IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON EFFECTIVE TEACHING AND LEARNING PROCESS IN TECHNICAL COLLEGES IN EKITI STATE

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Abstract
This paper examined the impact of Information and Communication Technology, ICT, on effective teaching and learning process in technical colleges in Ekiti State. The paper also explored teachers' related factor affecting effective use of ICT in technical colleges in Ekiti State. It was a descriptive research of a survey type and the population covered all the teachers and students in all he 5 technical colleges in Ekiti State; out of which random sampling technique was used to select 20 teachers and 150 students as the sample size. The data collected through a closed ended questionnaire was analyzed through mean and standard deviation for the research questions and simple linear regression for the formulated hypotesis. It was discovered that there was a significant effect of ICT on effective teaching and learning process in technical colleges in Ekiti State, and that poor planning for the use of technology, teachers' inexperience in using technology as a productivity tool and lack of timely training are teachers' related factors affecting effective use of ICT in technical colleges in Ekiti State. Based on the findings, it was therefore recommended teachers should not neglect ICT facilities in the teaching and learning process and they should be adequately trained and supervised thoroughly so as to achieve the importance of ICT facilities in the teaching and learning process.

Keywords: ICT, Teaching and Leaning, Technical Colleges

Introduction

There is no doubt that technical colleges play an important role in the economic development of any nation. Hence, the need for efficiency and effectiveness among teachers and students in technical colleges thus cannot be overemphasized. Olaitan (2009) opined that higher performance in the educational sector is always contingent on the availability of adequate, capable teachers, good welfare package, availability and proper usage of instructional aids. This implies that availability of adequate, capable teachers and good welfare package without instructional aids that will breed higher connection between the instructor and students and also simplify the teaching and learning process will affect the performance level of teachers and the productivities of students. Instructional aids, part of which is Information and Communication Technology (ICTs), are indispensable in the teaching and learning process in technical colleges.

Technical education gives individuals the skills to live, learn and work as a productive citizen in a global society. Okoro (2009) described technical education as all those experiences whereby an individual learns to carry on successfully any useful occupation. This implies that technical education is that aspect of education that is mainly concerned with the preparation of individuals for skilled performance on task that is geared towards

making the learner much more productive through improved performance in either paid employment or in self-employment. Winer (2002) in his contribution opined that technical education is designed to develop skills, abilities, understanding, attitudes, work habits and appreciation encompassing knowledge and information needed by workers to enter and make progress in employment on a useful and productive basis. It is an integral part of the total education programme and contributes towards the development of good citizens by developing their physical, socio, civic, cultural and economic competencies.

According to the National Policy on Education (NPE), technical education is described as that aspect of education that leads to the acquisition of practical and applied skills as well as basic scientific knowledge. In this sense, it forms a practical segment of education that involves skill acquisition. Therefore, technical education is a subset of vocational education. Olaitan (2009) opined that technical education can be explained in terms of: – training designed to advance an individual's proficiency in relation to his or her present or future occupation, training or re-training which is given in schools or classes under public supervision and control; provision of systematic training experiences which are designed to fit individuals in recognized occupations. Thus, vocational education is that part of total educational system, which offers courses leading to the acquisition of specific skills to enable one to perform certain job. Sometimes, vocational education offers re-training to up-grade workers already in employment.

The teaching and learning of technical subjects demand engagement of students in practical work especially with any of information and communication technology tools. According to Ashrafi and Murtaza (2008), ICT refers to a wide range of computerized technologies that enables communication and the electronic capturing, processing, and transmission of information. These technologies include products and services such as desktop computers, laptops, hand-held devices, wired or wireless intranet, business productivity software, data storage and security, network security etc. With the use of ICT, teachers and students can interact more efficiently and access events and material remote in time (Buhalis, 2003). This implies that with the use of ICT, the time constraint, and distance barrier to accessing relevant information is eliminated or drastically reduced.

The field of education has been affected by the ICTs, which have undoubtedly affected teaching, learning, and research (Yusuf, 2005). Al-Ansari, (2006) submitted that ICTs could enhance the teaching process of technical subjects in several ways; by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher productivities. Corroborating this Dawson and Rakes (2003), observed that ICTs have the potentials to accelerate, enrich and deepen skills, to motivate and engage students, to help relate school experiences to work practices, create economic viability for tomorrow's workers as well as strengthening teaching and helping school change. ICT has an impact not only on what students should learn, but it also plays a major role on how the students should learn.

