

Business Educators' Rating of Techniques for Improving the Teaching of Information and Communication Technology Courses in Tertiary Institutions in Anambra State

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Abstract: The poor condition of teaching ICT in Nigeria tertiary institutions cannot help the graduates to possess the requisite skills that will enable them perform effectively in their entrepreneurial ambitions. The study examined business educators' rating of techniques for improving teaching of information and communication technology courses in tertiary institutions in Anambra State. Two purposes and corresponding research questions guided the study. Two null hypotheses were tested at 0.05 level of significance. Related literature pertinent to the study were reviewed which highlighted the relevance of the study. Descriptive survey research design was adopted for the study. The population of the study comprised of 106 business educators in tertiary institutions in Anambra State. A structured questionnaire developed by the researchers and validated by two business education experts was used for data collection. Cronbach Alpha was used to test the reliability of the instrument which yielded a index of 0.85. Data collected from the study were analyzed using mean, standard deviation and the t-test. Mean was used to answer the research questions and standard deviation was used to explain how the responses of the respondents varied. The t-test was used to test the hypotheses at 0.05 level of significant. Statistical Package for Social Sciences (SPSS) was used to analyze the data. The results showed that business educators in tertiary institutions in Anambra State agreed that organized practical work will improve the teaching of ICT courses while they strongly agree that project method will also improve the of ICT in tertiary institutions. The results also showed that male and female business educators differ significantly in their mean ratings on the organized practical work and project method techniques for improving the teaching of ICT courses. Based on the findings, the researchers recommended among others, that business educators should utilize the techniques identified as being capable of improving the teaching of ICT in tertiary institutions. Business educators should also make efforts to own quality Personal Computer (PC), Internet enabled mobile phones and other internet powered gadgets to supplement gross inadequacies of ICT facilities in the school system. This will enable them to achieve individualized instruction in the teaching and learning process of business education.

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Introduction

The emergence of Information and Communication Technology (ICT) as recorded in recent times has brought advancement in different spheres of human endeavour; education, business and so on. So many technological tools, gadgets and software programmes are being discovered on daily basis and the need to develop our human capital towards the acquisition and utilization of this knowledge becomes inevitable (Okoli, 2012). Education is regarded as the bedrock of any national development and the issue of technological application in teaching is considered a priority for other resource areas to tap into. Information and Communication Technology is a system that is used in the processing, storage and transfer of information which can be audio, visual or both in the form of numbers, letters and pictures. Information and Communication Technology (ICT) plays a vital role in the development of any nation. It has been an instrument for achieving social, economic, scientific and technological development (Adedeji, 2010). ICT has greatly influenced the education sector, especially teaching, learning and research. The application of ICT is not only emphasized in business organizations and in industrial sector, but is an essential part of education at all levels (Allen, 2011).

The National Policy on Information Technology (Federal Republic of Nigeria, FRN (2014) emphasized the integration of ICT at all levels of education. This was to ensure the actualization of the goals of education as stated in the National Policy on Education, (FRN, 2014). The goals include: contribution to national development through high manpower training, development of individual intellectual capability in order to understand their immediate environment and other goals are the provision of opportunities for the acquisition of physical and intellectual skills for individuals to be self-reliant and become useful members of the society. The policy statement identified ICT as the bedrock of national survival and development in a rapidly changing global environment.

Information and Communication Technology as applied to business education according to Igberaharha in Okoro (2013) involves the use of networks, expert systems, and artificial intelligence in what is now known as electronic commerce (e-commerce) or electronic business (e-communication business). E-commerce helps to facilitate the exchange of information, goods and services between companies and their customers. Business operations are also much dependent on ICT. This is because the impact of communication and information technology is felt in all aspects of an organization's life from manufacturing to the service sector particularly marketing.

ICT is often perceived as a catalyst for change, change in teaching styles, and change in learning approaches and in access to information. ICTs can help by providing alternative possibilities for education (Casal, 2007). Use of different information and communication technologies has become inevitable for students in learning. By using modern information communication technologies, students can retrieve required information within a short time. They can access and disseminate electronic information such as e-books and e-journals and can improve their learning by using different modern ICTs in form of wireless networks, internet, search engines, databases, websites, and web 2.0 technologies. Teachers are a vital link in the education chain, and for education to truly respond to the needs of 21st century, they must play a central role in leveraging technology, and in particular, using Information and Communication Technology (ICT) devices in teaching and learning.

