



Information Communication Technology (ICT) Resources Utilization as Correlates Of Research Output of Lecturers in Colleges of Education in Nigeria.

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Abstract

The paper investigates the relationship between ICT resources utilization and attitude with research output of lecturers in colleges of education in Nigeria. Descriptive survey research was adopted in the study. The population of the study consisted all lecturers in Colleges of Education in Nigeria. The sample population was made up of 720 lecturers drawn from twelve Federal Colleges of Education in Nigeria. Two Colleges of Education were randomly selected from each of the six geo-political zones in Nigeria. Sixty lecturers were randomly selected from each of the twelve Colleges making a total of 720 participants. A self-developed questionnaire titled ICT Resources Utilisation and Attitude Questionnaire (ICTRUAQ) was used to gather data for the study. Data collected were analysed using mean, standard deviation, t-test and Pearson product moment correlation Coefficient. The study revealed that ICT resources are not adequately available for research purposes in Colleges of Education. It was further revealed that lecturers' attitude to research work was positive. The study further reveal a strong relationship among ICT resources utilization and lecturer research output in Colleges of Education. The relationship between attitude and lecturer research attitude was also confirmed to be negative. The study recommended that government and other stakeholders in education sector should supply appropriate ICT resources to Colleges of Education in Nigeria. It was further recommended that training and workshops should be organized on regular bases for lecturers to improve their skills in handling ICT resources for research purposes.

Key words: Attitude, ICTresources, college of education



Introduction

Research is becoming vital and necessary part of tertiary education. Tertiary institutions are considered as modern entrepreneur engine and generator of knowledge through research, knowledge and innovation. Lecturers in higher institutions considered that research and teaching are interlinked. Involvement in research activities always supports teaching. Writing of research papers enables lecturers in higher institutions particularly universities, colleges of education and polytechnics to quickly understand the originality and quality of the research work. According to Bnunemu (2009), teaching and research are equally important for tertiary institutions' lecturers; they must give equal attention to research and teaching as part of their duty, because participation in research directly improves the quality of teaching. Research is required for the improvement of general knowledge, it enables the academicians to understand their own selves, to analyze their own abilities, and enable the academicians to fully understand their discipline, which is imperative for effective teaching.

Research has been defined as man's systematic and empirical investigation into existing but hidden elements in nature with a view to unearthing, restructuring and explaining such element for the purpose of development (Ifidon and Ifidon 2007). Reitz (2005) also describes research as a systematic painstaking investigation of a topic or in a field of study often employing technique of hypotheses and experimentation, undertaken by a person intent on revealing new facts, theories or principles or determining skill and identification of research problems. Research therefore comprises of creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of people, cultures and societies, and the use of this stock of knowledge to devise new applications. Research aims at producing new and better goods and services and developing new and better ways of offering or distributing them. It also results in efficient use of present resources and waste products.

Research plays a key role in development and dissemination of knowledge. It leads to development of new knowledge as well as contributing to existing knowledge. It also provides an important background for academic staff to become successful lecturers. It enhances the quality of teaching effectiveness and reinforces many of the skills that are required for effective teaching (Lertputtarak 2008). Lecturers actively involved in research activities are usually in touch with the latest developments in their field and are more likely to be on the forefront of their discipline, compared to the research dormant lecturers. Furthermore, several academic and research institutions' reward system base the promotion criterion on quantity and quality of research productivity.

Research output is a means by which academics contribute new knowledge to the existing body of knowledge. This can be in form of journal articles, technical reports, books or chapters of book. The quality of research could be measured, according to Popoola (2002), by counting the numbers of books published, or journal articles produced over a period. Lecturers in tertiary institutions in Nigeria today are being asked to increase their research output and productivity, in order to meet the ever changing demands of the 21st century.