According to Scrimshaw (2004), ICTs are revolutionizing education by removing distance from education and making knowledge more accessible to all.

Technology-enhanced learning will play a crucial role in the development of a lifelong learning culture and has the capacity to empower learners by providing them with multiple pathways that offer choices and channels to meet their education and training needs (Human Resources Development Canada, 1998). It is not surprising therefore to see a growing interest in Technology-Based Learning (TBL) across the world. TBL may be defined as the array of hardware and software used in the teaching and learning systems that include computer-based training systems, multimedia systems, electronic performance support systems, telecommunications systems, as well as the Internet with World Wide Web systems.

The rate at which the Internet is being accessed keeps increasing at lightning speed. TBL can enhance teaching and learning; it has the potential to become cost-effective as it offers greater flexibility regarding time and location of training delivery (Furst-Bowe, 1996). Additionally, TBL may facilitate institutional policy regarding access and equity (Lafreniere, 1997). Technology also provides greater flexibility to adapt teaching and learning to meet learners' cognitive and learning styles. Expanding this Imel (2008) opined that ICT changes the characteristics of problems and learning tasks, and hence play an important task as mediator of cognitive development, enhancing the acquisition of generic cognitive competencies as essential for life in our knowledge society. ICTs allow learners to explore and discover rather than merely listen and remember.

Jawarneh, El-Hersh and Khazaleh (2007) and Moreno, Helenius and Jarmo (2001) opined that the use of ICT in passing instruction to students can provide schools with potential access to the world of work outside of the school and allows teachers to design useful learning environments that emphasizes learning in the context of real world activities for technical students. Successful use of ICT in schools can help students to develop skills; both specific to ICT and more generally, that will be useful for them in their future academic and professional lives (OECD 2005). Such students will have the advantage of being familiar with different media common to the modern workplace, and should be able to use these ICT skills to access, compile, synthesize and exchange information effectively.

Numerous research studies provide a long list of factors that can potentially affect the use of technology in colleges. These factors include lack of convenient access to computers, inadequate infrastructure, poor planning for the use of technology (Smerdon, Cronen, Lanahan, Anderson, Iannotti, & Angeles 2000), and teachers' inexperience in using technology as a productivity tool (Hope, 1998). According to some researchers, teachers have the most impact on the quality of technology use in schools and therefore, factors relating to teachers are most frequently cited as influencing technology use in schools. For example, Hardy's (1998) review of studies on teacher attitudes revealed that teacher confidence affects the use of technology more than variables such as access to equipment, administrative support, and time.

Other researchers have noted various important, teacher-related variables that influence the effective adoption or implementation of information technology. For example, whether teachers are positive about technology (Becker & Ravitz, 2000); whether they realize the advantages of integrating technology in their teaching (Scrimshaw, 2004); teachers' beliefs and

views on information technologies (Norton, McRobbie, & Cooper, 2000); teachers' resistance to change in general (Jones, 2004) and their willingness to change their long-standing pedagogical practices (Snoeyink & Ertmer, 2001) and classroom role (Hardy, 1998); teachers' confidence to incorporate innovation and their commitment to the innovation (Dawson & Rakes, 2003); teachers ability to integrate technology (Kent & McNergney, 1999); prior negative experiences of using technology as a productivity tool (Snoeyink & Ertmer, 2001) and feelings of intimidation if they sense students know more than them (Fryer, 2003).

Similarly, students complained that the use of ICT facilities provided by the schools couldn't go around the students due to shortage supply. Some other students complained that some teachers are not skilled in using ICT in teaching them. This is why such teachers prefer to stick to the traditional method of teaching. This can be supported with the view of Adeshina (2007) who stated that for technical subject teachers to grow professionally and remain relevant, they must possess ICT skills. On the basis of the foregoing and with the aim of advancing the frontiers of knowledge, the paper is designed to examine the impact of Information and Communication Technology, ICT, on teaching and learning process in technical colleges in Ekiti State.