Globally, the nature of teaching is changing rapidly due to increased interaction from more accessible global telecommunication networks driven by the content of the internet. With the

increasing capacity of information and communication technology, there is a rise in new learning opportunities beyond the traditional- book-teacher's model. The shift from the teacher centered to student-centered learning via the internet means teachers and students at all level need to embrace information and communication technology. Information and communication technology is generally accepted as a model instrumental tool that enables the business educator to modify the teaching techniques use in order to increase the student's interest.

These techniques are the tools of effective practice and teachers should plan for whole class, small groups and independent work. Within these contexts, effective teachers will provide a varying degree of support that reflects the needs of the students and the challenge in learning. It can also be maintained that discovering the best technique for teaching ICT will enhance students' learning process through active participation in the classroom. Okwuanaso (2004) stated that business educators who are professionally current and are using appropriate teaching techniques in their instructional delivery, contribute to improving the standard of business education. In view of this, business educators need to use different techniques in teaching ICT to ensure student-centered learning method in the classroom for creativity, innovative and critical thinking. Classroom teaching is likely to be more effective when it is informed by an understanding of how students learn. Effective teaching of the skilled business courses, like ICT, demands adequate and appropriate use of relevant instructional techniques by a competent business educator who is aware of the appropriate skills and competencies required to prepare the learner for the world of work or for personal use purposes. These instructional techniques such as organized practical work and project method will help to improve the teaching of ICT in tertiary institutions and increase students' performance.

Organized practical work refers to any type of teaching activity in which students, working either individually or in small groups, are involved in manipulating and/or observing real objects and materials as opposed to virtual objects and materials such as those obtained from a DVD, a computer simulation, or even from a text-based account (Millar, 2011). Practical work in this sense is a broad category that includes, for example, recipe, style tasks, experiments, investigations and discovery style tasks. Students also see practical work as being effective in terms of their learning and enjoyment of teaching ICT.

Project method is a comprehensive perspective focused on teaching by engaging students in investigation (Greno, 2006). According to Mills (2009), project method of teaching is one of the most effective ways of arousing interest. The method is a reaction against the rather rigid and artificial divisions of knowledge and shows that a practical job or problem in real life demands blending of several subjects. Mills further stated that the project method can be very rewarding in terms of achieving behavioural objectives of the knowledge which leads to experimentation and evaluation. This method is a technique that can be used in improving the teaching of ICT in tertiary institutions.

Considering this views, tertiary institutions in Nigeria are faced with the challenges of incorporating the new technologies into their programme. This places increased competitive pressure on business educators to differentiate themselves and compete distinctively by adopting the new technologies in their programme to meet the needs of students who must be prepared adequately to fit into ICT permeated environment (Okuta, 2010). Business educators are professional teachers of business who are constantly aware of the state of the art in education "for" and "about" business. The advent of ICTs demands that business

educators should adequately possess ICT competencies needed for them to impart knowledge effectively to the students (Okeke and Ezenwafor, 2011).

Business educators are male and female lecturers who teach students the fundamentals, theories and processes of business. Some of them teach in colleges of education and universities with so many years of experiences. Some are found in rural and urban areas and are not gender biased. The gender of business educators may not influence their rating of techniques for improving the teaching of ICT in tertiary institutions. This could be due to the fact that male and female business educators have realized the need to adopt various organized practical work, project method of instruction among others in teaching ICT to produce graduates that will be competent in today's business world. In support, Okoro (2013) and Mills (2009) stated that gender was not considered when techniques are used for teaching ICT because ICT is effective and suitable for arousing student interest and improving the level of teaching.

The use of Information and Communication Technology (ICT) in the educational institutions has continued to pose a serious threat to the students and business educators alike. It has been observed that there has been a persistent poor performance in ICT courses in higher institutions in the past years. Identifying techniques for improving the teaching of ICT in tertiary institution will help to improve students' acquisition of Information Communication Technology skills for proper adaptation in the labour market after graduation (Jerry, 2006).

