Influence of Gender Differences on Usage Patterns of Electronic Information Sources among Undergraduates of Selected Universities in Southwest, Nigeria

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Abstract This research work investigated the influence of gender differences on usage patterns of electronic information sources among undergraduates in Nigeria. The study adopted a descriptive survey research design. The population was made up of randomly selected undergraduate students of Ekiti State University (EKSU) and University of Ibadan (UI). Data were generated through the use of questionnaire designed to elicit responses from respondents and analysed using descriptive statistics method of frequency counts and percentages. However, out of five hundred (500) copies of questionnaire administered, four hundred and twenty one (421) were returned which represents 84.2% response rate for the study. Findings revealed that there is no basis for gender differentiation in the use of electronic information sources as gender gap in electronic resources usage appeared negligible. However, it was recommended that university libraries in Nigeria should continue to give equal opportunities to both sexes in term of training and orientation on the use of e-resources among other recommendations.

Keywords Gender differences, Usage pattern, Electronic Information Sources, Undergraduates, Universities in Nigeria

1. Introduction

Gender differences are being discussed in academia, economy, politics, science and technology and even in religious circles. According to McGiugan, (2008), gender issues have been in the forefront of impassioned public discussion regarding higher education. Waldman (2003) had acknowledged also that gender is a relevant factor in the use of electronic databases, while issues of gender difference among students towards the use of library resources have been raised by scholars. In a report by Manda (2007), gender was observed to be associated with the use of electronic information resources, and that male postgraduate students were more likely to use e-resources than female students. They further reported that even when there was control for attitude towards the use of e-resources or training in the use of e-resources the relationship between gender and e-resources was maintained. In fact, a study by Amkpa (2007) revealed that male and female students differ significantly in attitudes towards computer applications which later affect their job opportunities after graduation.

Furthermore, Utulu (2006) had observed that the issue of gender gap in the digital divide and the impact of new technologies on gender in particular, and on the economic and political spheres of women lives. These are very important as gender influences factors like income, time constraints, literacy, education, language, and culture (Paul, 2009), and in turn affects access to facilities, training, and employment in information Technology.

However, Luan, Aziz, Yunus, Sidek, Bakar, Meseran, and Atan, (2005) observed that there is a gender gap in the use of internet communication technology. They found out that females are normally less confident than males in handling technology such as computer software. The research conducted by Madigan, Goodfellow, and Stone. (2007) to compare students' skills in four major technology domain areas indicated that first year female students showed less confidence in using computer technology and did not perceive themselves as competent technology users. Also a study by Sacks et al. (1994) of higher school students found that their attitudes to computer and use tended to vary by gender.

A better understanding of the concept of gender could be gained in social psychological literature where the physical, mental and social differences of men and women have been discussed. Furthermore, findings of some empirical studies have shown that differences could manifest in the patterns of male and female use of ICT and electronic resources. Fallows (2005) revealed that gender differences exist in the

use of Internet between men and women. The longitudinal study of Pew Internet and American life project reported by Fallows (2005) has shown that women appreciate especially the communicative features of the Internet, while men are more likely to use online transactions, get information, play games and use entertainment. However, the study by Alshawi (2008) which examined the gender differences in Internet usage among faculty members in Saudi Arabia did not see a significant gender difference in the overall Internet usage.

Developing information technology skills and competency in using electronic resources transcends gender boundary as both sexes need skills to navigate the information landscape. Although there are studies in the literature that report gender differences in attitude, usage level, and experiences in the use of ICT and electronic resources by different professionals, there appears to be no or scanty empirical research carried out to establish this assertion especially on information professionals in South-western Nigeria (Osunade and Ojo 2006).

2. Literature Review

The gender differences in the use of electronic resources observed between male and female also reflect in the use of computer technology. Tella and Mutulu (2008) noted that one of the recurring themes in underutilization of ICTs is the lack of relevant competences with females often cited as more affected than males. Similarly, Jenson (1999) reported computer inexperience for female use as an important factor in determining their attitude and anxieties towards computers.

