Acquisition of Computer Literacy Skills in Teaching and **Research By Lecturers In Colleges Of Education In South-**East Nigeria.

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Abstract

This study was carried out to ascertain the level of acquisition of computer literacy skills by lecturers in teaching and research in Colleges of Education in South East Nigeria. Three research questions guided the study, while one null hypotheses was tested at 0.05 level of significance. Descriptive survey research design was adopted. The population of the study comprised of 2,102 lecturers in the seven colleges of education in the area. The sampling size was 630 drawn using multi-stage sampling procedure. The instrument for data collection was researcher -structured questionnaire titled Acquisition of Computer Literacy skills Questionnaire (ACLSQ) which was validated by three experts. The reliability of the (ACLSQ) was established using KR-21 formular to test for internal consistency of the items which yielded reliability indices of 0.78. the questionnaire copies were administered to the lecturers with the help of three research assistants. Data collected were analyzed using mean, standard deviation and independent t-test. The findings of the study revealed among others that lecturers in colleges of education acquired microsoft word skills and internet operation skills but did not acquire Microsoft power point and microsoft Excel. Further more, table 3 indicate that female lecturers outperformed male lecturers in acquisition of computer literacy skills. The results of the acquisition of computer literacy skills by male and female colleges of education lecturers vary significantly as ttest measures. Based on the findings of the study, it was recommended among others that male and female colleges of education lecturers should constantly update their knowledge in computer skills for teaching and research through constant practices and attending workshops, the conferences and seminars their usage to enhance their skills and to use them regularly for the teaching and research.

Keywords: Acquisition, computer literacy skills, colleges of education lecturers

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Introduction I.

In a developing country like Nigeria, computers are slowly but steadily, creeping into the fabrics of business, industries, and institutions of learning. As a result of this, it has become necessary that the future should be prepared for it. Computer technology has been found to be the fastest among other electronic equipment, hence the introduction of computer education in the school system in Nigeria. Computer education makes teaching and learning interesting. Computer transforms our mode of life. It is therefore very necessary that computer education be given the attention it deserves, more so, now that computer education is part of the school curriculum. Ani (2006) observed that one of the most dramatic advances in communication potentials is found in the field of computer. Ani asserted that computer presents materials and problem situations to students, guides their thinking, respond to their questions and manage their performance. Mbam 2012 defined computer as a tool for performing task fast, conveniently, effectively and more accurately. One can only use computer and computer gadgets when he or she is computer literate. Katane and Slevi (2009), literacy is a set of knowledge and experience necessary for future which manifests in activities.

Maurer, Montag-Torardiand and Whitaker (2011) defined computer literacy skill as knowledge and ability to handle computer system, which includes being able to identify computer software and hardware, also being literate to handle Softwares in computer system. According to Adevinka and Mutala (2008), computer literacy skills is knowing some basics fundamental of computer, for example, use of Microsoft power point,

internet operation, word processing. Microsoft Excel, for preparation of lesson notes, typing of examination question papers, preparing students results, projecting of lessons sending and receiving mails, uploading and downloading of document among others. Adagundo and Idowu (2013) defined computer literacy skills as the knowledge and ability to utilize computers and related technology efficiently, with a range of skills covering the levels of operation, from elementary use to computer programming and advanced problem solving. Acquisition is the act or process of gaining skill and knowledge. (https://www.merriam-ebster.com/dictionary/acquisition).

Researchers over the years had generally supported that computer skills acquisition in education have many benefits for teachers (Ndawi, Thomas and Nyaruwata, 2013). These include, sending and receiving of mails, setting of examination questions, increasing the teachers efficiency in preparation and content delivery.

Lecturers in tertiary institutions also use their knowledge of computer for teaching and research. Teaching and research is a process of transmitting knowledge and discovering of knowledge, Therefore Colleges of Education lecturers have to balance the expectations of good teaching as well as creation of knowledge through active research. This is because, Lecturers' research is intentional, systematic inquiry with the goals of gaining insights into *teaching and* learning thereby becoming more reflective practitioners, effecting changes in the classroom or school. (https://www.naeyc.org/resources/pubs/vop/about-teacher-research.)