Statement of the Problem

Information and Communication Technology (ICT) has provided innovation for teaching and learning, and has engendered advances in research about how people learn, thereby bringing about rethinking the structure of education. The advent of ICT demands that business educators should adequately possess the ICT competency required to impart practical knowledge. The teaching of ICT is more of theoretical rather than practical in most tertiary institutions in Nigeria which also affect students' performance in practical exercise. Most of them find it difficult to operate in an office equipped with ICT facilities as found in modern day offices. Egboka (2012) revealed that lecturers are not provided with ICT trainers (technologist) to guide them in supervising practicals until they are comfortable with ICT usage on their own and lecturers are not provided with ICT educational resources that are directly related to the curriculum. The poor condition of teaching ICT in Nigeria tertiary institutions cannot help the graduates to possess the requisite skills that will enable them perform effectively in their entrepreneurial ambitions. The problem of the study therefore, is that business education students perform poorly in ICT courses hence the need for this study.

Purpose of the Study

The main purpose of this study was to ascertain business educators rating on techniques for improving the teaching of information and communication technology courses in tertiary institutions in Anambra State. Specifically, the study sought to ascertain business educators ratings on the:

1. Techniques in organized practical work for improving the teaching of ICT courses in tertiary institutions in Anambra State.
2. Techniques in project work for improving the teaching of ICT courses in tertiary institutions in Anambra State.

Research Questions

The following research questions guided this study.

1. What are the techniques in organized practical work for improving the teaching of ICT courses in tertiary institutions in Anambra State?
2. What are the techniques in project work for improving the teaching of ICT courses in tertiary institutions in Anambra State?

Hypotheses

The following null-hypotheses were tested at 0.05 level of significance.

1. There is no significant difference in the mean ratings of male and female business educators in tertiary institutions in Anambra State on the techniques in organized practical work for improving the teaching of ICT courses in tertiary institutions in Anambra State.
2. There is no significant difference in the mean ratings of male and female business educators in tertiary institutions in Anambra State on the techniques in project work for improving the teaching of ICT courses in tertiary institutions in Anambra State.

Literature Review

Business Educators

Business educators are professionally trained teachers of business subjects who are competent in teaching all business related subject in the faculty of education in universities and colleges of education. Aliyu (2006) stated that one can be referred to as a business educator only when one has a basic knowledge of all the three options (programme areas) of the business teacher education programme. According to Okeke and Ezenwafor (2012) business educators are professional teachers of business subjects who are constantly aware of the state of the art in business education and business world. Business educators are trained in colleges of education and faculty of education in universities. This is for the educators to acquire pedagogical and business competencies in the world of work. It will enable them to produce competent and skillful business teachers, office administrators, entrepreneurs and businessmen and women that will effectively secure jobs and make a career from it in the world of work (Olaitan *et al.*, 2009). A business educator should be more practical in their approach to teaching especially in ICT courses so that students could acquire practical skills and knowledge needed to function properly in this technological era.

Techniques

Technique is the manner and ability with which an artist, writer, athlete, among others employs the technical skills of a particular art or field of endeavor (Kernerman, 2009). It is also the body of specialized procedures and methods used in any specific field especially in an area of applied science. Technique is skill and ability which a person develops through training and practice. Technique involves all the processes or ways adopted for effective teaching. According to Nwankwo (2014), techniques are the various teaching methods which are employed by educators in teaching effectively. Techniques can further be defined as a way of carrying out a particular task especially in the execution or performance of a teacher or in an artist work as a scientific procedure. In the context of this study, techniques are defined as the use of various instructional methods applied by lecturers (business education lecturers inclusive) with the aim of improving the teaching of ICT in tertiary institutions.

Information and Communication Technology

Information and Communication Technology (ICT) is a system that is used in processing, storing and transferring information which can be audio, visual or both in the form of numbers, letters and pictures. The application of ICT in teaching has raised considerable concern among individuals and the government who made it emphatically clear in its NEEDS

programme that Nigerian should not be caught in the web of ignorance because other nations anchor their development programmes and plans on technologies such as ICT (National Planning Commission, 2014). To this effect, efforts were made by the Federal Government of Nigeria at different times to promote the provision and utilization of ICT equipment in educational institutions, especially in the universities which are regarded as the highest level of education (Okoli, 2012).

