



INFORMATION AND COMMUNICATION TECHNOLOGY AND INSTRUCTIONAL DELIVERY OF BUSINESS EDUCATION COURSES: EVIDENCE FROM FEDERAL COLLEGE OF EDUCATION (TECHNICAL) AKOKA, LAGOS

OLUWOLE VICTOR FALOBI^{1*}, OLUWASINA SAMSON OKUNEYE², ZAINAB ADETOLA SANSADEEN³

^{1,2,3}*Faculty of Education, Department of Technology and Vocational Education, University of Lagos Akoka, Lagos, Nigeria.*

Corresponding Author: wolefalobi@gmail.com

Abstract

The study examined Information, Communication and Technology (ICT) and its role in fostering instructional delivery of Business Education courses in Federal College of Education (Technical) Akoka, Lagos. A quantitative survey research design was employed for this study. A simple random sampling technique was used to select 200 students for the study from a target population of 415 Business Education students. The data collected from the respondents were analyzed using descriptive statistics such as Mean, Standard Deviation and Inferential statistic such as Pearson Product Moment Correlation. The result showed that not all variables have a significant impact in explaining ICT as an integral part of teaching and learning business education. The result also showed that there is no significant relationship exists between ICT adoption and effective teaching and learning of business education courses. The result further showed that there is no significant relationship between Lecturer's exposure to ICT and quality of instructional delivery in business education. ICT adoption, lecturers' exposure to ICT and ICT utilization do not contribute significantly to the teaching and learning business education courses. The study therefore recommended, among others, that the utilization of ICT for teaching and learning of business education courses should be monitored and assessed regularly to meet a variety of educational objectives.

Keywords: *Business education, ICT, Instructional Materials, Learning, Teaching.*

Introduction

Information and Communication Technology (ICT) refers to technologies that provide access to information through communications. It is a technology that accumulates, evaluates, palpates, handles, and proffers communication of information in digital form. It can also be regarded as a computer-based tool practiced by individuals to function with an organization's information and communication processing demands. ICT is made up of computer and communication technology. Computer technology is the tool for storing and processing information in digital form, while communication technology helps to disseminate digital information. ICT is an agglomeration of technologies for its functional usage in information access and communication (Ogunshola & Wahab, 2005). ICT includes computers, the internet, broadcasting technologies, and telephony (Adomi & Kpangbam, 2010).

ICT is often spoken of in a particular context, such as ICT in education, health care, or libraries (Abe & Adu, 2007). Concerns over educational relevance and quality coexist with the imperative of expanding educational opportunities to those most vulnerable by globalization developing countries in general; low-income groups, girls and women, and low-skilled workers in particular. Global changes also pressure all groups to acquire and apply new skills constantly. The International Labour Organization 2015 defined the requirements for education and training in the



new global economy simply as basic education for all," core work skills for all, and "lifelong learning for all." ICT have been considered as powerful enabling tools for educational change and reform. When used appropriately, different ICT are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality, among others, to help make teaching and learning into an engaging, active process connected to real life. When ICT is appropriately integrated into a broader educational programme, it would be most important in education as a pedagogical tool. ICT has brought about changes in most developing countries; it has introduced new teaching methods and research methods into the education system of Nigeria. It has enabled educational institutions to adopt policies relevant to the new information age to achieve their goals. Nwezeh (2010) stated that ICT had been brought into education facilities for online learning, teaching, and research collaboration, because of their dynamic, interactive, and engaging nature; ICT has influenced the quality and quantity of teaching and learning. The field of education has been flourished by ICT, which have undoubtedly affected teaching, learning, and research (Yusuf, 2005).

