# INFLUENCE OF LECTURERS COMPETENCE AND UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY FOR TEACHING IN KWARA STATE COLLEGE OF EDUCATION

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**Abstract**
The introduction of Information and Communication Technology (ICT) into education system has been accepted and its penetration transformed teaching and learning across the curriculum. The study adopted survey method of descriptive research. Sample was drawn from the lecturers of Kwara State College of Education, Ilorin. The lecturers were stratified based on their gender and area of specialization. In light of this, 100 lecturers were selected randomly for the study. Data was analyze using percentage and frequency count to answer research questions 1,2 and 3, analysis of variance (ANOVA) was used to test for research hypothesis 1 while t-test statistics was used to test research hypothesis 2. The findings from the study revealed that: ICT facilities and tools is always available in Kwara state College of Education, Ilorin. Most of the lecturers in Kwara State College of Education, Ilorin use ICT facilities for teaching. Study also revealed that Kwara State College of Education in Ilorin lecturers' ICT competence level is moderate. There is no significant difference in the lecturers' competence towards the use of ICT based on their areas of specialization. There is no significant difference between Kwara State College of Education, Ilorin lecturers' competencies towards the use of ICT based on gender.

**Keywords:** ICT, Lecturers, Teachers, Education

Globally, some nations of the world are considered information- rich societies. Acquisition of knowledge has become the great priority of individual persons; however, the transfer of their knowledge is efficiently obtainable within the scheme of education which could be formal or informal. The importance of a teacher as an architect of future generations demand that only the best and the most intelligent and competent members of our intelligent is to be allowed to qualify for the noble profession. Access to fast growing, knowledge is directly related to new technologies thus quality information and knowledge transfer becomes an invaluable

and veritable tool for personal development.

The ICT world has initiated a transition of emphasis from analogous educational research based technological development to that of digital knowledge based technological development in education (Jude &Dankoro, 2012). Therefore, in order to produce competent teacher for human capacity building, information and communication technology (ICT) must be given prior focus in teacher education system. The advancement which ICT resources offer higher education can be evident through accessibility to quality resource material and utilization in instructional delivery, particularly when teachers are competent in the use of these resource materials because productive instructional delivery enhances learners' creativity and intellectual development. Information and communication technology (ICT) have become an integral part of daily lives for the last decades (Yusuf & Afolabi, 2010). Many countries now regarded understanding ICT and mastering the skills and concept of ICTs as of the core of education, alongside reading, writing and calculations.

Information and communications technologies are computer based tools used by people to work with information and communication processing needs of an organization. Its purview covers computer hardware and software, the network, and other digital devices like video, audio, camera, and so on, which convert information (text, sound, motion, etc.) into digital form (Yusuf & Afolabi, 2010). National United States (US) Higher Education ICT initiative (2003) describes ICTs as the ability to use digital technology, communication tools, and networks appropriately to solve problems in order to function in an information society. These include the ability to use technology as tool to research, organize, evaluate and communicate information and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information. Conventional teaching emphasizes content, and courses are developed based on textbooks as a means of teaching. Lecturers present students with the information that makes the curriculum. The use of computers and ICTs as an instructional medium modifies strategies which are employed by both lecturers and students in the teaching and learning process. When computers and ICTs are integrated appropriately into teaching they can improve the quality of education by facilitating communication and engagement in classroom learning, help promote active learning, higher-order thinking and better understanding of concepts, and thereby increase the student's motivation (Behnam, 2012).

Nigeria started implementing its policy in April 2001 after the Federal Executive Council approved it by establishing the National Information Technology Department Agency (NITDA), the implementing body. The policy empowers NITDA to inter into strategic alliance and joint ventures and to collaborate with the private sector to realize the specifics of the country's vision

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of ''making Nigeria and IT capable country in Africa and a key player in the information society by the year 2005 through using IT as an engine for sustainable development and global competitiveness''.