Nwabueze (2011) defined ICT as a broad-based technology which uses equipment, applications, methods and management that support the creation, storage, manipulation and communication of information. Federal Ministry of Education (2010) defined ICT as encompassing all equipment and tools (inclusive of traditional technologies of radio, video and television to the newer technologies of computers, hardware, firmware etc), as well as the methods, practices, processes, procedures, concepts and principles that come into play in the conduct of the information and communication activities.

According to Okauru (2011), Information and Communication Technology (ICT) is the digital processing and utilization of information by the use of electronic computers. In effect, it comprises the storage, retrieval, conversion and transmission of information. Howe and Littleton (2010) defined ICT as the study of technology used to handle information and communication. ICT encompasses area such as telephony, broadcast media and all types of audio and video processing and transmission. In the school system especially at university level, there are some techniques used in teaching ICT. Such techniques include project method of instruction and organized practical work.

Theoretical Framework

The theoretical framework of this study was based on Piaget's constructivist theory of learning. Constructivist theory of learning was propounded by Piaget in (1972). The theory stated that learning is active construction of new knowledge based on the learner's prior experience. This theory is relevant to this study in that students acquire the knowledge on ICT individually or as a group through things which they experience and reflecting experiences. Learners have to combine their past experiences in ICT learning process with their thoughts in order to improve effectively.

Organized Practical Work

Organized practical work refers to any type of teaching activity in which students, working either individually or in small groups, are involved in manipulating and/or observing real objects and materials as opposed to virtual objects and materials such as those obtained from a DVD, a computer simulation, or even from a text-based account (Millar, 2011). For students to develop experimental and investigative scientific skills including the use of current technologies, organized practical work becomes necessary. It has been observed that the teaching of business education can be improved and strengthen through business education practical based that it requires, first and foremost, a re-conceptualization of the aims and purpose of business education (Abrahams and Millar, 2008; Osborne, 2010, p. 164). Wellington (2009) comments that 'teachers are always surprised, even shocked, when asked to consider what practical work in business education is for'. This phenomenon might simply reflect the almost sacrosanct position of 'the practical' in school (Delamont *et al.*, 2008). Over the years, there have been several studies that have reported teachers' views of the aims of business education practical work. Kerr (2011) identified ten aims reported by teachers and a further ten more were reported by Beatty and Woolnough (2012). Johnson *et al.*, (2013) in an unpublished study found another ten aims. However, the four most popular aims in all

three studies were: (i) to encourage accurate observation and description; (ii) to make phenomena more real; (iii) to arouse and maintain interest and (iv) to promote a logical and reasoning method of thought. Organized practical work can motivate students, by stimulating interest and enjoyment, teach laboratory skills, enhances the learning of business education.

Project Method

Project method is a student-centered pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems (Hye-Jung and Cheolil, 2012). Students learn about a subject by working for an extended period of time to investigate and respond to a complex question, challenge, or problem. It is a style of active learning and inquiry-based learning. Project method contrasts with paper-based, rote memorization, or teacher-led instruction that simply presents established facts or portrays a smooth path to knowledge by posing questions, problems or scenarios. Markham (2011) describes project method thus: integrates knowing and doing. Students learn knowledge and elements of the core curriculum, but also apply what they know to solve authentic problems and produce results that matter. Project students take advantage of digital tools to produce high quality, collaborative products. Project refocuses education on the student, not the curriculum - a shift mandated by the global world, which rewards intangible assets such as drive, passion, creativity, empathy, and resiliency. These cannot be taught out of a textbook, but must be activated through experience. The basis of project method lies in the authenticity or real-life application of the research. Students working as a team are given a "driving question" to respond to or answer, then directed to create an artifact (or artifacts) to present their gained knowledge. Artifacts may include a variety of media such as writings, art, drawings, three-dimensional representations, videos, photography, or technology-based presentations.

Project method of instruction replaces other traditional models of instruction such as lecture, textbook-workbook driven activities and inquiry as the preferred delivery method for key topics in the curriculum. It is an instructional framework which allows teachers to facilitate and assess deeper understanding rather than stand and deliver factual information (Bellanca, 2010). Project method intentionally develops students' problem solving and creative making of products to communicate deeper understanding of key concepts and mastery of 21st Century essential learning such as critical thinking. Students become active digital researchers and assessors of their own learning when teachers guide student learning so that students learn from the project making processes. This method is a technique that can be used in improving the teaching of ICT in tertiary institutions.

