

# A STUDY OF COMPUTER LITERACY AMONG TRAINEE TEACHERS IN A NIGERIAN UNIVERSITY OF EDUCATION

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## **Abstract**

*This study is aimed at finding out the level of computer literacy amongst trainee teachers in a Nigerian University of Education. The study utilized the survey design; one research question and three hypotheses guided the study. Stratified random sampling method was used to draw a sample of two hundred and forty (240) students (trainee teachers) from four faculties in the institution. The survey utilized self-report questionnaires-Computer Literacy questionnaire developed by the researchers and validated by ICT Education experts at the university's ICT Centre. The major findings of the study are that the level of computer literacy amongst trainee teachers in Rivers State University of Education is generally low, especially among fresh students. The male trainee teachers are more adept at skills and literacy in ICT than their female counterparts. The level of computer literacy and skills amongst trainee teachers was not dependent on their course of study. Recommendations given include provision of computers at all levels of education so as to ensure that all students have access to computers, Government and stakeholders in education should partner together with NGOs to not only to introduce the use of computers in schools but also provide the manpower required to impart skills on computer usage, provide access to the internet and encourage the use of ICT.*

**Keywords:** Information and Communication Technology, Computer literacy, Trainee teacher, University of Education, Nigeria.

## **Introduction**

Virtual technology has created changes in almost all spheres of life; there are new patterns of work. Electronic commerce has made great changes in the way business is conducted through the use of electronic messages such as emails which has made it possible for information to quickly move from one part of the world to another in spite of the great distances between countries and nations. Exchange of information and knowledge through the information communication technology (ICT) is a feature of modern societies. Information communication technology provides the tools for the creation, collection, storage and use of knowledge as well as for communication and collaboration (Kozma, 2003). Information communication technology is a generic term referring to technologies which are being used for collecting, storing, editing and passing on information in various forms; it is an umbrella term that covers all technical means for processing and communicating information.

Teachers are important in the society. The roles they play in the education process are central to basic education generally, and particularly in Third World countries. A daunting challenge facing the education system is lack of competent teachers who are literate/proficient in the use of information technology. Information Communication Technology (ICT) proficiency is the ability to use digital technology communication tools and networks to define an information need, access, manage, integrate and evaluate information. Information literacy is the ability to access, evaluate, organise and use information from a variety of sources (Humes, 2003).

Teachers are agents of change, and if they become ICT literate, they would bring about a lot of positive attitude towards the use of computer and information technologies. In a study done by Asan (2003) in Turkey, results showed that many teachers were not computer users. According to the study, 10 percent of the sample was found to be computer literate while a swelling 90 percent were not literate in the use of computers. Many teachers lacked a functional computer literacy foundation upon which to build new technology and skills. Furthermore, the study revealed the gender, teaching experience and school had a significant relationship with familiarity to computer technology in the country of study. More specifically, more male teachers than females were found to be familiar with some types of computer technologies. This is more so because, in a study carried out by Hepworth (1999), students in some developing countries had been found to have limited skills in the area of information literacy and skills.

In yet another study in relation to gender differences in the use of ICT, Reabdarkolaei and Amuei (2008) found no significant difference in previous experience with ICT between males and females. However, the investigators established that males, on the average, worked the computers for significantly more hours per week than females. In addition to that, they indicated that gender remained a significant predictor of some trainee teachers' scores related to their technical ICT capabilities. This finding is collaborated by Markauskaite (2006) who found in her study that males on the average worked with computers significantly more hours per week than females, showing that males had higher scores in computer literacy. Boys were more interested in ICT than girls, were heavier users of computers, had more positive attitudes about computers (Volman and Eck, 2001)

Markauskaite, Reimann, Reid and Goodwin (2006) have observed that students start pre-service training having very different levels of ICT literacy. Even though a number of students may not have used the computers as much as others, entry into school exposes them to the different uses, and thus they get motivated to acquire skills in the use of these technologies.

The above assertion is supported by Usluel (2007) whose study found student teachers' level and duration of ICT usage were determining factors for information literacy self-efficacy. The study showed significant differences in the use of ICT among grades (years of study) of the students, hence revealing that training during university education has an important role in increasing information literacy self-efficacy.

Despite the seeming coming of age with the internet and other technology, many students including trainee teachers seem to lack the information and communication technology literacy skills such as locating, evaluating, and the use of the overabundance of information available today. This study therefore explores the proficiency/literacy of trainee teachers bearing in mind the integral roles teachers play in the education process.

### **Objectives of the Study**

This paper was aimed at investigating Computer Literacy among trainee teachers in a University in Nigeria. Specifically, this study was designed to examine:

- a. Whether students' year of study had any influence on their computer literacy
- b. Whether students' faculty of study had any influence on their computer literacy
- c. Whether gender of students had any influence on their computer literacy

### **Research Question**

What is the general level of computer literacy among trainee teachers?

