APPRAISAL OF UNIVERSITIES LECTURERS' INTERNET LEVEL OF COMPETENCY (A CASE STUDY OF FUT, MINNA, NIGERIA)

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Abstract

The study surveyed the lecturers' Internet level of competency in Nigerian Universities (A Case study of Federal University of Technology (FUT) Minna, Niger State. To elicit responses for the study, two hypotheses were formulated. One hundred lecturers, (50 males and 50 females) from FUT, Minna, Niger State participate in the study. Data were collected for the study through the administration of 10–item questionnaire. The data obtained were analysed using mean, standard deviation, t-test and One-way ANOVA in testing the hypotheses. The findings showed that male lecturers are more competent in using Internet than their female counterparts. Also, less experienced lecturers are more exposed to the use of Internet than moderately and highly experienced lecturers. It was recommended among other things, that lecturers should be encouraged to acquire Internet skills; computers and Internet connectivity should be made available to lecturers; and old lecturers should be encouraged to develop and follow the new trends of technology in order to be relevant in this computer age.

Keywords: Internet; University; Research; Lecturers; Level of Competency

Introduction

The emergence of computers and Information and communication technology is re-defining the boundaries of the classroom in many ways that have not been thought of before. The Internet makes it possible for a student to access and even download information that may not be readily available to his/her lecturer. This is a new challenge to the university teacher who must constantly strive to prove to his/her students that he/she is an authority in his field (Raymond, 2006).

According to Olaofe (2005:1) "the risk now is that teachers who are not anything better than the pupils/students they teach; some who are computer literate may even be better than their computer illiterate teachers". The challenge for university teachers is no longer in covering course contents or in adopting appropriate technology pedagogy, but it is in having access to ICT and using it to enhance teaching and learning. Internet skill should be within the capabilities of most people, regardless of age, gender, or educational experience.

The Internet is the newest and fastest growing part of the Age of Information Technology. It is a global computer network that allows millions of computers around the world to communicate through the telephone system and other communication line.

The Internet is referred to as the web and the Digital Information superhighway. It was the invention of the World Wide Web (www) by Tim Berners-Lee. The impact of the Internet is

felt everywhere in the society and it has become an everyday household term. Currently over 100 million people in 150 countries around the world are using the Internet. Far greater predictions, is that over two billion people may be connected to the Internet–Super Information Highway by the year 2010 (Isaac, 2007).

According to Umar and Aliyu (2006) lecturers and students will greatly benefit from the Internet in the following ways:

(i)   They would be able to keep in touch and pass on information to colleagues and friends using electronic mail, internet telephony, keyboard chat and through fast streaming video conferencing,

(ii)   Tap directly using Internet global networking into million of available scholarly education materials or related database cited in important peer-reviewed journals,

(iii)   Use available institution libraries and newsgroups around the world to gather information in any topics of educational interest. The information can be inform of text, pictures, or even video materials.

(iv)   Stay tuned and up to date, with education news, e-journal and any current affairs around the world with information update daily, hourly or instantly.

(v)   Locate and download educational related computer software and other products that are available cyberspace.

(vi)   Benefits from the teeming and growing number of interactive multimedia and educational tools.

(vii)   Using the Internet will enable lecturers to publish information about his work (publications) and other areas of interest.

Hogarty and Kramer (2000) and Agbatogun (2006) found that sex and academic qualifications of teachers do not affect teachers' attitude towards the teaching and learning of computer science in schools. However, both male and female teachers normally exercise fear of failure in implementing any new idea or phenomenon. Agbatogun discovered that younger teachers are more amiable to new challenges than the older teachers. He concluded that with global technological wave that is affecting every sector and every aspect of life, teachers whether male or female, experienced or inexperienced, humanities, science or vocationally oriented need to struggle zealously to be computer literate in order to face the present educational challenges.

Research on gender is always inconclusive because this comparison was not addressed by enough researchers to draw firm conclusions. Durndell and Thomson (1997), Whitley, (1997) Kadijevich (2000) and Samuel (2007) revealed that females have less computer experience and hold less favourable attitudes towards computers than their male counterparts.