College of Education is the unit of tertiary education in Nigeria saddled with the responsibility of training teachers to obtain non-degree but qualitative professional certificate in education. However, it was observed that many teachers were not certificated and trained in computer skill. This observation was followed by a suggestion for greater expansion of intermediate education for intermediate teachers, which was targeted at upgrading the existing teaching force (Isiyaku, 2007). The philosophy underpinning teacher education at the Colleges of Education as pointed out by Isiyaku includes the desire of the Nigerian Government to ensure uniformity of content and educational standard. It also aimed at producing teachers with highly computer literate and professionals, integrity, teachers who are dedicated, and with appropriate skills and intellectual depth that would facilitate easy achievement of the national goal. Lecturers can serve as training personnel to students and other lecturers in computer skills acquisition and usage, it is this goal that motivated the present research on the Colleges of Education lecturers' level of acquisition of computer literacy skills for teaching and research. The level of lecturers acquisition os such skills however may depend on their gender.

Gender is the economic, social, political and cultural attributes and opportunities associated with being male or female (Onyegegbu, 2011). For Onyegegbu, what is consistent across culture is that there is distinct difference between women and men sphere of functioning. This may translate into male and females computer literacy skills acquired and used in teaching and research. Robin (2013) opined that most lecturers who are females, have limited computing skills and therefore act as poor role models. Secondly the author noted that the gender gap with respect to computer access and use has narrowed rapidly over the past five (5) years. Thirdly Robin reported that male lecturers are more computer literate than female lecturers, although each sex uses computers for different reasons. Male lecturers use computer for educational programs, and the Internet more, whereas female lecturers use computers for e-mail and typing of results. Microsoft word is an application use in production of documents, Lecturers in colleges of education are expected to type, print ,open, close, format, correct spellings and grammar, retrieved a saved document and save a document (Wikipedia 2014). Sawyer and Williams 2013 defined internet as worldwide network that connects hundreds of thousands of smaller networks. These networks links educational, commercial, and individuals . internet and computer play a vital role in modern living such as teaching, information searching communication and business activities (Benjadole, 2000)

Microsoft Power Point is oral presentation supported by sets of slides, design and sounds for educational or informal purposes (Segundo & Salazar,2011). It is a program developed by Microsoft. It is a complete presentation program that allows teachers to produce professional-looking presentations in classroom. Ozaslan and Maden (2013), concluded in their study that students learned better if the course material was presented through some visual tools. They also reported that teachers believed that Microsoft power point presentations made the content more appealing; therefore help to take students attention. Microsft Excel as a spreadsheet package, computerized traditional layout of which if formulated with columns and rows, electronic spread sheet potentials in aiding routine calculation (Boon, 2011). Lecturers in colleges of education have been shown to play important role in computer literacy

Statement of the problem

Most of the lecturers in Colleges of Education in south-east Nigeria, have phobia in operation of computer system; they prefer to use the old method of teaching which is teacher -centred (traditional) method of teaching. They also find it difficult to cope with the technology age probably because they have acclimatized with the copying of notes on the board or dictating the notes for the students. Being a computer literate is the basic necessity for lecturers to properly deliver lectures in different field of specialization, therefore computer literacy skill is a must for all lecturers in Colleges of Education. Despite various initiatives and programmes by the government to incorporate computer literacy skill in education, not much research had been done to evaluate

if computer literacy skill acquired and used by lecturers is influenced by gender. This study therefore filled the gap of lack of current information pertaining to the computer literacy skills acquired and used in teaching and research by male and female lecturers in colleges of education in south east Nigeria.

Purpose of the Study

The purpose of the study was to investigate acquisition of computer literacy skills for teaching and research by Colleges of Education lecturers in south east Nigeria.