However, the current rapid developments in the field of Information and Communication Technologies (ICTs) have changed significantly the nature of lecturers' research work in most of the tertiary institutions in Nigeria especially colleges of education. These major changes have brought and provided an avenue for researchers to communicate with one another, access to online resources, exposing them to the collection of standard texts of monographs, journal articles (locally and internationally), annual technical reports, technical pamphlets, scientific reports and dissertations/theses and also enable them to participate in



technical industrial fora in areas related to their fields. ICT has assisted the researchers in advancing their research works and knowledge and created room for effective management of knowledge and information, as such an organization of network of partners gets the right information to the right person(s) at the right time in a user-friendly and accessible manner so that they can perform their jobs effectively.

Attitude is another important factor that affect lecturers' research output in tertiary institutions. Tertiary institutions' lecturers are the primary actors in the research production system and ultimately, it is their attitudes that determine the output of academic research. Attitude is the readiness to act in a certain way to certain issues. What constitutes these could be moods, feelings, prejudices, fear and anxiety. Attitude is not an innate tendency but it is learnt. Attitude develops and is organized through experience. It is assumed that the appearance of an attitude is dependent on learning or social interactions. Attitude refers to a person's feeling thought and predisposition to respond to an object. Attitude is seen in psychology as an expression of favour or disfavour towards an object, event, person, place or thing. This attitude can be a positive or negative evaluation of people, objects, events, activities, and ideas. Attitude is a learned predisposition to react to an object or class of objects in a consistently favorable or unfavorable manner (Aribamikan 2007). A man's attitude towards any job or task is very important towards the successful execution of such a task. If one develops a poor attitude, the project may fail, but if the attitude is positive, success is achievable. Lecturers' research attitudes shape academic research behaviors. When attitudes change, the new attitude overrides but not necessary it will replace the old attitude. Attitudes are activated automatically only by stimuli that elicit a quick, conscious evaluative response. A lecturer with positive attitude to research will have good research output while the one with negative attitude to research will have poor research output.

However, research findings had shown that research output of lecturers in most of the tertiary institutions especially colleges of education in Nigeria is very low. This could be attributed to various factors such as poor motivation, poor working conditions, low remuneration, poor access to ICT resources, to mention a few. The need to investigate on various factors that affect research output in tertiary institutions especially college of education therefore arises. This study therefore, takes a survey study of Information and Communication Technology resources utilization and attitude as predictors of research output of lecturers in colleges of education in Nigeria.

Statement of the Problem

Research plays a crucial role in the development and dissemination of knowledge. Scholars as academics should conduct research, publish, and then convey their knowledge to students or apply what they have learned. . However, studies have revealed a gradual decline in research output in higher education since late 1980s. The factors responsible for this decline can be attributed to; lack of research skills in modern methods, inadequate equipment for carrying out state-of-the art research, overloaded teaching and administration schedules which leave little time for research, difficulty in accessing research funds, lecturers' attitude towards research and poor ICT resources utilization. The paucity of researches on lecturers' attitude and ICT utilization as important factors determining the level of research output in tertiary institutions especially colleges of education in Nigeria necessitated this study. This study therefore investigates ICT resources utilization and attitude as correlate of research output of lecturers in colleges of education in Nigeria.



Research Questions

1. What are the available Information Communication Technology (ICT) resources for research output in colleges of Education?
2. What is the attitude of lecturers toward research activities?

Research Hypothesis

1. There is no significant relationship between ICT resources utilization and research output of lecturers in college Education.
2. There is no significant relationship between attitude and research output of lecturers in colleges of education.

Research Methodology

This study employed the descriptive survey research design. The population of the study comprised of all lecturers in colleges of education in Nigeria. The sample population comprised of 720 lecturers drawn from twelve Federal Colleges of Education in Nigeria. Two Colleges of Education were randomly selected from each of the 6 geo-political zones making the total of 12 Colleges in Nigeria, 60 lecturers were randomly selected from each of the participating College of Education, making the total of 720 participants. A structural questionnaire titled ICT resources utilization and Attitude Questionnaire (ICTRUAQ) and check list were the instruments used in the study. To ensure both face and content validities of the instrument, the draft of the instrument were given to experts in test and measurement in the Department of Educational Foundations and Counselling, Adeyemi College of Education, Ondo. Two seasoned lecturers at Federal College of Education, Special Oyo were also given the draft of the instrument. Based on their comments and observations, some items of the instrument were restructured while some were completely eliminated.