Method

The research design that was used for this study is a descriptive survey. According to Nworgu (2015), a survey research design is the one which aims at collecting data on, and describing in a systematic manner the characteristics, features or facts about a given population. The study was carried out in tertiary institutions in Anambra State. The population of the study comprised 106 business educators in the five tertiary institutions in Anambra State that offer business education programme. There was no sampling because the number was manageable. The instrument for data collection was a researcher designed questionnaire. The questionnaire was structured based on the research questions guiding the study and the literature reviewed. The instrument was constructed on five-point scale of Strongly Agree (SA), Agree (A), Moderately Agree (MA), Disagree (D) and Strongly Disagree (SD). The questionnaire developed for this study was subjected to face validation by two experts in business education. Cronbach Alpha was used to ascertain the internal consistency of the instrument.

This yielded coefficient index of 0.85 which was deemed reliable for the study. The researcher personally administered 106 copies of the instrument with the help of four research assistants who were among the members of the staff in some of the tertiary institutions. Out of 106 copies of questionnaires distributed, a total of 96 were returned by the respondents which represent 93.4% and was used for data analysis. Data collected in the study were analysed using mean and standard deviation to determine the homogeneity or otherwise of the respondents views and t-test inferential statistics was used to test the null hypotheses at 0.05 level of significance. For the hypotheses, where the calculated p-value is less than the stipulated level of significance (0.05), it means that there was significant difference and the hypothesis will be rejected. Conversely, where the calculated p-value is equal to or greater than the stipulated level of significance (0.05), it means that there was no significant difference and the hypothesis will not be rejected. Statistical Package for Social Sciences (SPSS) version 21 was used in the analysis of data.

Results

Research Question 1

What are the techniques in organized practical work for improving the teaching of ICT courses in tertiary institutions in Anambra State?

Table 1. Respondents' mean ratings on the techniques in organized practical work for improving the teaching of ICT courses in tertiary institution (N = 99)

S. No	Practical Work	Mean	SD	Decision
1	Demonstrating specific learning concepts within the classroom	4.39	.49	Agreed
2	Motivating students by stimulating interest and enjoyment	4.40	.49	Agreed
3	Developing expertise in using practical work	4.51	.50	Strongly Agreed
4	Ability in manipulating objects and materials	4.61	.49	Strongly Agreed
5	Developing students ability to do things on their own	4.19	.40	Agreed
6	Providing opportunities to engage students in collaborative work	4.39	.49	Agreed
7	Developing students skills through laboratory training for research	4.71	.46	Strongly Agreed
8	Developing students interest in the use of multimedia projectors	4.30	.46	Agreed
9	Developing students confidence in the use of videophone systems in the classrooms	4.29	.46	Agreed
10	Engaging students and equips them with critical thinking	4.51	.50	Strongly Agreed
Cluster Mean		4.43		Agreed

The result in Table 1 shows that business educators strongly agreed that items 3, 4, 7 and 10 with mean ratings ranging from 4.51 to 4.71 are techniques in organized practical work for improving the teaching of Information and Communication Technology (ICT) courses in tertiary institutions in Anambra state. The respondents agreed that items 1, 2, 5, 6, 8 and 9

with mean ratings ranging from 4.19 to 4.30 are techniques in organized practical work that could improve the teaching of Information and Communication Technology (ICT) courses. The cluster mean of 4.43 indicates that business educators in tertiary institutions in Anambra State agreed that items in organized practical work are techniques for improving the teaching of ICT courses. The standard deviations for the items are within a close range of .40 to .50 which shows that the respondents were homogeneous in their opinion.

Research Question 2

What are the techniques in project work for improving the teaching of ICT courses in tertiary institutions in Anambra State?