Specifically, the study sought to investigate;

1. Acquisition of Computer literacy skills (Microsoft word, Internet operation, Power point and Microsoft Excel) for teaching and research by colleges of Education lecturers in south-east, Nigeria.

2. Acquisition of Computer literacy skills (Microsoft word, Internet operation, Power point and Microsoft Excel) by male and female lecturers for teaching and research by colleges of Education lecturers in south-east, Nigeria.

Research Questions

1. What are the mean scores of computer literacy skills (Microsoft word, Internet operation, Power point and Excel) acquired by lecturers for teaching and research in colleges of education in southeast Nigeria?

2. What are the mean scores of computer literacy skills (Microsoft word, Internet operation, Power point and Excel) acquired by male and female lecturers for teaching and research in colleges of education in southeast Nigeria?

Hypotheses

1. The mean acquisition scores of male and female lecturers computer literacy skills (Microsoft word, Internet operation, Power point and Excel) for teaching and research do not differ significantly

Methodology

The descriptive survey research design was adopted for this study. According to Nworgu (2015) descriptive survey research are those studies which aim at collecting data and describing in a systematic manner the characteristics features or facts about a given population. Survey research design was used because it is determinant factor in the choice of the population and sample studied.

Population and Sample

The population of the study comprised 2102 lecturers in the seven Colleges of Education in South East Nigeria. The sample for the study consists of 630 (Male and Female) lecturers from state and federal colleges of education. The Sampling was done using two stage sampling procedure. First, all the schools/faculties were purposively chosen in each of the seven colleges of Education, this is to ensure that the study covers both male and female lecturers from different schools/faculties. In each of the schools/faculty, accidental sampling was used to select male and female lecturers met on ground on the day of data collection. In this process a total of 630 was drawn for the study.

Instrument for data collection

Structured questionnaire was developed by the researcher based of the review of related literature and research questions guiding the study. The questionnaire was titled Acquisition of Computer literacy skills questionnaire (ACLSQ) The questionnaire was two parts, I and II. Part 1 contains the background information of the respondents such as name of school, gender of lecturers and area of specialization. Part 11 of the questionnaire is in four sections A, B, C and D which contains 20 items on computer literacy skills acquired by lecturers and its response options were true or false.

Method of Data Colletion

The researchers with the help of three research assistants distributed 671 copies of questionnaire out of which 630 copies were collected and completely filled given 94% return rate. The questionnaire has two response option "True or False" True response has 2 points, while false response has 1 point. For positively worded items and vice for negatively worded or reversed items.

Method of Data Analysis

The data obtained was first collated and organized. Thereafter, the mean and standard deviation were used to answer the research questions. Independent sample t-test was used to test the null hypothesis at 0.05 alpha level. Statistical Package for Social Sciences (SPSS) version 21 was used for the analysis.

In taking decision, mean scores of 1.5 and above was regarded as acquired and not acquired if below 1.5. the null hypothesis was rejected if probability value (P-Value) is less than or equal to 0.05 (P \leq 0.05), if otherwise (P \geq 0.05) the hypothesis was accepted.

 Table 1: Mean and standard deviation scores on computer literacy skills acquired by lecturers in Colleges of Education in South-east Nigeria.

