

Teachers' Attitude and Competence Towards the use Of ICT Resources: A Case Study Of University Of Agriculture Lecturers, Abeokuta Ogun State, Nigeria

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Abstract

The study is on teachers' attitude and competency towards the use of ICT resources in their lectures. The population of the study were lecturers at the federal university of agriculture, Abeokuta. Questionnaire and observation were instruments used to gather data from the respondents. The findings revealed that majority of the lecturers have positive attitude and competency towards the use of ICT resources in their lectures, and the use of ICT in instruction enhance academic performance of students. The study concludes by recommending that university administration should provide more training in the area of ICT to its staff and improve on regular and uninterrupted power supply to the campus.

Introduction

The importance of ICT resources in empowering teachers and learners, and enhancing teaching and learning has been highlighted in several studies. The potentials of ICT resources to facilitate students' learning and improving teaching have been established by various researchers (Kazu&Yavulzalp, 2008; Kirschner&Woperies, 2003). In addition, ICT resources technologies are computer based tools used by teachers to teach information and communication processing needs of an institution. These cover computer hardware and software, the network, and other digital devices like video, audio, camera, and so on, which convert information and resources (text, sound, motion, etc.) into digital form (Moursund&Bielefeldt, 1999). Successful integration of ICT resources in the school system depends largely on the competence and right attitude of lecturers towards the role of modern technologies in teaching and learning. Furthermore, ICT resources have very strong effect in education and it provides enormous tools for enhancing teaching and learning. There have been many studies that have highlighted the various ways that ICT resources may support teaching and learning processes in a range of disciplinary fields such as the construction of new opportunities for interaction between students and knowledge; accessing information and etc. ICT resources can have a useful effect on teaching and learning if it is used under right conditions including suitable sources, training and support. ICT resources also offer the potential to meet the learning needs of individual students, to promote equal opportunity, to offer learning material, and also promote interdependence of learning among learners (Teo, 2008). The present and future teachers must be prepared to provide technology-supported learning opportunities for their students and, therefore, need to have adequate ICT skills and digital competence themselves

Marija and Palmira (2007) suggested that there were five important reasons for teachers to use ICT resources in education. (1) Motivation, (2) distinctive instructional abilities, (3) higher productivity of teachers, (4) essential skills for information age, and (5) support for new teaching techniques. In order to use ICT resources in the classroom effectively, teachers' attitude toward technology should be positive and they should be trained in using modern technologies in the field of education. Kadel (2005) stated that the teacher clearly must act as the change agent in the relationship between technology and the student. Chou (1997) also highlighted that computer experience influenced teacher attitudes toward computer use. Ropp (1999) found that there is significant relationship between computer access and hours of computer use per week and computer attitudes. And also computer literacy level of the teachers increases their integration of computer application in their teaching. In summary, computer ownership has been consistently correlated to attitudes toward computers and positive effects for preparing teaching and learning materials.

Krumsvik (2008) emphasized that specific competence besides the ordinary technology competence is required from teachers because the focus of their work is in education and instruction. He defined teachers' ICT competence as teacher's proficiency in using ICT in a professional context with good pedagogic-didactic judgment and his or her awareness of its implications for learning strategies. Kabakci (2009) proposed a framework for developing teachers' ICT resources competence. His framework is based on a stage-based model introduced by Zhao, and Cziko (2001) presenting teachers, technology use according to the following four stages: Survival stage, Mastery stage, Impact stage, and Innovation stage. Kabakci (2009) proposed that the most important aspect in the framework is that teachers should participate in professional development programmes according to the stages of technology use, and media resources related activities should be realized in

Review of The Literature

accordance with each teacher's current stage of ICT use.

Sabliauskas, Bukantaite, and Pukelis (2006) made a review of several research publications modeling the ICT competency areas for teachers, Based on the review, they constructed the following list of areas included in teacher ICT competencies:

- Basic ICT competencies,
- Technological ICT competencies,
- ICT policy competencies,
- Competencies in the ethical areas of ICT use,
- Competencies of ICT integration into the teaching subject,
- Competencies of didactical methods based on the use of ICT, and
- Competencies of managing teaching/learning process working with ICT.

A great number of pre-service teachers are not equipped with basic computer operational skills; therefore, for teachers to be able to integrate ICT resources into the school curriculum, groundwork must be done at the pre-service teacher education level. Teacher educators need to understand the dimensions of pre-service teacher attitude as a means of developing teacher education curriculum relevant for the contemporary knowledge age (Lee, 1997). Yusuf and Balogun (2011) cited Yusuf (2005) on teachers' competence, teachers in Nigeria secondary schools are not competent in basic computer operation and in the use of generic software and although, they have positive attitude towards the use of computer. This finding has revealed the low level of ICT penetration in the Nigerian school system, although the attitudes of teachers have been positive.