Table 2. Respondents' mean ratings on the techniques in project work for improving the teaching of ICT courses in tertiary institutions (N = 99)

S.No	Practical Method	Mean	SD	Decision
1	Structuring meaningful tasks	4.39	.49	Agreed
2	Ability in manipulating objects and materials	4.30	.46	Agreed
3	Designing hand bills	4.49	.50	Agreed
4	Designing book covers	4.71	.46	Strongly Agreed
5	Designing calendars	4.61	.49	Strongly Agreed
6	Designing posters	4.30	.46	Agreed
7	Designing brochures	4.49	.50	Agreed
8	Designing banners	4.71	.46	Strongly Agreed
Cluster Mean		4.50		Strongly Agreed

The result in Table 2, shows that business educators in tertiary institutions in Anambra State strongly agreed that items 4, 5 and 8 with mean ratings ranging from 4.61 to 4.71 are techniques in the projects method for improving the teaching of ICT courses. The respondents agreed that items 1, 2, 3, 6 and 7 with mean ranging from 4.30 to 4.49 are techniques in projects method for improving the teaching of ICT courses. The cluster mean of 4.50 indicates that business educator strongly agreed that items in project method are techniques for improving the teaching of Information and Communication Technology (ICT) in Anambra State. The standard deviation for the items are within a close range of .46 to .50 which shows that the respondents were homogenous in their opinion.

Hypotheses Testing

Hypothesis 1

There is no significant difference in the mean ratings of male and female business educators in tertiary institutions in Anambra State on the techniques in organized practical work for improving the teaching of ICT courses in tertiary institutions in Anambra State.

Table 3. t-test analysis of male and female business educators' mean ratings of organized practical work as a technique for improving the teaching of Information and Communication Technology in tertiary institutions

Variables	N	\bar{X}	SD	Df	P-value	Decision
Male	53	4.45	.05	97	.00	Significant
Female	46	4.41	.02			

The result in Table 3 shows that the p-value of .00 is less than the stipulated 0.05 level of significance and 97 degree of freedom. This means that there is a significance difference in the mean opinions of male and female business educators in tertiary institutions in Anambra state on organized practical work as a technique. Hence the null hypothesis is rejected.

Hypothesis 2

There is no significant difference in the mean ratings of male and female business educators in tertiary institutions in Anambra State on the techniques in project work for improving the teaching of information and communication technology courses in tertiary institutions.

Table 4. t-test analysis of male and female business educators' mean ratings of techniques in project work as a technique for improving the teaching of Information and Communication Technology in tertiary institutions

Variables	N	\bar{X}	SD	Df	P-value	Decision
Male	53	4.54	.19	97	.00	Significant
Female	46	4.45	.12			

The result in Table 4 shows that the p-value of .01 is less than 0.05 level of significance and 97 degree of freedom. This means that there is a significance difference in the mean opinions of male and female business educators in tertiary institutions in Anambra state on techniques in project work as a technique. Hence the null hypothesis is rejected.

Discussion

Findings of the study revealed that business educators in tertiary institutions in Anambra State rated techniques in organized practical work as agreed for improving the teaching of ICT courses in business education. This finding is in consonance with that of Agomuo (2007) who stated that business educators now blend organized practical work through the use of ICT in teaching business education programmes at tertiary level because of its suitability. In agreement, Okolocha and Nwadiani (2015) reported that the emergence of ICT resources necessitated the introduction of organized practical work instructional technique in the teaching of business education courses in colleges of education and universities.

The organized practical work technique for improving the teaching of ICT was championed by Dabesaki (2005) who asserted that techniques in organized practical work for improving the teaching of ICT gives students broad viability and availability of educational opportunities where learning can be accessed irrespective of time and space.

Furthermore, findings of this study reveal that gender significantly affected respondents' mean ratings on the techniques in organized practical work for improving the teaching of ICT. Further explanation to this finding is that perhaps both male and female business educators must have realize the need to adopt organized practical work techniques in teaching ICT to produce graduates that will compete in today's business world. This finding disagrees with the discovery of Mills (2009) that gender should not be considered when organized practical work technique is used for teaching ICT because it is effective and suitable for arousing student interest and improving the level of teaching.

Findings of the study revealed that business educators in tertiary institutions in the area of the study rated the techniques in project work as strongly agreed for improving the teaching of ICT in business education. The outcome of this study agrees with the assertion of Ohakwe and Okwuanaso (2006) that the project method of instruction enables the recipients of

business education to compete favorably in their education endeavors. Ohakwe and Okwuanaso (2006) further stated that teaching of business education courses through ICT project method of instruction makes teaching process efficient, effective, easier and less cumbersome. This supports the findings of Ajibade (2009) which revealed that project method of instruction as a technique for teaching ICT is highly suitable for effective transfer of knowledge, content, concept, skills and attitude to the business students in teaching situation.

