GENDER DIFFERENCES IN SELF EFFICACY AND ATTITUDE TOWARDS INTERNET RESOURCES IN NIGERIA TERTIARY INSTITUTIONS: A CASE STUDY OF NIGER STATE

By

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Abstract
The study investigates the gender differences in self-efficacy and attitude towards Internet resources in Nigerian tertiary institutions (A case study of Niger State). To elicit responses for the study, two research hypotheses were formulated. 220 lecturers (110 males &110 females) from three federal tertiary institutions in Niger State participated in the study. The instrument used for the study was the researcher developed 'Gender and Internet Skills Questionnaire'. Data was collected for the study through the administration of 20–item questionnaire to respondents, the results were appropriately scored. The data obtained were analyzed using t-test statistics. The findings showed that female lecturers have inadequate proficient skills in using Internet for teaching, learning and research work while female and male attitudes and educational attainments are not significantly different. It was recommended that female lecturers should be encouraged to acquire internet skills and use them to improve their teaching, research and information service; and computer literate should be a priority to employing lecturers into teaching profession.

Introduction

The internet which is an integral aspect of the Information and Communication Technology (ICT) is becoming an indispensable tool for quality teaching, learning and research in academic setting. Its impact on education has been massive, thereby engendering such terms like e-teaching, e-learning, virtual teaching/learning, e-training, and so forth, all developed around internet application in the field of education.

The internet is defined as a network of networks of millions of computers in the world, communicating and sharing information with each other, using the Transmission Control Protocol/Internet Protocol (TCP/IP). It provides a wealth of resources for optimum achievement of the ends targeted by personality. Within seconds, a lecturer can retrieve information through the Internet to update his/her knowledge, prepare his/her lecture, give assignments to students, mark their assignments, and also work with colleagues and specialist (Scholastics, 2003).

According to Yusuf (2005) Internet can facilitate research in any discipline as they provide quicker and easier access to more extensive and current information through digital libraries that provide digitized full – text resources to learners and researchers. Others are electronics list – a directory of scholarly and professional e-conferences containing relevant topics and articles relevant to researchers, and electronics reference desks or virtual libraries.

Others include electronic journal and catalogues and image database. Other Internet resources can provide a researcher with current, in depth, first-hand information.

The computer connected to the internet may use several of the following internet services which are relevant to educational research. Electronic mail (e-mail) which permits sending relevant materials, and provide access to discussion groups, Telnet which permits a computer to log-on to another computer, and File Transfer Protocol (FTP) which allows computer to rapidly retrieve complex files intact from a remote computer, and Gopher which is a text only method of accessing internet documents. The World Wide Web (WWW) incorporates all these internet services and much more as educational researchers can retrieve documents, view images, animations and video in any color, listen to sound, speak and hear voice, thus providing multi-opportunity for use in research. Other facilities for literature review which are available on the internet are: search engines, meta-search engines, Internet subject directories, the invisible web, and online scholarly publications (AERA SIG, 2003).

Mallum (2000) posits that the research into gender conflict in educational attainment has indicated that there is no significant disequilibrium between the masculine and feminine performance. The contention over this conflict in educational, social and developmental achievement has been a continuous research topic. Yakubu and Ali (2002) opined that neither male nor female is superior to each other in terms of their knowledge and attitudes to the nation upliftment and the community. However, most African belief that young female are less useful than males and this is one of the factors that militate against women education and full participation in social, political, economic and technology activities (Ayanniyi, 1999).

In the United States, World Bank reported increasing use of the World Wide Web by women: In the winter of 2004-2005 surveys, 44% of the Web users were woman, up from 21% in September 2004. As a portion of the overall US population, 3% of adult women in the September 2004 survey stated that they logged onto the web compared to 12% of men. Research now shows that 26% of all American women use the Web, as do 35% of men (Trucano, 2005). Kitschner and Davis (2003) noted that the females have equal potential and ability as their male counterpart to undertake any course or discipline in ICT if given desired support and motivation.