According to Costa and Meadows (2000), male economists tended to use electronic resources more than the female ones. Dutta-Bergman (2002) in a study of demographic correlates on Internet use affirmed that, the males are most likely to use the Internet than the females. Osunade and Ojo (2006) confirmed this as they found that male students used the Internet at the University of Ibadan, Nigeria than their female counterparts for their academic activities. Alao and Folunsho (2008) also reported the existence of gender difference in Internet use. The findings of their study of Internet use in Ilorin, Nigeria revealed that males used the Internet than females. This trend was confirmed by Nwezeh (2010) that the Internet is mostly used by men, "while female users are increasing more slowly". Park (2010) in a survey of Social Networking Sites (SNS) by university students and faculties in Korea; reported that there is significant relationship between gender and the social networking sites (SNS). He found that, males are involved in the use of SNS than females. The findings of these studies are in line with that of Al-Ansari (2006), who investigated Internet use by academic staff in Kuwait University and found that "males used the Internet more than females". Gamage and Halpin (2007) in their study of how to bridge digital divide in E-Sri Lanka, similarly found that females used the Internet less than males.

But in contrast, other researchers have reported that females used the Internet more than males (Akporido, 2005; Deng, 2010). A survey by Akporido (2005) on Internet use in Delta State, Nigeria indicated that more females (56%) used the Internet than males (44%). Fourie and Botham (2006) in her study on digital divide reported that male students scored lowest marks in ICT courses than females in the University of Pretoria, South Africa during their assignment grading, but her review indicated that gender differences do not have impact on the use of online resources. Deng (2010) in a study of emerging patterns and trends in use of electronic resources in Australian higher education environment found that females (55.7%) used electronic resources more than males (44.3%); further analysis revealed that there was no significant difference in the use of e-resources by gender.

The observed gender divide in terms of access and use of ICT is in line with the study by Grace, Kenny and Qiang (2004) who in a survey of the use of the Internet in Africa found that 86% of Internet users in Ethiopia, 83% in Senegal, and 64% in Zambia were males. A study by Amkpa (2007) revealed that there exists a significant difference in computer use between male and female students at the University of Maiduguri, Nigeria. The finding was similar in terms of attitude toward the use of computers, as it was found that females' attitude towards computers were comparatively negative. The paper recommended that female students should improve their attitudes toward the use of computers.

EdQual (2010) in a survey of the use of ICT to support science and mathematics education in Rwanda equally observed that there exist gender differences in the use of ICT as boys were said to dominate girls in ICT use. Rubagiza, and Sutherland (2011) affirmed the need to address the gender difference in the use of ICT in Rwanda. According to these studies, boy students are better exposed to ICT than the girls, especially during "out-of-school use of ICT", where the girls are confined at homes, while the boys have relative freedom to go out to the Internet cybercafé. This explains why boys are apparently more skilled users of ICT in Rwanda than girls, and thus dominate ICT use. The implication of these finding is that this trend will continue to higher education or post education level where males will continue to dominate females in ICT use in academic and professional use.

According to Deng (2010), the debate on gender use of ICTs and e-resources is a continuous one; he suggested the need for further study on the subject matter. It is therefore hoped that the findings of the present study would make a significant contributions on the on-going scholarly debate on gender influence on access and use of e-resources for academic research in Nigerian universities.

Many scholars have discussed the issue of gender difference among students towards the use of library resources. Manda (2007) report that gender is associated with the use of electronic information resources, and that male postgraduate students were more likely to use e-resources than female students. They further report that

even when there was controlled for attitude towards the use of e-resources or training in the use of e-resources the relationship between gender and e-resources was maintained. A study by Amkpa (2007) revealed that male and female students differ significantly in attitudes towards computer applications which later affect their job opportunities after graduation.