N= 630

S/N	ITEMS	X	SD	REMARK		
	MICROSOFT WORD	1 57	0.49			
1	I know now to prepare students records using microsoft word I can give students assignments in Microsoft word	1 59	0.49	Acquired		
3	Microsoft word can only be for assessing documents in CD and	1.58	0.49	Acquired		
5	Flash drive	1.50	0.45	Acquired		
4	I know how to use Microsoft word to type examination question	1.58	0.49	Acquired		
5	I can prepare a lesson note using Microsoft word.	1.56	0.49	Acquired		
	Subtotal =	1.52	0.49	Acquired		
	INTERNET					
6	l sent information to the students through e-mail using Internet	1.58	0.49	Acquired		
7	I give students assignment using the internet	1.50	0.50	Acquired		
8	I know how to use Google class room with my students	1.86	0.34	Acquired		
9	Zoom are used when computer is offline to interact with students	1.51	0.50	Acquired		
10	Students results can be uploaded using internet	1.46	0.49	Not Acquired		
	Sub total = MICROSOFT POWER POINT		0.49	Acquired		
	Sub total = MICROSOFT POWER POINT 1 I present animation using power point while teaching					
11	I present animation using power point while teaching	1.46	0.49	Not Acquired		
12	I know how to print slides using power point	1.51	0.50	Acquired		
13	I can present a note of lesson to students using power noint	1.50	0.50	Acquired		
14	Slides can be displayed without Microsoft power point software.	1.53	0.49	Acquired		
15	One can not create more than two slides in power point	1.48	0.50	Not Acquired		
	Sub total =	1.49	0.50	Acquired		
	N = 630					
	ITEMS					
	MICROSOFT EXCEL	X	SD	REMARK		
16	Excel is use for computing students grade	1.48	0.49	Acquired		
17	I can sort figures in ascending order using excel		0.50	Not Acquired		
18	I can create a graph in excel worksheet		0.50	Not Acquired		
19	I can calculate numerical data using excel		0.50	Not Acquired		
20	One can prepare lecture note using excel	1.52	0.49	Acquired		
	Sub total	1.49	0.50	Acquired		
	Grand Total	1.50	0.49			

S/N	COMPUTER LITERACY SKILLS	Ν	V	SD	REMARK
1	Microsoft word	630	1 2	0.49	Acquired
2	Internet operation	630	1.53	0.46	Acquired
3	Microsoft point	630	1.49	0.50	Acquired
4	Microsoft excel	630	1.49	0.50	Not Acquired
	TOTAL		1.50	0.49	

Table 2: Summary of the Mean and Standard Deviation scores of the computer literacy skills acquired by lecturers for teaching and research in colleges of education in South-east Nigeria.

Table 1 and summary results in Table 2, shows the Mean and Standard deviation scores of lecturers acquisition of computer literacy skills. Lecturers acquired two computer literacy skills out of four skills with mean scores of 1.49 in each case. From Table 1 also, lecturers do not acquired computer literacy skills in Internet operation, they accepted that they were unable to upload their students results using internet.

Table 3: Mean and standard deviation scores on computer literacy skills acquired by male and female lecturers for teaching and research in colleges of education in south east.

Male = 305; Female = 325

S/N	ITEMS		Gender	X	SD	REMARK		
	MIROSOFT WORD							
1	I know how to prepare students record	ds using	Male	1.56	0.49	Acquired		
	Microsoft word		Female	1.57	0.50	Acquired		
2	I can give students assignments in Mici	rosoft word	Male	1.61	0.48	Acquired		
			Female	1.56	0.49	Acquired		
3	Microsoft word can only be for assessi	ng documents	Male	1.56	0.49	Acquired		
	in CD and Flash drive		Female	1.60	0.49	Acquired		
4	I know how to use Microsoft word to t	vpe	Male	1.59	0.49	Acquired		
	examination question		Female	1.54	0.49	Acquired		
5	I can prepare a lesson note using Micro	osoft word.	Male	1.57	0.49	Acquired		
			Female	1.55	0.49	Acquired		
	Sub total	Male =	Malo	1 56	0.40	Acquired		
		Female =	Female	1.50	0.49	Acquired		
	INTERNET OPERATION		- Cindic	2.00		noquica		
6	I sent information to the students thro	ough e-mail	Male	1.60	0.48	Acquired		
	using Internet		Female	1.56	0.49	Acquired		
7	I give students assignment using the		Male	1.46	0.49	Not Acquired		
	internet		Female	1.53	0.49	Acquired		
8	I know how to use Google class room v	vith my	Male	1.92	0.26	Acquired		
	students		Female	1.81	0.39	Acquired		
9	Zoom are used when computer is offlir	ne to interact	Male	1.50	0.50	Acquired		
	with students		Female	1.52	0.50	Acquired		
10.	Students results can be uploaded using	internet	Male	1.53	0.49	Acquired		
		-	Female	1.50	0.59	Acquired		
	Sub total Ma	le	Female	1.58	0.49	Acquired		
			Male	1.56	0.49	Acquired		