Lakkala, Ilomaki and Kantosalo (2011) Cited Krumsvik (2008) according to him, there is a double dimension in teachers' competence: they are role models for students' subject use of ICT resources and they must make educational decisions about how ICT resources may enhance their learning possibilities, in addition to using ICT resources for personal purposes.

Objectives of the Study

The main objective of this study is to investigate the teachers' attitude and competence towards the use of ICT resources in their teachings. Specifically, the study examined:

1. The attitude of teachers towards the use of ICT resources
2. The competence of teachers in the use of ICT resources
3. The influence of use of ICT resources on the academic performances of students

Research Methodology

The research design used for the study is the survey method, using questionnaire and observation as instruments for data collection. The questionnaire centered on teacher's attitude and competency on ICT resources. The population for this study is drawn from academic staff of Federal University of Agriculture, Abeokuta. A total of 250 copies of questionnaire were distributed to academic staff in the nine colleges understudy, out of this number, only 211 copies of questionnaire were returned to the researchers which were found to be useful for the study. The data generated were analyzed using frequency, percentages and correlation analysis.

Data Analysis and discussions

This presents the result of the analysis in line with the research question/hypothesis postulate for the study in order to make a valid conclusion based on the stated problem for the study. The table above presents the distribution of respondents by gender according to the result of the analysis, 147(69.7%) of the respondents were male while 64(30.3%) were female. This shows that majority of the respondents were male. By implication it means that there is more male academic staff than that of their female counterpart.

The table 2 presents the distribution of respondents by status. According to the result of the analysis, 34(16.1%) of the respondents holds lecturer II position, 85(40.3%) holds Lecturer I position while others were Senior lecturer, Readers and Professors as indicted by 64(30.3%), 20(9.5%) and 8(3.8%) respectively. This show that majority of the respondents were between lecturer I and senior lecturer cadre.

TABLE 1: Distribution of Respondents by Sex

Sex	Frequency	%
Male	147	69.7
Female	64	30.3
Total	211	100.0

TABLE 2: Distribution of Respondents by Work Status

Status	Frequency	%
Lecturer II	34	16.1
Lecturer I	85	40.3
Senior Lecturer	64	30.3
Readers	20	9.5
Professors	8	3.8
Total	211	100.0

TABLE 3: Distribution By Teachers Attitude Towards The Use Of ICT

Statements	SA (%)	A (%)	D (%)	SD (%)
I have right attitude towards the use of ICT	29.9	55.0	7.6	7.0
I am ready to use ICT resources while teaching	22.3	39.8	27.0	10.9
I am comfortable using ICT resources in teaching-learning process	20.4	52.6	21.3	5.7
ICT makes course more interesting	26.5	64.0	7.6	1.9
ICT skill is worthwhile	26.5	60.2	9.2	3.8
I wont have anything to do with ICT	7.6	13.3	41.7	37.4
I have phobia for ICT equipment	3.8	7.6	50.7	37.9
ICT cannot address the need of school system	15.6	37.4	19.0	28.0
The state of facilities discourages me from using ICT	19.4	36.0	28.4	16.1
Most of ICT equipment are not available for use	11.8	23.7	43.1	21.3

The table above presents the distribution of respondents on their attitude towards the use of ICT. The result above shows that majority of the respondents' show positive attitude toward the use of ICT in teaching and learning process. For example about 84.9% of the respondents agreed that they have right attitude towards the use of ICT, about 90.5% and 86.7% agreed with the fact that ICT make course more interesting and that the use of ICT is worthwhile respectively.

In addition, 64.4% of the respondents disagreed with the statement that ICT equipment is not available for use. This means that the resources are ever available for use in the school. Moreso, about 79.1% of the respondents disagreed that they won't have anything to do with ICT and about 73.0% indicated that they are comfortable using ICT resources in teaching-learning process. In a not shell one can now deduce that the sampled teachers have a positive attitude toward the use of ICT.