A study by Tella and Mutula (2008) on gender difference in computer literacy reported that students with higher computer literacy were more inclined to access and make use of library facilities. They further reported that differences exist between female and male undergraduate students at the University of Botswana with regard to computer literacy. In the same vein, Ford and Miller (1996) report that gender is a predictor of internet use and attitudes, males seem to enjoy browsing on the internet for enjoyment, while females tend to only use it for work-related purposes. Ford, Miller, and Moss (2001) found that women tend to experience more difficulty in finding information online than men.

Ozoemelem (2009) reports a high frequency of use of electronic information resources by both male and female postgraduate students. The gender gap in electronic resources usage appears negligible. Different studies have identified how students acquire their search skills for the use of e-resources. Klatt (2001) reports that a majority of students obtained their knowledge by trial and error or with the help of fellow students. Similarly, Adomi, Omodeko, and Otlo (2004), report that most students acquired Internet knowledge and skills through practical self-teaching. Irrespective of gender, e-resources are used by students for different purposes. Obaje and Camble (2008) reported that e-resources are used for theses/dissertation/ project writing by postgraduate and final–year students.

Using ICT for learning does improve learning capacity and makes the learner focused on the process for acquiring knowledge and at the same time the content of knowledge. Huyer (2003) also argues that access to ICT offers many opportunities for women and girls to gain the education and technical skills required for them to participate equally in the knowledge economy. However, active use of ICT requires many competencies. Two concerns come up: the capacity requirement of the task and the mental effort that needs to be exerted. The degree of attention and resources demanded for ICT use needs to become a focal point of research. With the integration of ICT, it is important to understand and think more specifically about productive uses by students through reflection on theories and research on technology, cognition and education.

Bimber (2000) on reaction of postgraduate students at Fuzhou University, Fujian, People's Republic of China argued that the gender gap in the Internet is larger where more intensive Web use is concerned. Women are substantially less likely to be frequent users, equally likely to be infrequent users, and more likely to be intermediate users and that females are less intensive internet users than males. Bimber (2000) attributes this finding to a combination of gendered technology embodying male values, content that favours men, sex differences in cognition and/or communication, and socioeconomic differences. Ono and Zovodny (2003) also found women to be less frequent and less intense users of the Internet. Concern about gender inequality has now shifted from access to intensity.

Okiki (2011) examined the factors that influence the use of electronic information sources among postgraduate students. The study covered six Universities in the South West, Nigeria. The results show that males seem to enjoy browsing on the internet for enjoyment while female tend to only use it for work related purpose. Ford et al (2001) also found that females tended to experience more difficulty finding information online, to feel competent and comfortable using the internet, to use the internet less frequently than males and to make use of a less varied set of internet application, though found a similar result in studying faculty members; while males tended to have computing skills than females, age and year of obtaining highest educational qualifications were also important factors in establishing computers skills.

Recent literature on technology presents a complicated picture of the relationship between gender and Web use. While most scholars agree that the gender gap in Internet use has narrowed significantly in the college age group as well as the general population, some gender differences have been found in attitudes toward technology, intensity of Internet use, online applications preferred, and experience in cyberspace. (Obuh, 2009).

3. Methodology

The study adopted a descriptive research method and data were generated through the use of questionnaire which was administered on randomly selected students of Ekiti State University (EKSU) and University of Ibadan (UI). Items in the questionnaire focused on accessibility of electronic information resources, frequency of use of electronic collections, and utilisation of these resources. The use of frequency counts and percentages method of data analysis was adopted for this research work.

3.1. Presentation and Discussion of Results

Below is the comprehensive analysis of data and findings based on the responses received from the respondents through the use of questionnaire. Out of the five hundred (500) copies of questionnaire distributed, four hundred and twenty one (421) copies (84.2%) were returned with valid responses. While seventy nine (79) copies (15.8%) were not returned at all.