Purpose of the Study

The purpose of this study is to examine the impact of Information and Communication Technology on effective teaching and learning process in technical colleges in Ekiti State and also explore teachers' related factor affecting effective use of ICT in technical colleges in Ekiti State.

Research Question

Stemming from the purposes of the study, the following research questions are raised to guide the study:

i. Is there any significant impact of ICT on effective teaching and learning process in technical colleges in Ekiti State?
ii. Are there teachers' related factors affecting effective use of ICT in technical colleges in Ekiti State

Research Hypotheses

The following hypotheses are formulated for the study:

$H_0$1: There is no significant impact of ICT on effective teaching and learning process in technical colleges in Ekiti State.

Methodology

The study adopted a descriptive research design of the survey type and the population covered all the teachers and students in all the 5 technical colleges in Ekiti State. The sample that was determined through random sampling technique consisted of 20 teachers and 150 students across the 5 technical colleges in Ekiti State. The sample consisted of 4 teachers and 30 students from each college; making a total of 170 respondents. To collect the needed data, a close ended questionnaire was used and validity and reliability of the instrument were done accordingly. Validity of the instrument was done by reputable colleagues in the department while Cronbach Alpha was used to ascertain the reliability of the instrument; having administered the questionnaire on a set of respondents outside the sampled ones. The data collected was analyzed through mean and standard deviation and chi-square.

Results and Discussion and Findings

Research Questions

Research Question 1: Is there any significant impact of ICT on effective teaching and

learning process in technical colleges in Ekiti State

Table 1: Respondents' Responses on the impact of ICT on Effective Teaching and Learning Process in Technical Colleges in Ekiti State.

S/N	Items	*f*	Mean	Std Deviation	Remarks
1	The introduction of ICT in the teaching and learning process increases students' retention rate	18	3.51	1.457	Agreed
2	ICT has made the learning of technical subject easier for students	33	4.03	1.057	Agreed
3	With ICT, students need little assistance from teachers in workshop activities	41	4.38	1.187	Agreed
4	Learning with ICT has improved academic performance of the students	28	3.64	1.299	Agreed
5	With the introduction of ICT, teaching and learning process is more interesting	30	3.92	1.336	Agreed
6	The use of ICT causes effective teaching and learning	20	3.55	1.296	Agreed

Source: Field Survey

The outcome above revealed that the respondents agreed that the introduction of ICT in the teaching and learning process increases students' retention rate, ICT has made the learning of technical subject easier for students, With ICT, students need little assistance from teachers in workshop activities, learning with ICT has improved academic performance of the students, with the introduction of ICT, teaching and learning process is more interesting, the use of ICT breed effective teaching and learning with mean and standard deviation of 3.51(1.457); 4.03(1.057); 4.38(1.187); 3.64(1.299); 3.92(1.336) and 3.55(1.296) respectively.

Research Question 2: Are there teachers' related factors affecting effective use of ICT in technical colleges in Ekiti State

Table 2: Responses of the respondents on Teachers' Related Factors Affecting Effective Use of ICT in Technical Colleges in Ekiti State

S/N	Items	*f*	Mean	Std Deviation	Remarks
1	lack of convenient access to computers	21	3.61	1.330	Agreed
2	Inadequate infrastructure, poor planning for the use of technology	32	3.82	1.317	Agreed
3	Teachers' inexperience in using technology as a productivity tool	28	3.76	1.452	Agreed
4	Lack of timely training	35	3.87	1.252	Agreed
5	Teachers' resistance to change in general their willingness to change their long-standing pedagogical practices	15	3.54	1.572	Agreed
6	Feelings of intimidation if they sense students know more than them	39	4.02	1.055	Agreed

Source: Field Survey

The discovery above revealed that the respondents agreed that lack of convenient access to computers, inadequate infrastructure, poor planning for the use of technology, teachers' inexperience in using technology as a productivity tool, lack of timely training, teachers' resistance to change in general their willingness to change their long-standing pedagogical practices and feelings of intimidation if they sense students know more than them were the teachers' related factors affecting effective use of ICT in technical colleges in Ekiti State with mean and standard deviation of 3.61(1.330); 3.82(1.317); 3.76(1.452); 3.87(1.252); 3.54(1.572) and 4.02(1.055) respectively.

