hypothesis Testing

Based on research question 2, a corresponding hypothesis was formulated, the results of the tested hypothesis was shown in table 4. 4. The hypothesis was tested at 0.05 level of significance.

**Ho<sub>1</sub>:** There is no significant difference in male and female undergraduates' Information Literacy skills in the use of Internet Resources for learning.

To determine whether there was a significant difference in undergraduates' Information Literacy skills on the use of Internet Resources for learning based on gender, data was analyse using t-test statistic, the result obtained is presented in table 4.

Table 5  
*t-test of Male and Female Undergraduate Information Literacy skills*

Gender	No	X	SD	D	T	Sig. (2-tailed)	Remarks
Male	143	72.13	7.48	292	2.86	.004	Not sig.
Female	151	69.64	7.41				
Total	294					.004	

Table 4 showed a significant difference between male and female undergraduates' information literacy skills in the use of internet resources for learning. This is reflected in the result:  $t(292) = 2.86, p < .05$ . That is, the result of t-value of 2.86 resulting in .004. Significant value was less than 0.05 alpha values. Thus, the hypothesis is rejected. This implies that there was significant difference between male and female undergraduates' information literacy skills in the use of internet resources for learning in favour of male with mean score of 72.13.

## CONCLUSIONS

This research examined gender influence on information literacy skills of undergraduates in the use of internet resources for learning in Kwara state. The result obtained from data gathered and analysed in this study indicated that students possessed various information skill for learning. Also, there was significance difference between male and female use of internet resources in favour of males and could be consider to be similar to submission of Ford, Miller and Moss (2001) that female experience more difficulty finding information, felt less competent and comfortable using the internet.

## RECOMMENDATIONS

Based on the findings and conclusions of this study, the following recommendations were made:

1. There are other internet resources which undergraduates can use for learning. Hence, they should be encouraged not to focus on some particular set of resources because of the entertainment aspect that comes with them to avoid being distracted.
2. Female undergraduates should be encouraged to get acquainted with the internet both in school and at home. This may be achieved through seminars and workshops.

## REFERENCES

- Abbas, K. D. (2014). Expert or novice in information searching, access and sharing: An Information Literacy model for Nigerian university system. *European Journal of Computer Science and Information Systems*, 2(2), 30-37. Retrieved from <http://goo.gl/9cMzkf7>
- Al-Issa, R. E. (2013). Concepts of Information Literacy and Information Literacy Standards among undergraduate students in public and private Universities in the state of kuwait. A dissertation. Retrieved from <http://goo.gl/laeYkF>
- Bhatt, R. K. (2011). Information Literacy models and competencies development Initiatives in India. Word document. Retrieved from <http://goo.gl/mPoN62>
- Brand-Gruwel, S., Wopereis, I., & Walraven, A. (2009). A Descriptive Model of Information Problem Solving while Using Internet. *Computers & Education*, 53(4), 1207-1217.
- Bruce, C. (2002). Information Literacy as a catalyst for educational change. Retrieved from <http://goo.gl/g325SB>
- Bruce, C. (2004). Information Literacy as a Catalyst for Educational Change Retrieved from <http://www.nclis.gov/libinter/infolitconf&meet/papers/brucefullpaper.pdf>
- Chartered Institute of Library and Information Professionals, CILIP, (2012). Information literacy: definition. Retrieved from <http://www.cilip.org.uk/getinvolved/advocacy/informationliteracy/pages/definition.aspx>
- Eisenberg, M. B. (2008). Information Literacy: Essential skills for the information age. *Journal of Library & Information Technology*, 28(2), 39-47. Retrieved from <http://goo.gl/chnyGE>
- Eisenberg, M. B., & Berkowitz, R.E. (1990). Information problem-solving: The Big six skills approach to library and information skills instruction. *Norwood, New Jersey: Ablex*
- Ford, N., Miller, D. & Moss, N. (2001). The role of individual difference in Internet searching: An empirical study. *Journal of the American Society for Information Science and Technology*, 52(12), 1049-1066
- Gerjets, P., & Hellenthal-Schorr, T. (2008). Competent information search in the World Wide Web: Development and evaluation of a web training for pupils. *Computers in Human Behavior*, 24(3), 693-715.
- Ifidon, S. (2005). Information rules the world. In J. Lasisi, O. K. Odusanya, E. O. Okegbola, F. O. Balogun et al. (Eds.), *Proceedings of selected papers of the cataloguing, classification and indexing section of the Nigerian Library Association*. 114-120.
- Ikor, F.M. (2002). Information sources for effective teaching and learning in Nigerian languages. *Lang. Librarianship J.* 1 (2): 21-29.
- Kumar, G. T., & Kumar, B. T. S. (2008). Use of electronic information sources by the academic community: A comparative study, 684-692

- Libguides, (2014) About SInformation Literacy. Retrieved from <http://goo.gl/7YlgQg>
- Macpherson, K. (2004). Undergraduate Information Literacy: A teaching framework. *Australian Academic & Research Libraries*, 35(3), 226–41
- Massachusetts College of Liberal Arts, 375 Church Street North Adams, MA 01247  
[http://library.mcla.edu/free\\_library](http://library.mcla.edu/free_library)
- Ministry of Education and National Library of New Zealand, (2002). The school library and learning in the information landscape: Guidelines for schools. Wellington, New Zealand: Ministry of Education. Retrieved from <http://goo.gl/ZADHjI>
- Oakleaf, M., & Owen, P. L. (2010). Closing the 12-13 gap together: School and college librarians supporting 21st century learners. *Teacher Librarian*, 37(4), 52-58. Retrieved from <http://goo.gl/HU1oFI>
- Odell, P. M., Korgen, K. O., Schumacher, P., & Delucchi, M. (2000). Internet use among female and male college students. *Cyber psychology & Behavior*,
- Ogunlade, O. O. (2015). Information and Communication Technology in Education. In: Critical Issues in Educational Technology. 98-104
- Ominuta, I. M. (2015). Influence of information literacy skills on the use of internet resources for learning among undergraduates in Kwara state. An M.Ed. Dissertation submitted to the Department of Educational Technology, Faculty of Education University of Ilorin, Nigeria
- Partnership for 21st Century Skills. (2013). A framework for 21st century learning. Retrieved from <http://www.p21.org/>
- Shim, W. J. (2001). Measure and statistics for research library networked services: Procedures and issues (ARL E-Metrics Phase II Report). Washington, DC: *Association of Research Libraries*. Retrieved from <http://goo.gl/TzBaFU>
- Stambler, L. G. (2013). *Information Literacy. Literacies for the digital age developed for the Pier Institute: Global Youth in the Digital Age*. Yale University.
- Steinerova, J., & Susol, J. (2007). User's information behavior. A gender perspective. *Information research*, 12(3). Retrieved from <http://goo.gl/15DQFo>
- Tella, A. & Mutula, S. M. (2008). Gender differences in computer literacy am undergraduate students at the university of botswana: implications for library use: *Malaysian Journal of Library & Information Science*, 13(1), 59--76. Retrieved from <http://goo.gl/w1tPzg>
- Tsado, E. (2012). The role of information and communication technology invocational and technical education in Nigeria. Retrieved from <http://goo.gl/rjFxNi>
- Weiser, E. B. (2000). Gender differences in internet use patterns and internet application preferences: A two-sample comparison. *Cyber Psychology and Behavior*, 3, 167–77.
- Yusuf, M. O. (2006). Problems and Prospects of Open and Distance Nigeria. *Turkish Online Journal of Distance Education*, 7(1), 22-29. Retrieved from <https://goo.gl/ClszKX>