This section presents findings on the distribution of the respondents by institutions and gender. 42.8% of the respondents were from UI, while 57.2% were from EKSU. From UI, 56.7% of the respondents were male and 43.3% were female. From EKSU 53.9% were male while the remaining 46.1% were female. This findings is in line with the assertion of EdQual (2010) in a survey of the use of ICT

to support science and mathematics education in Rwanda, he observed that there exist gender differences in the use of ICT as boys were said to dominate girls in ICT use.

Findings from the study revealed that the respondents have access to electronic information resources for academic purposes through various channels. Of the seven items of mode of access to electronic information resources, the use of mobile phones technology ranked highest with (39.7%) for male and (44.4%) for female as their most preferred mode of access. The respondents' choice of access to electronic information resources on campus accounted for the lowest with (30%) for male and (10%) for female. A total of (33.6%) male and (41.8%) female revealed that they access information resources through cyber café. (20.7%) male and (18.5%) female access information resources through the library website. Respondents' access to electronic information resources through modem as their most preferred mode of access accounted for (33.2%) male and (31.7%) female. Lastly, (32.3%) male and (34.4%) female opined that they use electronic resources at home. This is line with Ozoemelem (2009) who reported a high frequency of use of electronic information resources by both male and female postgraduate students. He also noted that gender gap in electronic resources usage appeared negligible. Although boys and girls are generally educated side-by-side in schools, their experiences however, are profoundly different. The reason for electronic resources

usage by female study may either be that the female students are more confident in the use of the library than their male counterparts who are more confident in the use of computer software applications as reported by Luan et al. (2005) or the fact that female students perceive themselves as incompetent technology users (Madigan et al., 2007).

Findings on the frequency of use of e-resources revealed that majority of the respondents (35.4%) male and (29.6%) female use e- journals on daily basis, (33.6%) male and (31.2%) female use e-books daily, (20.3%) male and (2.6%) female use open access resources daily, (14.7%) male and (13.8%) female use e-theses daily, (35.8%) male and (28.6%) female use E-newspapers daily, (31.5%) male and (6.9%) female use e-maps daily, this is in tandem with findings of Alao and Folunsho (2008) who reported the existence of gender difference in internet use among students of university of Ilorin, Nigeria. It was reported that males used the Internet than females.

But in contrast, (24.1%) male and (46.0%) female use online databases daily, (40.9%) male and (50.8%) female use E-mail daily, (47.0%) male and (49.2%) female use E-reference sources (Dictionary, encyclopaedia daily. This agrees with the position of Deng (2010) in a study of emerging patterns and trends in use of electronic resources in Australian higher education environment found that females (55.7%) used electronic resources more than males (44.3%).

Table 1. Distribution of Respondents by Institution and Gender

S/N	Institution	Frequency	Male	Female
1	University of Ibadan	180(42.8%)	102(56.7%)	78(43.3%)
2	Ekiti State University	241(57.2%)	130(53.9%)	111(46.1%)
	Total	421(100%)	232(55.1%)	189(44.9%)

Table 2. Accessibility of Electronic Information Resources

S/N	Items	Gender	Very highly preferred	Highly preferred	Moderately preferred	Not preferred
1	Cybercafé	M	78(33.6%)	56(24.1%)	29(12.5%)	69(29.7%)
		F	79 (41.8%)	71(37.6%)	19(10.0%)	20(10.6%)
2	Through the library website	M	48(20.7%)	59(25.4%)	65(28%)	60(25.9%)
		F	35(18.5%)	46(24.3%)	58(30.7%)	50(26.5%)
3	Modem	M	77(33.2%)	61(26.3%)	81(34.9%)	13(5.6%)
		F	60(31.7%)	52(27.5%)	65(34.4%)	12(6.4%)
4	Internet (Cable and Wires)	M	85(36.6%)	73(31.5%)	66(28.4%)	8(3.5%)
		F	68(36.0%)	51(27.0%)	53(28.0%)	17(9.0%)
5	Use of Mobile Phones (GSM Network)	M	92(39.7%)	55(23.7%)	70(30.1%)	15(6.5%)
		F	84(44.4%)	65(34.4%)	26(13.8%)	14(7.4%)
6	On Campus	M	71(30.6%)	37(15.9%)	85(36.7%)	39(16.8%)
		F	19(10.0%)	54(28.6%)	61(32.3%)	55(29.1%)
7	At home	M	75(32.3%)	52(22.4%)	53(22.8%)	52(22.5%)
		F	65(34.4%)	56(29.6%)	29(15.4%)	39(20.6%)