	ITEMS MICROSOFT POWER POINT	GENDER	x	SD	REMARK
11.	l present animation using power point while While teaching	Male Female	1.42 1.50	0.49 0.50	Not Acquired Acquired
12.	I know how to print slides using power point	Male Female	1.49 1.52	0.50 0.50	Not Acquired Acquired
13.	I can present a note of lesson to students using power point	Male Female	1.48 1.52	0.50 0.50	Not Acquired Acquired
14.	I can connect projector to a computer for teaching and research purposes	Male Female	1.50 1.55	0.50 0.49	Acquired Acquired
15.	I know how to close a slide in power point.	Male Female	1.47 1.49	0.50 0.50	Not Acquired Not Acquired
	subtotal=	Male Female	1.53 1.47	0.49 0.49	Acquired Acquired
	MICROSOFT EXCEL				
16	Excel is use for computing students grade	Male Female	1.46 1.50	0.49 0.50	Not Acquired Acquired
17	I can sort figures in ascending order using excel	Male Female	1.44 1.50	0.49 0.50	Not Acquired Acquired
18	I can create a graph in excel worksheet	Male Female	1.45 1.53	0.49 0.50	Not Acquired Acquired
19	I can calculate numerical data using excel	Male Female	1.47 1.52	0.50 0.50	Not Acquired Acquired
20.	One can prepare lecture note using excel	Male Female	1.49 1.54	0.50 0.49	Not Acquired Acquired
	Şu	b total Male = Female =	1.46 1.52	0.49 0.50	Acquired Acquired
	Grand	I Total Male = female =	1.52 1.54	0.47 0.50	

Table 4: Summary of the Mean and Standard Deviation scores of the computer literacy skills acquired by male and female lecturers for teaching and research.

S/N	COMPUTER	LITERACY	MALE		REMARK	FEMALE		REMARK
	SKILLS		X	SD		X	SD	
1	Microsoft word		1.57	0.48	Acquired	1.56	0.49	Acquired
2	Internet operation		1.60	0.44	Acquired	1.58	0.49	Acquired
3	Microsoft power point		1.47	0.49	Not Acquired	1.51	0.50	Acquired
4	Microsoft excel		1.46	0.49	Not Acquired	1.52	0.50	Acquired
	TOTAL		1.52	0.47		1.54	0.50	

As shown in Table 3, female lecturers acquired all the four computer literacy skills with mean scores ranges from 1.56, .58, 1.51 and 1.52 compared to the male lecturers, the male lecturers acquired microsoft word skills, Internet skills and Microsoft Excel skills but do not acquire Microsoft power point skills with mean score of 1.47. From indication, female lecturers acquire computer skills than the male lecturers in teaching and research.

Computer literacy skills	Source of variation	Ν	Х	SD	df	Cal.t	P. value	P ≥ 0.05
MSword	Male	305	7.92	1.14				
	Female	325	7.84.	0.89	628	0.937	0.349	Not Sig
Internet Operation	Male	305	8.03	1.12				
	Female	325	7.95	1.13	628	0.94	0.343	Not Sig
Power Point	Male	305	7.39	1.96				
	Female	325	7.59	1.73	628	1.384	0.167	Not Sig
Excel	Male	305	7.34	1.92				
	Female	325	7.62	1.12	628	1.91	0.056	Not Sig

 Table 5:
 t-Test of significant difference between the mean scores of male and female lecturers on computer literacy skills acquired for teaching and research in South-east Nigeria.