In Nigeria, Ekwueme and Kalu (2003) assessed the teachers' level of computer literacy and attitudes towards ICT application in Science, Technology and Mathematics (STM) education. The study revealed that only few secondary school science teachers are computer literate and can assess the internet without assistance.Mustapha (2007) investigate the attitudes, knowledge and utilization of computer in education by college of education science lecturers and found that the college science lecturers had favorable attitudes towards computer in education but lacked knowledge about computer and do not use computer in their professional and academic work.

Some research studies have indicated that male teachers generally appeared more enthusiastic about the role of computer in education. Yusuf (1998) found that male teachers showed greater positive attitudes towards computer than female teachers.Similarly, Gambari and Fagbemi (2010) found that gender had influence on lecturers' attitudes towards the use of ICT facilities/equipment in tertiary institutions in favor of male lecturers. However, some studies on gender have indicated that females show greater degree of anxiety towards the use of computer (Clement, 1981 & Gribbin, 1987). However, Agbatogun (2006)found that both male and female teachers normally exercise fear of failure in implementing new technology. Hogarty and Kramer

(2000) found that sex and academic qualifications of teachers do not affect teachers' attitude towards the teaching and learning of computer science in schools.

Teachers' gender is of particular concern when new subject or innovations are introduced into the school system. The researcher has not come across many researches that dealt specifically with higher education teachers' internet skill acquisition in Nigeria. Therefore, this research investigates gender differences in self-efficacy and attitude towards Internet resources in Nigerian tertiary institutions, Niger State as a case study.

Research Hypotheses

The following hypotheses were formulated to guide the study and were tested at 0.05 level of significance:

(i) There is no significant difference between the attitudes of male and female lecturers towards the use of Internet for research and information services.

(ii) There is no significant difference between male and female lecturers' Internet skills acquisition for research and information services.

Research Methods

Research Type: The study is a descriptive one using survey method. It employed the use of questionnaire administered on the respondents to gather the required data.

Sample: The research samples were 220 tertiary institutions lecturers drawn from three federal government tertiary institutions in Niger State. These institutions were selected because they were better equipped and staffed than the state government owned public institutions and they have computer laboratories with internet facilities. Also, all these institutions offer computers as a course at their various institutions. The participants are of equal number (110 male and 110 female lecturers). They cut across all the departments within the institutions.

Instrument: The instrument used for this study "Gender and Internet Skills Questionnaire". It was the researcher's developed and validated questionnaire with a reliability coefficient of 0.91, 0.78 and 0.89 for each sub-scale respectively. The questionnaire consisted of two major sections (One and Two). Section one dealt with demographic data (lecturers' gender, educational qualifications, institutions, etc.) while section two contained three sub-scales. These sub-scales were: Attitudes of male and female lecturers towards the use of Internet for research and information services (10-items); Level of Internet skills possessed by male and female lecturers in tertiary institutions (10-items); Utilization of internet resources by male and female lecturers (10-items).The response to the questionnaire items was based on response pattern: Strongly Agree, Agree, Disagree; and Strongly Disagree for subscale one and three while (Highly Proficient (HP);Moderately Proficient (MP); Proficient (P);Not Proficient(NP) was used for sub-scale two.

Procedure for Data Collection:

The research subjects were 250 tertiary institutions lecturers drawn from three federal tertiary institutions in Niger State namely: Federal University of Technology, Minna, Federal Polytechnic, Bida and Federal College of Education, Kotongora, Niger State. The questionnaire was administered on behalf of the researcher by lecturers in those institutions. The administration

cut across all the departments. Out of 230 questionnaires administered only 220 were correctly returned and utilized for the research data. Inferential statistical analyses were conducted at 0.05 level of significance.

Data Analysis and Results

An item-by-item analysis of the questionnaire was carried out. The number of respondents who picked the same type of responses was counted. Scores were assigned to each point on the Likert Scale for subscale one as follows: Strongly Agree = 4; Agree = 3; Disagree = 2; and Strongly Disagree = 1. For sub-scale two, scores were assigned as follows: Highly Proficient (HP) = 4; Moderately Proficient (MP) = 3; Proficient (P) = 2; Not Proficient (NP) = 1. Then the mean response, standard deviation and t-test statistics were computed for each group as shown in the table below.