Table 3. Frequency of use of the following e-resources

	E-Resources	Gender	Daily	Once a week	Occasionally	Never
1	E-journals	M	82(35.4%)	43(18.5)	71(30.6%)	36(15.5%)
		F	56(29.6%)	23(12.2%)	91(48.1%)	19(10.1%)
2	E-books	M	78(33.6%)	11(4.7%)	89(38.4%)	54(23.3%)
		F	59(31.2%)	21(11.1%)	82(43.4%)	27(14.3%)
3	Online Database	M	56(24.1%)	44(18.9%)	83(35.8%)	49(21.2%)
		F	87(46.0%)	43(22.8%)	46(24.3%)	13(6.9%)
4	Open access resources	M	47(20.3%)	14(6.0%)	91(39.2%)	80(34.5%)
		F	5(2.6%)	89(47.1%)	76(40.2%)	19(10.1%)
5	E-theses	M	34(14.7%)	48(20.7%)	46(19.8%)	104(44.8%)
		F	26(13.8%)	22(11.6%)	67(35.4%)	74(39.2%)
6	E-newspapers	M	83(35.8%)	27(11.6%)	55(23.7%)	67(28.9%)
		F	54(28.6%)	28(14.8%)	88(46.6%)	19(10.0%)
7	E-maps	M	73(31.5%)	21(9.0%)	91(39.2%)	47(20.3%)
		F	13(6.9%)	31(16.4%)	68(36.0%)	77(40.7%)
8	E-mail	M	95(40.9%)	26(11.2%)	79(34.1%)	32(13.8%)
		F	96(50.8%)	45(23.8%)	41(21.7%)	7(3.7%)
9	E-reference sources (Dictionary, encyclopaedia etc)	M	109(47.0%)	38(16.4%)	69(29.7%)	16(6.9%)
		F	93(49.2%)	45(23.8%)	40(21.2%)	11(5.8%)

Table 4. Utilisation of Electronic Information Resources

	Item	Gender	High	Average	Low	Never
1	By direct reading from the Net	M	118(50.9%)	68(29.3%)	13(5.6%)	33(14.2%)
		F	97(51.3%)	52(27.5%)	26(13.8%)	14(7.4%)
2	By downloading the information resources	M	127(54.8%)	74(31.9%)	15(6.4%)	16(6.9%)
		F	97(51.4%)	67(35.4%)	4(7.4%)	11(5.8%)
3	By mere cut and paste	M	76(32.8%)	84(36.2%)	42(18.1%)	30(12.9%)
		F	46(24.3%)	99(52.4%)	27(14.4%)	17(8.9%)
4	By saving the document in any storage devices	M	112(48.3%)	57(24.6%)	44(18.9%)	19(8.2%)
		F	96(50.8%)	72(38.1%)	11(5.8%)	10(5.3%)
5	By downloading the forwarded document from e-mail	M	83(35.8%)	91(39.2%)	42(18.1%)	16(6.9%)
		F	79(41.8%)	81(42.9%)	21(11.1%)	8(4.2%)
6	By printing the content of the document.	M	17(7.3%)	97(41.8%)	79(34.1%)	39(16.8%)
		F	73(38.6%)	59(31.2%)	51(26.9%)	6(3.3%)