Colleges of Education lecturer(s) prepare teachers that feed the primary and junior secondary school level of education in Nigeria with manpower demands. It is at this level that they should have their first encounter with technology in the classroom, this they will put to use when eventually they leave school and are gainfully employed to teach in the primary and secondary schools. It is in this light that the training of students' teachers, who are expected to drive the new ICT into advanced education system Ebisine (2014).

Essentially, colleges of education are to provide full time courses in teaching, instruction and training and to conduct courses in education for qualified teachers. Also, noted by Anikweze (2001) as cited in Ebisine (2014) that colleges of education were to produce highly qualified professional teachers for the primary and secondary levels of education. Therefore, to ensure colleges of education products attain the broad goals of tertiary education, as well as, ensure quality in the preparation of teachers, relevance and professionalism, there is need for optimal utilization of ICTs in teaching and academic quality assurance. (Ebisine, 2014).

Lecturer are developing the most appropriate tools for a particular task, and using these tools in combination to solve real problem; Transformation Stage: In the transformation stage, the teacher development focus on experiment and innovating new ICTs skills to produce new knowledge in the teaching and learning process.Kwaca,(2007) noted that the most common problems associated with the effective implementation of ICT are lack of qualified ICT personnel, cost of equipment, management attitudes, inconsistent electric power supply, inadequate telephone lines particularly in rural areas and inclusion of ICT programs in teachers training curricula and at the basic levels of education. Similarly, Lewis and Smith (2002) summarized these problems as limited equipment's, inadequate skills, minimal support, time constraints and the teachers own lack of interest or knowledge about computer.

**Purpose of the Study**

The purpose of this study is to investigate the influence of lecturers competence and utilization of information and communication technology for teaching in Kwara state college of education. Specifically to:

1.      Find out the availability of ICT facilities in Kwara State College of Education, Ilorin.
2.      Find out the availability of ICT resources in Kwara state college of Education, Ilorin.
3.      Determine the level of ICT utilization by lecturers in Kwara State College of Education, Ilorin.
4.      Determine the lecturers' competence in utilization of ICT

5. Study if lecturers' area of specialization affects their competence in the use of ICT

6. Examine if gender has influence on lecturers' competence in the use of ICT in Kwara State College of Education, Ilorin.

## Research Questions

The following research questions was raised in finding answers to the objectives of this study as stated above.

1. What are the available ICT facilities in Kwara State College of Education, Ilorin?

2. What are the available ICT resources in kwara state college of education, Ilorin?

3. What is the level of ICT utilization by lecturers in Kwara state College of Education, Ilorin?

4. What are the levels of lecturers' competence in ICT usage?

5. Do lecturers' areas of specialization influence their competence in the use of ICT?

6. Do lecturers' genders influence their competence in the use of ICT?

## Research Hypotheses

The following null hypotheses are formulated and will be tested:

$H_{O1}$: There is no significant difference in lecturers' competence in the use of ICT based on area of specialization.

$H_{O2}$: There is no significant difference in lecturers' competence in the use of ICT based on gender

## Methodology

The research design adopt for this study was Descriptive Survey Research design. The design is suitable when gathering data from a relatively large number of cases at a particular time, as it involves collection of information by administering questionnaires to a sample of individuals that describes events, then organizes, tabulates and presents. The target population for this study includes selected lecturers in Kwara State College of Education, Ilorin. Simple random sampling techniques was adopted to draw out the sample for the study. Hundred (100) lecturers out of the total population of 196 academic staffs of Kwara State College of Education, Ilorin was participating in this study. The selection will constitute both male and female lecturers from all the discipline across board. A researcher designed questionnaire was used to collect information for this study. The questionnaire is titled "Questionnaire for Lecturers' competence and utilization of ICT" (QLCUI). This study, statement was composed concerning the competence of lecturers' in uses of ICT facilities. After being certified by the researcher's supervisor, two experts in the Department of Educational Technology, validated the relevance and suitability of the instruments for the study using standard measures to check for its clarity, appropriateness, correctness, commensuration of questions with the topic of the research and other necessary criteria for the validity and reliability of research instruments.