The reliability was conducted by administering the instrument on 50 lecturers selected from a college of education, which was not part of the institutions selected for the study. The reliability co-efficient of 0.84 was obtained using Cronbach-alpha which was considered to be high enough for the instrument to be used for the study.

Results

Research Question 1: What are the Information Communication Technology (ICT) resources for research output in colleges of Education?

Table 1: Availability of ICTs Resources for Research Output

| S/N | Item | VHA | HA | OA | NA | Mean | Std. D | Remark |
|-----|---------------------|-----|-----|-----|-----|------|--------|---------------|
| 1 | Internet Facilities | 16 | 193 | 339 | 145 | 2.11 | .75 | Not Available |
| 2 | E-Books | 85 | 189 | 201 | 218 | 2.20 | 1.01 | Not Available |
| 3 | E-journals | 120 | 213 | 268 | 92 | 2.39 | .92 | Not Available |
| 4 | Computers | 218 | 251 | 169 | 55 | 2.91 | .93 | Available |
| 5 | Projectors | 115 | 210 | 341 | 27 | 2.21 | .76 | Not Available |
| 6 | Printers | 192 | 381 | 120 | 0 | 2.27 | .86 | Not Available |
| 7 | Scanners | 80 | 364 | 211 | 38 | 2.33 | .97 | Not Available |
| 8 | E-library | 86 | 162 | 247 | 198 | 2.19 | .98 | Not Available |
| 9 | CD ROMs | 92 | 144 | 320 | 137 | 2.27 | .92 | Not Available |



N= 693

Key: VHA= **Very Highly Available**, HA= **Highly Available**, OA = **Occasionally Available**,
 NA = **Not Available**

Decision Value: Not Available = 0.00-2.44, Available = 2.45-4.00

Table 1 shows the available ICTs resources in colleges of education for lecturers' research output. The result from this table shows that the following resources are highly available: E-journal (\bar{x} = 2.52), Computer (\bar{x} = 2.91), Projectors (\bar{x} = 2.59), Printers (\bar{x} = 3.10), Scanners (\bar{x} = 2.70), Radio (\bar{x} = 2.50), Television (\bar{x} = 2.59), Public Address System (\bar{x} = 2.55), and Microphone (\bar{x} = 2.49). The table further shows that the ICTs resources that are occasionally available are Internet facility (\bar{x} = 2.11), E-books (\bar{x} = 2.20), E-library (\bar{x} = 2.19), interactive board (\bar{x} = 2.20) and CD ROMS (\bar{x} = 2.27). Meanwhile, based on the result from this table and in line with the decision value it can be inferred that the available Information Communication Technology (ICT) resources for research output in colleges of education are E-journal, Computer, Projectors, Printers, Scanners, Radio, Television, Public Address System, and Microphone.

Research Question 2: What is the attitude of lecturers toward research activities in colleges of education?