Findings on utilisation of electronic information resources revealed that (50.9%) male and (51.3%) female noted that they use e-resources by direct reading from the net was high, (54.8%) male and (51.4%) female agreed that they use e-resources by downloading the information resources was high, (32.8%)%) male and (24.3%) female opined that they use e-resources by mere cut and paste was high, (48.3%) male and (50.8%) female noted that they use e-resources by saving the document in any storage devices was high, (35.8%) male and (41.8%) female noted that they use e-resources by downloading the forwarded document from e-mail ad lastly, (7.3%) male and (38.6%) female noted that they use e-resources by printing the content of the document was high. These findings aligns with the position of Osunade and Ojo (2006) that the development of information technology skills and competency in using electronic resources transcends gender boundary as both sexes need skills to navigate the information landscape.

4. Conclusions and Recommendations

From the findings of this study, it is clear that there is no basis for gender differentiation in the use of electronic information resources in Nigeria universities. Both sexes must be accorded the same priority in the scheme of things especially issues related to electronic resources usage or enhancement of capacity through ICT skill acquisition and orientation. This is because findings from the study revealed that gender gap in electronic resources usage appeared

negligible.

Based on the findings of this study, the following recommendations were proffered:

1. University libraries in Nigeria should continue to give equal opportunities to both sexes in term of training and orientation on the use of electronic information resources.
2. University management should make relevant electronic resources available through regular subscriptions and encourage usage of the resources by removing all gender barriers.
3. Students both male and female in all universities in Nigeria should be encouraged to be computer literate to access information resources personally on the Internets.

REFERENCES

[1] Adomi, E.E., Omodeko, F.S., & Otolo, P.U. 2004. The use of cybercafés at Delta State University Abraka, Nigeria. Library Hi Tech, 22 (4).

[2] Akporido, CE. 2005. Internet Use in a Nigerian Suburban Setting. *The Electronic Library* 23 (3): 302-310.

[3] Al-Ansari, H. 2006. Internet Use by the Faculty Members of Kuwait University. *The Electronic Library* 24 (6): 791-803.

[4] Alao, IA. & Folorunsho, AL. 2008. The Use of Cybercafes in Ilorin, Nigeria. *The Electronic Library* 26 (2).

[5] Alshawi A. 2008. Gender differences in internet usage among faculty members: The case of Saudi Arabia. The paper appears in: Hum. Syst. Int. conference.

[6] Amkpa, SA. 2007. Gender and Age Differences in Computer Use and Attitudes among Students of University of Maiduguri, Nigeria. *The Information Technologist (ICT)* 4 (1).

[7] Bimber, B. 2000. Measuring the gender gap on the Internet. Social Science Quarterly 81 (3).

[8] Costa, S. & Meadows, J. 2000. The Impact of Computer Usage on Scholarly Communication among Social Scientists. Journal of Information Science 26 (4).

[9] Dutta-Berman, MJ. 2002. Beyond Demographic Variables Using Psychographic Research to Narrate the Story of Internet User. *Studies in Media and Information Literacy Education* 2 (3). Available at www.utpress.utoronto.ca/ journal/ejournals/simile. (Accessed 17 August 2011).

[10] Deng, H. 2010. Emerging Patterns and Trends in Utilizing Electronic Resources in a Higher Education Environment: An Empirical Analysis. New Library World 111 (3/4).

[11] EdQual 2010. Using ICT to Support Science and Mathematics Education in Rwanda. *EdQual Policy Brief* No. 3, September.

[12] Fallows D 2005. How women and men use the internet. Washington, D.C.: Pew Internet and American Life Project.

Available at http:www.pewinternet.org/pdfs/pip – Women and Men. Online.pdf.

[13] Ford, N. Milla, D. and Moss N. 2001. The role of individual differences in internet searching: An empirical study. *Journal of the American Society for Information Science and Technology* 52(12).