Testing of Hypotheses

Hypothesis 1: There is no significant impact of ICT on effective teaching and learning process in technical colleges in Ekiti State.

Table 3: Simple Regression Analysis of the Impact of ICT on Effective Teaching and Learning Process in Technical Colleges in Ekiti State

Dependent variable: Teaching and learning in technical colleges

Model	Coefficients	Std Error	R	R^2	F	P.value
Constant	1.785	0.279	0.44	0.18	16.6	0.000
ICT	0.385	0.094				

Source: Authors' Computation

Estimation presented in the table above reported coefficient estimate of 0.385 alongside probability value of 0.000 for internal audit. The result showed that ICT exerts a significant positive effect on effective teaching and learning in technical colleges in Ekiti State, reflecting that effective teaching and learning increases by 0.385 following the usage of ICT facilities. R-square reported stood at 0.18, which implies that about 18% systematic variation in the effective teaching and learning in technical colleges could be explained by the usage of ICT facilities.

Discussion of Findings

The result showed that ICT exerts a significant positive effect on effective teaching and learning in technical colleges in Ekiti State, reflecting that effective teaching and learning increases following the usage of ICT facilities. The consequence of this finding is that ICT facilities are very instrumental to bridge the gap of individual differences and supplying the teaching and learning process in technical college in Ekiti State and beyond. In the same vein, this discovery adduced that the use of ICT facilities in the teaching and learning process help students to be relevant in the world of work. This finding was similar to the findings of Jawarneh, El-Hersh and Khazaleh (2007) and Moreno, Helenius and Jarmo (2001). They submitted that the use of ICT in passing instruction to students can provide schools with potential access to the world of work outside of the school and allows teachers to design a useful learning environment that emphasizes learning in the context of real-world activities for technical students.

It was also discovered that there are teachers' related factors affecting effective use of ICT in technical colleges in Ekiti State. The reveals that the efficiency level of teachers in using ICT facilities to pass instruction to college students is plagued with problems such as that lack of

convenient access to computers, inadequate infrastructure, poor planning for the use of technology, teachers' inexperience in using technology as a productivity tool, lack of timely training and teachers' resistance to change in general their willingness to change their long-standing pedagogical practices, but to mention just a few. These findings corroborated the conclusion of Smerdon, Cronen, Lanahan, Anderson, Iannotti and Angeles (2000), Hope (1998), Jones (2004) and Dawson and Rakes, 2003). They confirmed that the aforementioned factors were the relevant teachers-related factors affecting effective use of ICT in technical colleges in Ekiti State.

Conclusion and Recommendation

This paper centered on the impact of ICT on effective teaching and learning in technical colleges in Ekiti State. Based on the findings of this study, it was concluded that there was a significant effect of ICT on effective teaching and learning process in technical colleges in Ekiti State and that there are teachers' related factors such as poor planning for the use of technology, teachers' inexperience in using technology as a productivity tool and lack of timely training and teachers' resistance to change, affecting effective use of ICT in technical colleges in Ekiti State. It was therefore recommended that ministry of education should make available the necessary ICT facilities, teachers are urged not to neglect ICT facilities in the teaching and learning process and also teachers should be adequately trained and supervised thoroughly so as to achieve the importance of ICT facilities in the teaching and learning process.

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EFFECT OF SEX EDUCATION ON KNOWLEDGE, ATTITUDE AND PRACTICE OF SEXUAL RISK BEHAVIOUR AMONG ADOLESCENTS IN ADO-EKITI, NIGERIA.

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Abstract

Sex education was carried out among adolescents in Ado-Ekiti with the aim of improving their knowledge of and attitude to sexual risk behaviour thereby reducing the practice of these behaviour among them.103 secondary school students, selected from two schools in Ado-Ekiti, using simple random sampling, constituted the sample for this study. Pretest-Posttest quasi-experimental nonequivalent groups design was adopted for this study. Questionnaire with reliability coefficient of 0.68 was the instrument for data collection. Frequency counts and percentages were used to analyse the demographic data of the participants while ANCOVA was