Table: 2 Lecturers' Attitude toward Research Activities

| S/N | Item | SA | A | D | SD | Mean | Std. D |
|-----|--|-----|-----|-----|-----|------|--------|
| 1 | I like engaging in research activities | 440 | 245 | 4 | 4 | 3.61 | .53 |
| 2 | Research activities is very interesting | 319 | 374 | 0 | 0 | 3.46 | .49 |
| 3 | Research activities help me to think creatively | 469 | 220 | 4 | 0 | 3.67 | .48 |
| 4 | Research activities enhance my academic career | 449 | 244 | 0 | 0 | 3.64 | .47 |
| 5 | I often engage in research activities to make my lectures in class vivid | 246 | 395 | 43 | 9 | 3.26 | .63 |
| 6 | Research activity is boring. | 43 | 146 | 225 | 279 | 1.93 | .92 |
| 7 | Research activities is tedious and time consuming | 272 | 317 | 57 | 47 | 3.17 | .85 |
| 8 | Research activity has no benefit to my academic career | 48 | 92 | 181 | 372 | 1.73 | .93 |
| 9 | I give little or no attention to research activity. | 34 | 72 | 219 | 368 | 1.67 | .85 |
| 10 | I prefer other activities such as sport and games than research | 63 | 111 | 329 | 190 | 2.06 | .89 |
| 11 | I dislike research activities because of its financial commitments | 57 | 108 | 238 | 290 | 1.90 | .94 |
| 12 | Research activities affects my other personal activities | 96 | 221 | 180 | 196 | 2.31 | 1.02 |
| 13 | Research activities opens door to various academic opportunities | 293 | 279 | 104 | 17 | 3.22 | .78 |
| 14 | Research activities enhance my high level of intelligence | 385 | 262 | 0 | 46 | 3.42 | .80 |



| | | | | | | | |
|----|--|-----|-----|-----|-----|------------------|------|
| 15 | I like research activities because it strengthens my relationship with other academic scholars | 416 | 273 | 4 | 0 | 3.59 | .50 |
| 16 | Research activities does not give room for laziness. | 428 | 244 | 21 | 0 | 3.58 | .55 |
| 17 | Research activities should be encouraged among academic staff | 367 | 277 | 49 | 0 | 3.46 | .62 |
| 18 | Research activities should not be the pre-requisite for the promotion of academic staff | 196 | 156 | 156 | 185 | 2.52 | 1.16 |
| 19 | I like research activities because it is sometimes prove to be pragmatism | 110 | 333 | 202 | 48 | 2.72 | .80 |
| 20 | I dislike research works because the research findings are not usually implemented. | 74 | 189 | 362 | 68 | 2.38 | .80 |
| | | | | | | Weighted Average | 2.87 |

Key: SA= Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree

Decision Value: 0.00 - 2.44 = Negative, 2.45 - 4.00 = Positive

Table 4.6 shows the attitude of lecturers toward research activities in Colleges of Education. The table shows that the lecturers strongly agreed that: they like engaging in research activities ($\bar{x} = 3.61$), research activities is very interesting ($\bar{x} = 3.46$), research activities help them to think creatively ($\bar{x} = 3.67$), research activities enhance their academic career ($\bar{x} = 3.64$), like research activities because it strengthens their relationship with other academic scholars ($\bar{x} = 3.59$), research activities does not give room for laziness ($\bar{x} = 3.58$) and research activities should be encouraged among academic staff ($\bar{x} = 3.46$). Furthermore, the table also shows that the lecturers agreed to the following: often engage in research activities to make their lectures in class vivid ($\bar{x} = 3.26$), research activities is tedious and time consuming ($\bar{x} = 3.17$), research activities opens door to various academic opportunities ($\bar{x} = 3.22$), research activities enhance their high level of intelligence ($\bar{x} = 3.42$), research activities should not be the pre-requisite for the promotion of academic staff ($\bar{x} = 2.52$) and they like research activities because it is sometimes prove to be pragmatism ($\bar{x} = 2.72$). Also, the table revealed that the lecturers disagreed that: research activity is boring ($\bar{x} = 1.93$), research activity has no benefit to their academic career ($\bar{x} = 1.73$), give little or no attention to research activity ($\bar{x} = 1.67$), prefer other activities such as sport to research work ($\bar{x} = 2.06$), dislike research activities because of its financial commitments ($\bar{x} = 1.90$), research activities affects my other personal activities ($\bar{x} = 2.31$) and that they dislike research works because the research findings are not usually implemented ($\bar{x} = 2.38$). Meanwhile, based on the value of the weighted average (2.87 out of 4.00 maximum value obtainable) which falls within the decision value for positive, it can be inferred that the attitude of lecturers towards research activities in Colleges of Education is positive.