**Data Analysis and Result**

The two major research questions analysis using percentage and meanwhile the hypothesis was tested using t-test.

**Table 1: Percentage Distribution of Respondents based on their Gender**

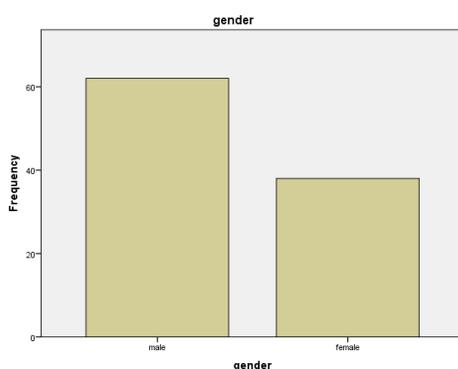| | Frequency | Percentage (%) |
|---|---|---|
| Male | 62 | 62.0 |
| Female | 38 | 38.0 |
| Total | 100 | 100.0 |



**Figure 1: Bar chart on respondents by their gender**

Table 1 shows that 62 of the respondents representing 62% of the total respondents are male while 38 of the respondents representing 38% of the total respondents are female.

**Table 2: Percentage Distribution of Respondents Based on their Area of Specialization**

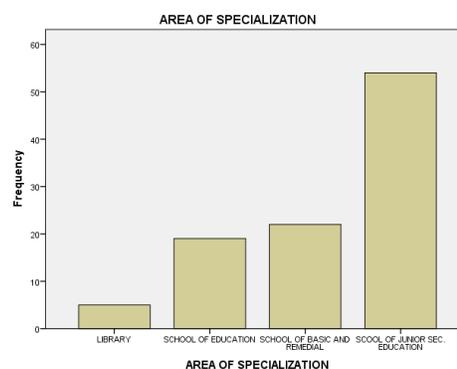| | Frequency | Percent (%) |
|---|---|---|
| LIBRARY | 5 | 5.0 |
| SCHOOL OF EDUCATION | 19 | 19.0 |
| SCHOOL OF BASIC AND REMEDIAL | 22 | 22.0 |
| SCOOL OF JUNIOR SEC. EDUCATION | 54 | 54.0 |
| Total | 100 | 100.0 |



**Figure 2: Bar chart showing lecturers area of specialization**

It was reveal in table 2 that percentage of respondents in library is 5 representing 5% of the total respondents, School of Education 19 of the respondents representing 19% of the total respondents, School of Basic and Remedial 22 of the respondents representing 22% of the total respondents, while that of School of

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Junior Sec. Education 54 respondents representing 54% of the total respondents.