Ho_1: There is no significant difference between the attitude of male and female lecturers towards the use of Internet for research and information services.

Table 1: t-test comparison of the attitudes of male and female lecturers towards the use of internet for research and information services

Variable	No of paired samples	df	Mean $(\overline{x})$	S.D	t- value calculated	P
Males	110	219	56.24	9.52		
Females	110		55.16	9.47	1.62^{ns}	0.192

ns - Not Significant at 0.05 level

From the data shown on Table 1, the analysis on the attitudes of male and female lecturers towards the use of internet indicated that there was no significant difference between male and female lecturers' attitudes towards the use of internet for research and information services in tertiary institutions. This was as a result of the t-value of 1.62 resulting in 0.192 significance value which was higher than 0.05 alpha value. Therefore, the hypothesis which states that there is no significant difference between the attitude of male and female lecturers towards the use of Internet for research and information services is not rejected.

Ho_2: There is no significant difference between male and female lecturers' Internet skills acquisition for research and information services.

Table 2: t-test comparison of the internet skills acquired by male and female lecturers in tertiary institutions in Niger State

Variable	No. of paired samples	df	Mean $(\overline{x})$	S.D	t-value Calculated	P
Males	110		55.70	9.45		
Females	110	219	48.00	8.98	20.60^{*}	0.001

* - Significant at 0.05 level of significance

From the data shown on Table 2, the analysis on the skills acquired by male and female lecturers towards the use of internet indicated that there was significant difference between male and female lecturers' skills acquired on the use of internet for research and information services in favor of the male lecturers. This was as a result of the t-value of 20.60 resulting in 0.001 significance value which was lesser than 0.05 alpha value. Therefore, the hypothesis which states that there is no significant difference between male and female lecturers' Internet skills acquisition for research and information services is rejected.

Discussion of Results

Results in Table 1, revealed that there is no significant difference male and female lecturers' attitudes towards the use of internet for research and information services at tertiary institutions. The position of this study is supported by the findings of Hogarty and Kramer (2000) and Agbatogun (2006) which show that gender and academic qualifications of lecturers do not affecttheir attitudes towards the use of ICT facilities. However, it disagreed with the findings of Yusuf (1998) and Gambari (2010) who found that male teachers have better attitudes towards the use of computer and ICT facilities than their female counterparts.

The results in Table 2 revealed that there is significant difference in the Internet skills possessed by male and female lecturers in tertiary institutions. This result indicates that the male lecturers are more knowledgeable and skillful than the female lecturers as regards the use of Internet facilities for research and information services.The findings are in agreement with Kitchener and Davis (2003) who reported that theuse of the World Wide Web by womanhas increased but not compared with that of their male counterparts.

Conclusion

Most institutions do not have the necessary internet facilities for instruction and research neither do the lecturers possess internet skills in effective classroom interactions. Internet offer innumerable benefits in enhancing the quality and quantity of learning and teaching tertiary institutions. The evidence of low internet skills by female lecturers seems to be present at different institutions examined. Despite the prevalent nature of internet usage in virtually every aspect of human endeavor, it has not been fully utilized in the higher institutions of learning. Their uses will not only revolutionized teaching in tertiary institutions, they will engender the development of lecturers' globally, increase their scientific inquiry mind and their critical thinking abilities. There is need to sensitize and encourage female lecturers towards the use of internet because when this is done, the success of integration of computer education into schools will be guaranteed.

Recommendations

Based on the above findings the following recommendations were proffered:

1. Female lecturers should be encouraged to acquire necessary skills on the use of internet for research and information services.
2. Female lecturers should be motivated to use internet frequently in order to improve their level of research and get better knowledge and skills to improve their teaching.
3. Workshops/seminars should be organized specifically for the purpose of facilitating female literacy, awareness and skills in using internet resources.

4. Computer literacy should be one of the pre-requisites for appointing lecturers into the teaching profession.
5. Tertiary institutions should be adequately equipped with functional computer laboratories/cyber café for lecturers' use.

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