The failure to apply project method of instruction in teaching ICT will eventually lead to the production of half-baked business education graduates who cannot function proficiently in modern offices (Omeje, 2008). The study also found a significant difference in the mean ratings of respondents on the project method of instruction for improving the teaching of ICT courses based on gender. This finding supports Okoro (2013) who reported that male and female business educators found project method of instruction highly suitable in helping students to demonstrate the understanding of what have been learnt which in turn helps to maximize students' attentiveness to instruction.

Conclusion

The Information and Communication Technology in Business education courses prepares students for a world of business and communication that relies on electronic technology. Information and communication technology is generally accepted as an instructional tool that enables the business educator to modify the teaching techniques use in order to increase the students' interest. Such techniques involve teaching styles that employ hands-on experiences in learning. Such methods can still be complemented by both lecturing and direct instruction. In the light of the findings of this study, it could be concluded that effective teaching of information and communication technologies can be improved in Anambra State when instructional techniques such as organized practical work and project techniques are adopted and utilized in tertiary institutions in Anambra state.

Recommendations

Based on the findings of the study and conclusion drawn, the following recommendations are made:

1. Deans of faculties and Heads of departments should ensure that adequate and effective teaching strategies for sustaining ICT learning should be used by lecturers in delivering their lectures to the students especially the ones identified in this study.
2. Administrators of tertiary institutions should provide ICT facilities in the classrooms for internet access and effective teaching. Workshop and seminars should be organized for sustaining ICT teaching in their institutions.
3. Business educators should make efforts to own quality Personal Computer (PC), Internet enabled mobile phones and other internet powered gadgets to supplement gross inadequacies of ICT facilities in the school system to achieve individualized instruction in the teaching process of business education and ICT courses.

References

1. Abrahams, I. and Millar, R. 2008. Does practical work actually work? A study of the effectiveness of practical work as a teaching method in school science, *International Journal of Science Education*. 30(14): 1945–1969.
2. Adedeji, S.P. 2011. Definition of microsoft power point. Retrieved from <http://www.ehow.Com> on 23rd June, 2011.

3. Agomuo, E.E. 2007. Modern office technology. Nsukka: University of Nigeria Press.
4. Ajibade, A. 2009. Understanding micro teaching theory and practice. Osogbo: Simba Ventures.
5. Aliyu, M.M. 2006. Business education in Nigeria: Trends and issues. Ilorin: Goshen Print media
6. Allen, A.N. 2011. The need for problem-solving skills in secretariat education curriculum. *Busin. Edu. J.*, 6(1): 197-206.
7. Bellanca, J. 2010. Enriched learning projects, solution tree press, Bloomington, In. Blumenfeld *et al.*, 1991, *Educational Psychologist*, 26(3&4) 369-398 Motivating Project-Based Learning: Sustaining the Doing, Supporting the Learning.
8. Casal, R.C. 2007. ICT for education and development. *Info.* 9(4).
9. Dabesaki, M.C. 2005. Electronic education in Nigeria: Challenges and prospects. A paper presented at the 8th UNICT taskforce meeting at Dublin, Ireland.
10. Delamont, S., Beynon, J. and Atkinson, P. 2008. In the beginning was the Bunsen: The foundations of secondary school science, *Qualit. Stud. Edu.*, 1(4): 315–328.
11. Egboka, P.N. 2012. The status of information and communications technology (ICT) in empowering policy implementation in universities in south east zone of Nigeria. *Int. J. Edu. Res. Dev.*, 8(2): 231-236.
12. Greeno, J.G. 2006. Learning in activity. In: Sawyer, R.K., (Ed.), *The Cambridge handbook of the learning sciences*, New York: Cambridge University Press, pp: 79-96.
13. Howe, C. and Littleton, K. 2010. Educational dialogues: understanding and promoting productive interaction: London. Retrieve from www.educ.cam.ac.uk/people/staff/howe/
14. Hye-Jung, L.H. and Cheolil, L.C. 2012. Peer evaluation in blended team project-based learning: What do students find important? *J. Edu. Tech. Soc.*, 15(4): 214-224.
15. Igberaharha, O.C. 2009. Issues of information and communications technology (ICT). Assessment in teaching and learning of business education courses. *Bus. Edu. J.*, 7(1): 95-105.
16. Jerry, U.C. 2006. ICT in vocational teaching/learning and research in south-east Asian Countries: A study of Bangladesh. *Int. J. Vocat. Techn. Edu.*, 3(2): 20-28.
17. Johnson, S., Monk, M. and Swain, J. 2013. Teacher development and change: an evolutionary perspective. In: Cheng, Y.C., Mok, M.M.C. and Tsui, K.T. (Eds.). *The pursuit of teaching effectiveness and teacher development*. Hong Kong: The Hong Kong Institute of Education.
18. Kernerman, N.A. 2009. English multilingual dictionary. Multilingual: Harper Collins Publishers.