**Research question 1:** what are the available ICT facilities and resources in Kwara State College of Education?

**Table 5: Percentage Distribution of Availability of ICTs Facilities and Resources**

|  | NOT AVAILABLE | | NOT ADEQUATE | | ADEQUATE | | Total | |
|---|---|---|---|---|---|---|---|---|
|  | frequency | percent% | frequency | percent% | frequency | percent% | frequency | percent% |
| COMPUTER LABORATORIES | 1 | 1.0% | 26 | 26.0% | 73 | 73.0% | 100 | 100.0% |
| INTERNET FACILITIES | 5 | 5.0% | 44 | 44.0% | 51 | 51.0% | 100 | 100.0% |
| EMAIL SERVICES | 13 | 13.0% | 40 | 40.0% | 47 | 47.0% | 100 | 100.0% |
| SATELLITE | 21 | 21.0% | 54 | 54.0% | 25 | 25.0% | 100 | 100.0% |
| TELEPHONE | 6 | 6.0% | 27 | 27.0% | 67 | 67.0% | 100 | 100.0% |
| LAPTOP | 5 | 5.0% | 26 | 26.0% | 69 | 69.0% | 100 | 100.0% |
| OVERHEAD PROJECTOR | 11 | 11.0% | 34 | 34.0% | 55 | 55.0% | 100 | 100.0% |
| INTERACTIVE WHITE BOARD | 2 | 2.0% | 33 | 33.0% | 65 | 65.0% | 100 | 100.0% |
| PUBLIC ADRESS SYSTEM | 7 | 7.0% | 30 | 30.0% | 63 | 63.0% | 100 | 100.0% |
| WIRELESS TECHNOLOGY | 20 | 20.0% | 55 | 55.0% | 25 | 25.0% | 100 | 100.0% |
| PRINTER | 2 | 2.0% | 26 | 26.0% | 72 | 72.0% | 100 | 100.0% |
| SCANNER | 2 | 2.0% | 35 | 35.0% | 63 | 63.0% | 100 | 100.0% |
| PROJECTION SCREEN | 9 | 9.0% | 37 | 37.0% | 54 | 54.0% | 100 | 100.0% |
| TELEVISION | 9 | 9.0% | 36 | 36.0% | 55 | 55.0% | 100 | 100.0% |
| DIBITAL MICROSCOPE | 27 | 27.0% | 44 | 44.0% | 29 | 29.0% | 100 | 100.0% |
| DIGITAL CAMERA | 9 | 9.0% | 46 | 46.0% | 45 | 45.0% | 100 | 100.0% |
| MAINTENANCE WORKSHOP | 4 | 4.0% | 50 | 50.0% | 46 | 46.0% | 100 | 100.0% |
| SPARE PARTS AND ACCESSORIES | 14 | 14.0% | 65 | 65.0% | 21 | 21.0% | 100 | 100.0% |

Table 5 indicates that computer laboratories has 73% adequately available, 26% for not adequately available and 1% for not available. Internet facilities has 51% adequately available, 44% not adequately available, and 5% for not available. E-mail services has 47% adequately available, 40% for not adequately available, 13% for not available. Satellite has 25% adequately available, 54% for not adequately available, 21% not available. Telephone has 67% adequately available, 27% for not adequately available, 6% for not available. Laptop 69% for adequately available, 26% for not adequately available, 5% for not

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available. Overhead projector has 55% adequately available, 34% for not adequately available, 11% for not available. Interactive white board has 65% adequately available, 33% not adequately available, 2% for not available.

Public address system has 63% adequately available, 30% not adequately available, 7% for not available. Wireless technology has 25% adequately available, 55% not adequately available, and 20% not available. Printer has 72% adequately available, 26% not adequately available, and 2% not available. Scanner has 63% adequately available, 35% not adequately available, and 2% not available. Projection screen has 54% adequately available, 37% not adequately available, and 9% not available. Television has 55% adequately available, 36% not adequately available,

and 9% not available. Digital microscope has 29% adequately available, 44% not adequately available and 27% not adequately available. Digital camera has 45% adequately available, 46% not adequately available and 9% not available. Maintenance workshop has 46% adequately available, 50% not adequately available and 4% not available. Spare parts and accessories rooms has 21% adequately available, 65% not adequately available, and 14% not available.