TABLE 4: Distribution by Competency of Teachers in the Use of ICT

Statements	SA (%)	A (%)	D (%)	SD (%)
I can locate and run an application programme e.g. word processing	46.9	45.5	5.7	1.9
I can search for files on computer system	33.6	41.7	15.2	9.5
I can connect the computer and its peripherals	45.0	39.8	9.5	5.7
I can access information on CD/DVD	33.6	62.6	1.9	1.9
I can organize electronic files into folders	22.3	19.4	54.5	3.8
I can print to various networked printers	14.2	25.6	54.5	5.7
I can open a new document in word	31.3	66.8	1.9	-
I can use spreadsheet package very well	8.1	35.1	36.0	20.9
I can sort and filter data	11.8	39.3	39.8	9.0
I can create a basic presentation package	25.6	41.7	28.9	3.8
I can set up a database and update them	8.1	17.5	53.1	21.3
I can access an internet site via its website address	36.0	60.2	1.9	1.9
I can download files from the internet	41.7	56.4	1.9	-
I can attached files to outgoing e-mails	24.2	51.2	20.9	3.8
I can save a document in various file formats including HTML and PDF	10.4	32.2	42.2	15.2
I can communicate online with students on assignment	25.6	70.6	1.9	1.9
I can use web search engines(goggle , AltaVista etc) very well	63.0	33.2	3.8	-
I can use web authoring tools	6.2	22.7	56.4	14.7
I can use a digital camera to capture images	35.1	57.3	3.8	3.8
I can use a scanner to copy images	10.4	25.1	45.5	19.0
I can set up and use Liquid Crystal Display (LCD) or Multimedia Projector	14.2	17.5	45.5	22.7
I can use the web camera to communicate on the internet	11.8	22.7	52.1	13.3

The table 4 presents the distribution of respondents on the competency of teachers in the use of ICT. According to the result of the analysis, 92.4% of the respondents indicated that they can locate and run application programme e.g. (Word processing) while 7.6% do not. Moreover, 75.3% of the respondents indicated that they can search for files on computer system while 24.7% can not. Furthermore, 84.8 % of the respondents actually indicated that they can connect the computer and its peripherals while 15.2% indicated that they could not.

Moreover, the result of the respondents also show that the teachers were competent in the use of ICT in the following areas: access information on

CD/DVD, opening a new document in word, create a basic presentation package, access an internet site via its website address, downloading files from the internet, attached files to outgoing e-mails, communicate online with students on assignment, use web search engines (goggle, AltaVista etc) very well and use a digital camera to capture images. In addition, the teachers seem not to be competent in the areas like: using a scanner to copy images, setting up and use Liquid Crystal Display (LCD) or Multimedia Projector, use web authoring tools, setting up a data base and manage them, saving a document in various file formats including HTML and PDF, organize electronic files into folders, and using spreadsheet package

Table 5: Correlation analysis showing the influence of the use of ICT resources on the academic performance of students

Variable	N	Mean	STD	r	P	Remark
Students performance score	211	34.94	4.82	0.85**	<0.05	Significant
Use f ICT	211	33.23	4.87			

The table 5 present correlation analysis showing significant influence of the use of ICT resources on the academic performance of students. The result of the descriptive analysis presented above shows that the mean score for students' performance is 34.94 while the mean score for the use of ICT among teachers is 33.23 with standard deviation of 4.82 and 4.87 respectively. The mean differences were significant at both 0.05 and 0.01 level of significance. Thus, there is a significant influence of the use of ICT resources on the academic performance of students.

Nevertheless, the correlation value of 0.85 whose probability close to zero percent shows statistically that at 0.01 and 0.105 level of significant, there is a statistical evidence to conclude that the use of ICT influence performance of students. Thus, There is a significant influence of the use of ICT resources on the academic performance of students.

Summary of Findings

1. Majority of the respondents for this study have positive attitude and competency towards use of ICT resources while teaching
2. Findings revealed that majority of the respondents have integrated ICT resources into their lectures
3. Majority of the respondents were competent in various areas of ICT; running of programme, search for files on computer system, connect the computer and its peripherals, downloading files from the internet, present PowerPoint, use web search engines etc
4. The using of ICT resources in the lecture enhance academic performance of the students according to the finding from the study
5. The University's administration had emphasized integration of ICT resources into lectures in the university, the evidence is that all lecture rooms/theatres were equipped with ICT resources and training was provided for academic staff.

Conclusion and Recommendations

To promote effective integration of ICT resources into lectures, lecturers must have positive attitude

and competency towards the use of ICT in their teaching. Lecturers are also advised to go for training in the area of ICT resources so that they can have up-to-date knowledge of these ICT resources. Lecturer will be in a position to decide which kind of ICT resources will be useful to the topic he/she is treating and what students are expected to learn. All lectures rooms/theatres should be equipped with necessary ICT facilities and infrastructure to enable academic staff and students have access to the equipment. In addition to the above, the researchers would like to recommend as follows.

To promote effective integration of ICT resources into lectures, lecturers must have positive attitude and competency towards the use of ICT in their teaching. All lectures rooms/theatres should be equipped with necessary ICT facilitate and infrastructure to enable academic staff and students have access to the equipment. In addition to the above, the researchers would like to recommend as follows:

- i. Academic staff should acquire skills in ICT and integrate ICT based methodology into their lectures
- ii. The University's administration should provide for more training in the area of ICT to its staff
- iii. Regular and uninterrupted power supply should be maintained in the campus

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