19. Kerr, J.F. 2011. Practical work in school science: an enquiry into the nature and purpose of practical work in school science in England and Wales. Leicester: Leicester University Press.
20. Markham, T. 2011. Project based learning. *Teac. Librar.*, 39(2): 38-42.
21. Millar, R. 2011. Practical work. In: Osborne, J. and Dillon, J., (Eds.), *Good practice in science teaching: What research has to say*, Maidenhead: Open University Press, pp: 108-134.
22. Millar, R. 2011. Practical work. In: Osborne, J. and Dillon, J., (Eds). *Good practice in science teaching: What research has to say*, Maidenhead: Open University Press, pp: 108-134.
23. Mills, A. 2009. 5th Edition. *Unlocking the clubhouse: Women in computing*. Cambridge, Ma: MIT Press.
24. Nwabueze, A.U. 2011. *Information and Communication Technology for Sustainable Development in Nigeria*. Retrieved from <http://www.faqs.org/periodicals>
25. Nworgu, B.G. 2015. *Educational research: Basic issues and methodology*. Owerri: Wisdom publishers.
26. Ohakwe, S. and Okwuanaso, S. 2006. *The access centre: Improving outcomes for all students K-8*. Department of education program, office of special education programmes, Washington DC.
27. Okeke, A.U. and Ezenwafor, J.I. 2011. Office technology skills for e-learning possessed by business educators in universities in south east zones of Nigeria. A paper presented at the first bi-annual faculty of education international conference held on 22-28 June 2011 university conference centre, Nnamdi Azikiwe University, Awka.
28. Okeke, A.U. and Ezenwafor, J.I. 2012. Office technology skill for e-learning possessed by business educators in universities in South East States of Nigeria. *Int. J. Edu. Res. Dev.*, 4(1): 193-199.
29. Okoli, B.E. 2010. A case for entrenchment of information and communication technology (ICT) literacy in the business education programme. *J. Vocat. Adult Edu.*, 7(1): 82-87.
30. Okoli, C.I. 2012. Assessment of ICT challenges and the success of e-learning adoption among business teachers in South East Universities of Nigeria. *Int. J. Edu. Res. Dev.*, 4(1), 284-294.
31. Okolocha, C.C. and Nwadiani, C.O. 2015. Assessment of utilization of ICT resources in teaching among tertiary institution business educators in South Nigeria. *J. Edu. Lear.*, 4(1):1-10.
32. Okoro, J. 2013. Strategies for enhancing the teaching of ICT in business education programmes as perceived by business education lecturers in universities in South-South Nigeria. *Int. Edu. Stu.*, 6(10): 1-12.

33. Okuta, T.S. 2010. Information and communication technology. Lagos: Noun Publishers. 2nd Edition, pp: 86-98.
34. Okwuanaso, S.I. 2004. Improving standards in business education in Nigeria. *Bus. Edu. J.*, 4(2): 12-23.
35. Olaitan, S.O., Amusa, T.A. and Nwobu, V.I. 2009. Quality assurance of instructors in teaching cocoyam production to students in schools of agriculture in South Western Nigeria. *A Journal of the Nigerian Vocational Association* vol. 14 No. 79-89.
36. Osborne, J. 2010. Science education without a laboratory? In: Wellington, J. (Ed.). *Practical Work in School Science Which Way Now?*, London: Routledge, pp: 156-173.
37. Wellington, J. 2009. *Practical work in school science. Which way now?* London: Routledge.
38. Woolnough, B.E. and Allsop, T. 2012. *Practical work in science.* Cambridge: Cambridge University Press.