### **Hypotheses**

The following research hypotheses have been formulated to guide the study:

1. There is no significant influence of students' year of study on their computer literacy
2. There is no significant influence of students' Faculty of study on their computer literacy
3. There is no significant influence of gender of students on their on their computer literacy.

### **Methodology**

The sample was drawn from different faculties in the Rivers State University of Education, Port Harcourt, Nigeria. Two hundred and forty students (trainee teachers) were randomly selected and given self-report questionnaires

(Information and Communication Technology Literacy questionnaire), which contained items that measure computer literacy. The instrument was validated by ICT Education experts at the university’s ICT Centre. A total of two hundred (200) questionnaires were returned properly filled, making a return rate of 83%. Data collected was collated and analyzed using chi-square statistics and percentages on the SSPS statistical package.

**Results**

Research Question: What is the general level of computer literacy amongst trainee teachers in Rivers State University of Education?

Table 1: Showing the level of computer literacy among trainee teachers in Rivers State University of Education

Level of computer literacy	Number of students	Percentage (%)
Computer literate	64	32
Not computer literate	136	68
Total	200	100

Table 1 shows that 64 students representing 32% of the respondents reported that they were computer literate while 136 (68%) reported that they were not conversant with the use of computers.

Hypothesis 1: There is no significant influence of students’ year of study on their computer literacy

Table 2: Chi square analysis of students’ year of study and their level of computer literacy

Level of computer literacy	Year 1	Year 2	Year 3	Year 4	Total	Calculated $\chi^2$	Critical $\chi^2$
Computer literate	10 (11.5)	17 (11.5)	17 (18.6)	20 (22.4)	64	2.7	7.815 Df=3
Not computer literate	26 (24.5)	19 (24.5)	38 (39.4)	53 (47.6)	136		
Total	36	36	58	70	200		

*Decision: since the calculated  $\chi^2$  value is less than the critical value, the null hypothesis is retained.*

Hypothesis 2: There is no significant influence of students’ course of study on their computer literacy

Table 3: Chi square analysis of year of study of students and their skill and literacy in computer usage

Level of computer	Year 1	Year 2	Year 3	Year 4	Total	Calculated $\chi^2$	Critical $\chi^2$
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literacy							
Computer literate	28 (28.6)	8 (12.8)	22 (19.8)	20 (17.9)	64	1.89	7.815 Df=3
Not computer literate	14 (13.4)	32 (27.2)	40 (42.2)	36 (38.1)	136		
Total	42	40	62	56	200		

Decision: since the calculated  $\chi^2$  value is less than the critical value, the null hypothesis is retained.

Hypothesis 3: There is no significant influence of gender of students on their computer literacy.

Table 4: Chi square analysis of gender of students and their skill and literacy in computer usage

Level of computer literacy	Male	Female	Total	Calculated $\chi^2$	Critical $\chi^2$
Computer literate	44 (40)	20 (24)	64	0.87	3.84 Df=1
Not computer literate	81 (85)	55 (51)	136		
Total	125	75	200		

Decision: since the calculated  $\chi^2$  value is less than the critical value, the null hypothesis is retained.

## Discussion

The only research question sought to find out the level of computer literacy amongst trainee teachers in Rivers State University of Education. The results revealed that majority of the students (68%) are not conversant with Information Communication Technology which includes the use of computers. This finding agrees with the study carried out by Hepworth (1999) that discovered that students in some countries had limited skills in the area of information literacy and skills.

Hypothesis 1 examined whether students' year of study significantly influenced their skill and literacy in computer usage, chi-square analysis of data showed that the year of study did not significantly influence students' skill and literacy in computer usage. This disagrees with the study undertaken by Usliel (2007) who found that there are significant differences in the use of computer among the grades (years of study) of students.

Hypothesis 2 examined whether students' course of study significantly influenced their skill and literacy in computer usage. The chi-square analysis of data showed that the students' Faculty of study did not significantly influence students' skill and literacy in computer usage.

Hypothesis 3 examined whether the gender of students significantly influenced on their computer literacy. The analysis of data showed that the gender of students did not significantly influence students' skill and literacy in computer usage. This finding does not agree with findings of Reabdarkolaei and Amuei (2008).

## **Conclusion**

Based on the findings of this study, the following conclusions were drawn

1. That the level of computer literacy and skills amongst trainee teachers in Rivers State University of Education is quite low.
2. The male trainee teachers are more adept at skills and literacy in computer usage than their female counterparts.
3. That the level of computer literacy and skills amongst trainee teachers was not dependent on their course of study or year of study.

## **Recommendation**

The following recommendations are given;

1. Computers should be provided at all level of education so as to ensure that all students have access to computers.
2. Government and stakeholders in education should partner together with non-governmental bodies to not only introduce the use of computers into schools (primary to tertiary) but also provide the manpower required to impart skills on computer usage, provide access to the internet and encourage the use of ICT in generally processing information and knowledge in government parastatals, schools and the society at large.
3. Usage of computers should be introduced at the basic education level to ensure that children get conversant with the use of computer from an early age.

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