Table 1 reveals that at 0.05 level of significance and 628df the calculated t is 0.95 on MS Word with the calculated p.value 0.349, t0.95 for internet with Pvalue 0.343, t1.38 for Power point with Pvalue 0.167 and t1.91 for MS Excel with Pvaue 0.056 which are greater than the critical p.value 0.05, the first null hypothesis is therefore accepted. Then, there is no significant difference in the mean scores of male and female college of education lecturers on the computer literacy skills (Microsoft word, Internet operation, Power-point and Excel) acquisition for teaching and research.

II. Discussion of findings

Computer literacy skills acquired

As shown in Table 1, lecturers in colleges of education acquire Microsoft word skills and Microsoft excel skills with mean scores of 1.57 and 1.53, but had least mean score on Microsoft power point and microsoft excel. The results in table 2 shows that lecturers in colleges of education acquired computer literacy skills. The findings is not in agreement with that of Ezenwafor (2011), who reported that 75% of the lecturers in tertiary institutions perform low in using Microsoft word application, internet operation, microsoft excel and powerpoint in teaching and learning. Also according to Terry in Nwafor (2015) opined that Computer Literacy skills must be embedded in lecturers practice since lecturers literacy skill is connected to student literacy skill and students literacy skill can be an indicator of lecturers literacy skill.

In acquisition of computer literacy skills of male and female lecturers, female lecturers acquired three skills out of four skills while male lecturers acquired two skills out of four skills, with mean score of 1.52 for male and 1.55 for female. The outperformance of female lecturers as identified in this study can be attributed to the fact that female lecturers always aspire to work with their personal computers and use the internet, they are no longer finds comfort in the kitchen. There is no statistically significant difference between the male acquisition of computer literacy skills compare to female acquisition of computer literacy skills. This is because the p.value 0.34, 0.34, 0.16 and 0.056 is greater than the level of significance (0.05). based on this, the null hypotheses was not rejected. This finding is not in agreement with that of Tella and Mutula (2008) report that there were differences in the male and female number of hours spent using computer per a week, with male lecturers spending more hours than the female lecturers.

The findings of the study have revealed that low acquisition and usage in computer literacy skills could serve as a major setback to lecturers promotions in their various institutions. The findings has shown that there is need to look into the curriculum of tertiary institutions in Nigeria as it concerns computer literacy skills to see if there are flaws that are affecting lecturers level of acquisition of computer literacy skills.

Findings of the study have also provided empirical evidence of the computer literacy skills acquired and used in teaching and research by colleges of education lecturers in south-east Nigeria. Thus, calling for serious check into the instructional activities and other factors that might be responsible for the computer literacy skills acquired and used in teaching and research by colleges of education lecturers in south-east Nigeria.

III. Conclusion

Based on the discussion of the result of the study, the following conclusions were made;

1. Inadequate training and inexperience by the lecturers affect their acquisition and utilization of computer skills. To be effective in teaching and research, every lecturer in colleges of education must have deep and extensive knowledge of computer skills.

2. The laboratory facilities in most schools are not adequate in terms of quality for teaching inadequate supply and use of computer in schools contributes towards the poor performance of lecturers in computer skills acquisition and utilization.

3. The school management fall short of inadequate instructional materials for teaching in most schools because they are expensive, so they avoid teaching the topics that require the use of such instructional materials.

IV. Recommendations

Based on the findings of this study, it is recommended as follows:

1. lecturers in colleges of educations should be exposed to intensive training by college management in the use of computer skills to ensure that they acquire enough skills for their classroom practices and research.

2. The Government should place equal opportunities to colleges of education lecturers to improve on their pedagogical skills on the use of computer skills in lesson deliveries.

3. Ministry of Education and college management board should organize Seminars, workshops and conferences on the use of current computer applications to improve knowledge economy for all colleges of education lecturers for teaching and research.

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