[14] Fourie, I. & Bothma, T. 2006. Addressing the Digital Divide in Teaching Information Retrieval: A Theoretical View on taking Students from ICT Access to Knowledge Sharing. *The Electronic Library* 24 (4): 469-489.

[15] Grace, J, Kenny, C. & Qiang, CZ. 2004. *Information and Communication Technologies and Broad-Based Development: A Partial Review of the Evidence.* Washington, D. C.: The World Bank.

[16] Huyer, S. 2003. Gender, ICT, and Education. In World Bank, Engendering ICT. Consulted 23 June 2015 at: http://archive.wigsat.org/engenderedICT.pdf.

[17] Jenson J 1999. Girls ex- machine:A school – based study of gender culture and technology. A ph.D thesis, Simon Fraser University.

[18] Klatt, R. 2001. Barriers in using digital scientific information at German universities and other higher education institutions. Lecture at the 23rd DGI-Online conference 2001.

[19] Luan, W.S., Aziz, A., Yunus, M.S.A., Sidek, Z., Bakar, K.A., Meseran, H. and Atan, H. (2005). Gender differences in ICT compentencies among academicians at Universiti Putra Malaysia. Malaysian Online J. Instruc. Tech. 2(3): 62-69.

[20] Madigan, E. M., Goodfellow, M. and Stone, J.A. (2007). Gender, perceptions, and reality: Technological literacy among first year students. In Proceedings of the 38th SIGCSE technical symposium on computer science education, March 7–11, Covington, KY. (pp. 410-414). New York, NY: ACM.

[21] Manda, P. A. 2005. Electronic resource usage in academic and research institutions in Tanzania, Information Development, 21(4).

[22] McGiugan, G.S. 2008. Databases versus web: a discussion of teaching the use of electronic resources in the library instruction setting. Internet reference Service (Q. 691).

[23] Nwezeh, CM. 2010. The Impact of Internet Use on Teaching, Learning and Research Activities in Nigerian Universities: A Case Study of Obafemi Awolowo University. *The Electronic Library* 28 (5).

[24] Obaje, M. A., & Camble, E. 2008. Use of CD-ROM database by staff and students in the University of Jos Library. The information scientist: an international journal of information and communication technology (ICT). 5(1):7-8.

[25] Obuh Alex O. 2009. Use of Electronic Resources by Postgraduate Students of the Department of Library and Information Science of Delta State University, Abraka, Nigeria. *Library Philosophy and Practice* 2009.

[26] Ono, H and Zavodny, M. 2003. Gender and the Internet. Social Science Quarterly 84 (1).

[27] Ozoemelem, O. A. 2009. Use of electronic resources by postgraduate students of the Department of Library and Information Science of Delta state university, Abraka,

Nigeria. Library philosophy and practice. Available: http [25 June, 2016].

[28] Paul, G. 2009. Mobile Broadband: Helping bridge the digital divide. i4d vol. VII. No.7: Information for Development, July-September 2009.

[29] Rubagiza, J., Were, E. & Sutherland, R. 2011. Introducing ICT into Schools in Rwanda: Educational Challenges and Opportunities. *International Journal of Educational Development* 31.

[30] Sacks, C.H., Bellissimo, Y. and Mergendoller, J.R. 1994. Attitudes towards computer and computer use: the issue of gender. J. Res. Computing Edu.; 26(2).

[31] Sharma, C 2009. Use and impact of e-resources at Guru Gobind singh Indrapratha University, India. A case study Electronic journal of Academic and Special librarianship vol. 10(1).

[32] Tella, A. and Mutala, S.M. 2008. Differences in computer literacy among undergraduate students at the University of Botswana: Implication for library use. *Malaysian Journal of Library and Information Science,* 13(3).

[33] Walman, M. 2003. Freshmen's use of library electronic resources and self-efficacy. Informat .Res.; 8 (2), paper no. 150 (Available at: http://informationr.net/ir/8-2/paper150.html.