**Research question 2:** What is the level of ICT competence of lecturers' in Kwara State College of Education?

**Table 6: Distribution Percentage of Lecturers' ICT Level of Competence**

| | HC | C | MC | NC | Total |
|---|---|---|---|---|---|
| | N (%) | N (%) | N (%) | N (%) | N (%) |
| COMPUTER IS USE FOR LECTURES PREPARATION | 55(55.0) | 25(25.0) | 16(16.0) | 4(4.0) | 100(100.0) |
| INTERNET IS USE IN LECTURE PREPARATION | 44(44.0) | 34(34.0) | 14(14.0) | 8(8.0) | 100(100.0) |
| INTERACTIVE WHITE BOARD IS USED | 54(54.0) | 34(34.0) | 9(9.0) | 3(3.0) | 100(100.0) |
| USE OF DIGITAL NICROSCOPE | 25(25.0) | 40(40.0) | 20(20.0) | 15(15.0) | 100(100.0) |
| PROJECTORS ARE USED | 38(38.0) | 35(35.0) | 17(17.0) | 10(10.0) | 100(100.0) |
| COURSE MATERIALS ARE PROVIDED | 28(28.0) | 43(43.0) | 18(18.0) | 11(11.0) | 100(100.0) |
| STUDENTS ASSIGNMENT | 23(23.0) | 30(30.0) | 28(28.0) | 19(19.0) | 100(100.0) |
| LECTURERS AND STUDENTS COMMUNICATE | 20(20.0) | 40(40.0) | 25(25.0) | 15(15.0) | 100(100.0) |
| PUBLIC ADDRESS SYSYTEM | 52(52.0) | 37(37.0) | 7(7.0) | 4(4.0) | 100(100.0) |
| LECTURERS ALWAYS USE THEIR COMPUTER | 29(29.0) | 43(43.0) | 22(22.0) | 6(6.0) | 100(100.0) |

Table 6 shows that 55% of the lecturers' highly competent use computer for lectures preparation, 25% of the lecturers' competently use computer for lectures preparation, 16% of the lecturers' moderately use computer for lectures preparation, 4% of the lecturers' not competently use computer for lectures preparation. Also, 44% of the lecturers' highly competently use internet for lecturer preparation, 34% competently use internet for lecturer preparation, 14% moderately competent use internet for lecture preparation, 8% of the lecturers not competently use internet for lecture preparation. 54% of the lecturers' highly competently use interactive white board for delivering lectures, 34% competently use interactive white board for delivering lectures, 9% moderately competent use interactive white board for delivering lectures, 3% not competently use interactive white board for delivering lectures. 25% of the lecturers highly competently use digital microscope for practical classes, 40% competently use digital microscope for practical classes, 20% moderately competent use digital microscope for practical classes, 15% not

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competently use digital microscope for practical classes.

### Hypotheses Testing

This section presents the results of the hypotheses tested with corresponding research questions 4 and 5 to establish lecturers' competence in ICT usage base on area of specialization and base on gender. ANOVA was used to test for the hypothesis one while T-test was used to test for the research hypotheses two. All the hypotheses are tested at 0.05 alpha level of significance.

### Hypothesis One

**Ho$_1$**: There is no significant difference in lecturers' use of ICT based on their area of specialization.

In an attempt to establish whether significance difference exists between lecturers from different areas of specialization (school of junior sec. education, school of basic and remedial, school of education and library) on their competencies level towards the use of ICT, data was analyzed using Analysis of Variance (ANOVA).

### Summary of Findings

The findings of this study is summarize as follows:
1. ICT facilities are available but not adequately use in Kwara state College of Education, Ilorin.
2. Most of the lecturers in Kwara State College of Education, Ilorin used ICT facilities for teaching.

3. That Kwara State College of Education, Ilorin lecturers' ICT competence level is moderate.
4. There is no significant difference in the lectures' competence towards the use of ICT based on areas of specialization.
There is no significant difference in Kwara State College of Education, Ilorin lecturers' competence towards the use of ICT based on gender.

### Conclusion

From the findings of this study, the utilization of ICT in teaching has not been most effectively utilized in Colleges of Education in teaching-learning process. Hence, the utilization of ICT in lecture preparation and presentation, instructional delivery, individualized learning, as well as collaborative and evaluation of learning will significantly be of great benefit to our society. From the data analysis result in chapter four, it could be concluding that ICT facilities and resources are available but not adequately used. It is also reveal that some of the lecturers are not utilizing ICTs effectively.

### Recommendations

Based on the findings, the following recommendations are made:
1. ICT facilities should be made available by institutions.
2. Lecturers should endeavor to acquire these facilities by themselves, since they are an integral part of instruction.
3. Workshop, training programs on the utilization of ICT facilities should be

organized for lectures at all levels of education.

4.    Furthermore, provision should be made for continuous retraining of lecturers on ICT since development in technology is dynamic and the lecturers need to keep abreast with current trends.

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