This study appraised the level of Internet competency among university lecturers in Minna, Niger State. It also sought to determine how gender and experience affects the Internet level of competence in teaching and research in the university.

Research Questions
The following research questions were raised:

(i)   Will there be any difference between male and female lecturers' level of Internet competency?

(ii)   Will there be any difference between less experienced, moderately experienced and highly experienced lecturers' level of Internet competency?

Research Hypotheses

The following hypotheses were formulated from the research questions and tested at 0.05 level of significant:

(i)   There is no significant difference between male and female lecturers' level of Internet competency.

(ii)   There is no significant difference between less experienced, moderately experienced and highly experienced lecturers' level of Internet competency.

Methodology

Sample and Sampling Technique: The subjects for the study were lecturers drawn from all departments from Federal University of Technology, Minna. A total of one hundred lecturers were randomly sampled and participated in responding to the questionnaire. The participants were stratified into gender and level of experience. The gender consisted of 50 males and 50 females, while 33 lecturers whose teaching experience were less than 7 years were treated as less experience, 33 lecturers whose teaching experience were less than 16 years were treated as moderately experienced, while 34 who had more than 16 years and above were treated as highly experienced lecturers.

Research Instrument: The research is a survey type. The instrument used for this study is a 10-item questionnaire designed by the researcher. It consists of two sections; section A requires general information including name of the department, Gender, and Years of Experience. Section B was specifically designed to appraise lecturers' competency level in the use of Internet. Response to items in this section serves as the measure of Internet competency levels. A Four-point Likert Scale was used. Response rated as 1 referred to Strongly Disagree (1), while 4 referred to Strongly Agree (SA). In other to validate the instrument, the questionnaire was given to a computer educationist and two educational technologists to critically look at the face and content validity. Reliability test was carried on the instrument and Alpha reliability score of instrument was 0.88 meaning that it is suitable for the research.

Data Collection Procedure: The questionnaire was distributed and collected after completion. Some questionnaires were not retrieved the same day and this led to questionnaire mortality. After responses have been collated, they were sorted into different strata: Male and female; highly experienced, moderately experienced and less experienced lecturers. 15-questionnaires mortality was discovered out of 115 questionnaires prepared for the research.

Data Analysis Procedure: Two statistical techniques were employed to analyze the response obtained from the respondents. T-test statistics and One-way Analysis of Variance (ANOVA) with Post-hoc test analysis using Scheffe's test were used to assess differences between groups of lecturers. Analyses were conducted at 0.05 level of significance. T-test was used to test the research hypothesis 1, while one-way ANOVA was used for testing hypothesis 2. Where differences had been established in hypothesis 2, the directions of the differences was established using Scheffe's post-hoc test.

Data Analysis and Results

Hypothesis 1: There is no significant difference between male and female lecturers' level of Internet competency in Nigerian Universities.

Table 1: t-test Comparison of Male and Female Lecturers' Internet Level of Competency in Nigerian Universities

Variable	No in paired sample	df	Mean (X)	SD	t-value Calculated	t-value Critical	Significance Level
Male Lecturers	50		2.99	0.600			
		98			10.633*	1.660	0.001
Females Lecturers	50		1.81	0.511			

*significant at 0.05 level of significance

Table 1 shows the t-test comparison of the male and female lecturers' Internet level of competence among Nigerian universities. From the table, the calculated t-value (10.633) is higher than the critical t-value (1.660). This indicates that there is statistical significant difference between male and female universities lecturers' level of Internet competency at 0.05 level of significance ($t_{cri} = 1.660$, df = 98, p > 0.05). Thus the hypothesis was rejected.

Table 2A: ANOVA Comparison of Less Experienced, Moderately Experienced and Highly Experienced Universities Lecturers' Internet Competency Level

Source of variable	Sum of Squares	df	Mean Squares	F – Value Calculated	F – Value Critical	Significance
Between Groups	36.560	2	18.280			
Within Groups	28.962	97	0.299	61.225*	3.09	0.0001
Total	65522	99				

*significant at P<0.05 level

The result in table 2A reveals that there is significant difference between less experienced, moderately experienced and highly experienced lecturers' Internet level of competency. The F-calculated value (61.225) is higher than F-critical value (3.09) thus the hypothesis was rejected.