Hypotheses Testing

Ho1: There is no significant relationship between ICT resources utilization and research output of lecturers in college Education.

Table: 3 Summary of Pearson Product Moment Correlation Showing Relationship between ICT Resources Utilization and Lecturers Research Output

| Variable | Mean | Std. D | N | r | Sig(p) | Remark |
|---------------------------|-------|--------|-----|-------|--------|-------------|
| ICT Resources Utilization | 36.25 | 7.28 | 693 | -.208 | .000 | Significant |
| Research Output | 40.25 | 8.85 | | | | |

Table 3 shows the relationship between ICT resources utilization and lecturers' research output in colleges of education. The table shows that there is a strong relationship between ICT resources utilization and lecturer research output in colleges of education, which was statistically significant though the relationship revealed to be negative. ($N = 693$; $r = -.208$; $p < 0.05$). Hence, hypothesis 1 which states that there is no significant relationship between ICT resources utilization and research output of lecturers in college Education that was not rejected.

Ho2: There is no significant relationship between attitude and research output of lecturers in colleges of education.

Table 4: Summary of Pearson Product Moment Correlation Showing Relationship between Attitude and Lecturers Research Output

| Variable | Mean | Std. D | N | r | Sig(p) | Remark |
|-----------------|-------|--------|-----|-------|--------|-------------|
| Attitude | 57.39 | 5.78 | 693 | -.300 | .000 | Significant |
| Research Output | 40.25 | 8.85 | | | | |

Table 4 shows the relationship between attitude and lecturer research output in colleges of education. The table shows that there was a strong relationship between attitude and lecturer research output in colleges of education, which was statistically significant. ($N = 693$; $r = -.300$; $p < 0.05$). Hence, hypothesis 2 is not accepted.

Discussion of Results

The study revealed that only computers were available to lecturers for research. This was corroborated by the school librarian. It was further revealed that most of the items listed were not available in the sampled schools. It was also revealed in the study that there was significant relationship between ICT resources utilization and lecturer research output in Colleges of Education in Nigeria.

The study revealed that there was positive attitude of lecturers towards research activities. Most of the lecturers responded that they like engaging in research activities. Only very few of the lecturers responded that they have no interest in research work because it requires more time and financial commitment. This finding is in agreement with findings of Eltabakh



(2013) who find positive attitude of university faculty members in teaching and research activities. It was further revealed significant relationship between lecturers' attitude and research output. The implication of this is that lecturers' attitudes will enhance research output of lecturers in colleges of education in Nigeria.

Conclusion and Recommendation

The study found out that most college of education lecturers indicated that the use of ICT resources in research was very important irrespective of their age and gender. Moreover, most of the respondents responded affirmative that the ICT resources for research work are grossly inadequate in colleges of education. Again, most respondents used ICT in their research because it ensured quick access to information, convenient access to information and saves time. Furthermore, the study also showed that lecturers developed positive attitude to research work in colleges of education in Nigeria.

Based on the findings, the following recommendations are provided

1. Government and all the other stakeholders in education sector should provide the scarce ICT based technologies for video conferencing technology, E- learning software, smart card technology more electronic learning resources and also explore cloud computing in order to allow college of education lecturers to maximize the usage of ICT facilities for research activities.
2. Regular workshops seminars and in- service training be organized for lecturers in colleges of education in order to improve their skills on effective use of ICT facilities for research activities.
3. Lecturers attitude to research activities should be enhanced by giving opportunities to lecturers to have access to sponsored conferences, seminar, Journals and research works.
4. College of education managements should encourage collaborative research work with other tertiary institution both locally and internationally. This will in no small measure increase research output of lecturers in college of education.

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