Table 2B: Scheffe's Post Hoc Tests on the Year of Experience among Universities Lecturers

Variable	Variable (j)	Mean difference (i-j)	Significance Level
Highly Experienced	Moderately Experienced	0.941*	0.0001
	Less Experienced	1.445*	0.0001
Moderately Experienced	Highly Experienced	-0.941*	0.0001
	Less Experienced	0.513*	0.001
Less Experienced	Highly Experienced	-1.455*	0.0001
	Moderately Experienced	-.513*	0.001

* - Significant at 0.05 level of significance

However, Scheffe's post hoc test shows that, the less experienced lecturers have highest mean scores (3.19), followed by moderately experienced (2.25) and highly experienced (1.74) lecturers respectively. This indicates that the less experienced lecturers' Internet level of competency is higher than moderately and highly experienced lecturers.

Discussion of Results
The position of this study is supported by the findings of Durndell and Thomson (1997), Whitley, (1997) Kadijevich (2000) and Samuel (2007) that females have less computer experience and hold less favourable attitudes towards computers application than their male counterparts. It also supports the findings of Hogarty and Kramer (2000) and Agbatogun (2006) which shows that sex and academic qualifications of lecturers do not affects lecturers' attitude towards the use of ICT facilities and equipment. Similarly, it is surprising that the younger lecturers are more amiable to new challenges than the old ones. Science lecturers are more interested in the use of ICT facilities than their non-science counterparts.

Conclusions
In spite of the importance of Internet to teaching and research in the university environment, it's obvious that university lecturers' levels of Internet competency are not encouraging. Gender has effect on lecturers' Internet level of competency in Nigerian universities. Male lecturers are more competent in the use of Internet than their female counterparts. The less experience lecturers are more dispose towards the use of Internet than their senior colleagues.

Recommendations
1. The lecturers should be encouraged to pursue Internet skills.
2. Workshops/seminar should be organised specifically for the purpose of facilitating the use of Internet in teaching and research in the universities.
3. Universities should be well equipped with adequately functional and well-furnished computer laboratory/cyber café for lecturers and students use.

References

Agbatogun, O. A. (2006). Attitude of teachers towards the integration of computer education into secondary school curriculum. *Journal of Research in Curriculum and Teaching,* 1, (1), 20.

Durdell, A. & Thomson, K. (1997). Gender and computing: a decade of change? *Computers and Education, 28, 1-9*

Hogarty, K. Y. & Kromrey, J. D. (2003). *The nature of technology use in classrooms: the development and validation of an instrument too measure teachers' perceptions*. Retrieved on 2/11/2006 from http://www.coedu.usf.edu/ITResearch/techsur.htm.

Issac, O. A. (2007). Internet awareness, accessibility and use by undergraduate and postgraduate students in Nigeria Universities: A case study of Lautech, Ogbomosho, Nigeria. *An International Journal of Information and Communication Technology, 4(2), 147-162.*

Kadijevich, D. (2000). Gender differences in computer attitude among ninth grade students'. *Journal of Educational Computer Research, 22, 145-154.*

Olaofe, I. A. (2005). *Nigerian educational emancipation: Roadmap from crisis to resurgence.* Faculty of Education seminar series No. 1 Ahmadu Bello University, Zaria.

Raymond, B.B. (2006). Internet cafes: Academic cyber-freedom and the challenge of teaching in Nigerian universities. *Journal of Educational Research and Development, 1(1)71-75.*

Samuel, A. A. (2007). Gender and age differences in computer use and ttitudes among students of university of Maiduguri, Nigeria. *An International Journal of Information and Communication Technology, 4(1), 60-67.*

Umar, R. T. & Aliyu, M. M. (2006). The impact of ICT on business education in a new era. *Journal of educational research and development, 1(1) 144-147.*

Whitley, B. E. (1997). Gender differences in computer-related attitudes and behaviour; a meta-analysis. *Computers in Human Behaviuor, 13, 1-22.*