Business education is one of the courses taught in tertiary institutions (ABEN, 2017: Falobi & Ononiwu, 2022). Business is needed by students in the contemporary academic World because business education develops life skills for economic success and enables students to develop skills and attitude needed for career success. Business education is education "for" business and "about" business (Edokpolor & Owenvbuigie, 2017). According to Falobi (2019), business education is education for self-reliant and economic development. Business education plays a significant role in Nigeria's economic growth and development. It improves personal qualities and builds the attitudes of individuals necessary for adjustment to personal and employment situations. It also provides knowledge, skills, and competence for individuals to function well in office occupations and create jobs for themselves and others (Amoor & Udoh, 2008). With the introduction of modern equipment in the place of work, business education should prepare students on graduation to serve productively and efficiently in tomorrow's business environment. Business education is the bedrock of every nation's workforce development and poverty alleviation. Okoro (2013) focuses on applying ICT in business education. Using ICT as a teaching tool has the potential to benefit both lecturers and students and the business community as a whole.

Developing ICT for teaching and learning has been used interchangeably in the educational literature as "ICT for education." In contrast, the term "ICT in education" refers to the incorporation of generic ICT components into the process of teaching and learning. ICT as tools within the academic environment in business education involves an application for business administration and management, teaching, and learning of ICT related proficiency for strengthening the presentation of classroom task, teaching/learning intellectual, problem-solving aptitudes, instigating creativity for research and communication tools by teachers and students. We live in a world where frequent changes occur in all sectors, so also, Business education has seen as education for self-reliant and economic development (Falobi, 2019). This induces the authors to undertake this study to examine ICT as an integral part of instructional materials required in teaching and learning of Business Education courses at Federal College of Education.

Statement of the Problem

It is obvious that ICT will contribute maximally to education and society through their adaptability and flexibility in an ever-changing context because the trend of ICT in all facets makes it a necessity. It is important to remember that the main challenge is dealing with this new technological approach to teaching and learning. The fields of knowledge are changing rapidly due to the rapid advancement of technology and its contributions that makes government in their wisdom



provides enough ICT equipment in the colleges of education for teaching and learning purposes. It is therefore believes that, education as a discipline is taking on new challenges that deserve further investigation. That is why this study assessed the use ICT gadgets such as projectors, internet applications, and other technologies in teaching and learning of business education courses at Federal College of Education, Akoka Lagos to ascertain the level of preparedness of business education teacher trainees.

Purpose of the Study

This study aims to assess ICT and its role in teaching and learning Business Education courses in Federal College of Education (Technical), Akoka Lagos. Specifically, the study sought to examine:

1. the extent to which ICT availability associate with business education students learning in Federal College of Education (Technical), Akoka Lagos.
2. the extent to which ICT adoption associate with effective teaching of business education courses in Federal College of Education (Technical), Akoka Lagos.
3. whether Lecturer's exposure to ICT associate with quality of instructional delivery at Federal College of Education (Technical), Akoka Lagos.
4. the extent to which ICT utilization associate with students' interest in business education courses at Federal College of Education (Technical), Akoka, Lagos.

Research Questions

The study will provide answers to the following questions.

1. To what extent do ICT availability associate with business education students' learning at Federal College of Education (Technical), Akoka Lagos?
2. To what extent does ICTs adoption associate with effective teaching of business education courses at Federal College of Education (Technical), Akoka Lagos?
3. To what extent does Lecturer's exposure to ICT associate with quality of instructional delivery in Federal College of Education (Technical), Akoka Lagos?
4. To what extent does ICT utilization associate with students' interest in learning business education courses at Federal College of Education (Technical), Akoka Lagos?

Research Hypotheses

The following null hypotheses guided the study.

Research Hypothesis 1: There is no significant relationship between ICTs availability and students' learning engagements in Federal College of Education (Technical) Akoka Lagos based on gender.

Research Hypothesis 2: There is no significant relationship between ICT adoption and effective teaching and learning of business education in Federal College of Education (Technical) Akoka Lagos based on levels of study.

Research Hypothesis 3: There is no significant relationship between Lecturer's exposure to ICTs and quality of instructional delivery of business education based on gender.

Research Hypothesis 4: There is no significant relationship between ICTs utilization and students' interest in business education courses in Federal College of Education (Technical) Akoka Lagos based on levels of study.

Conceptual Framework

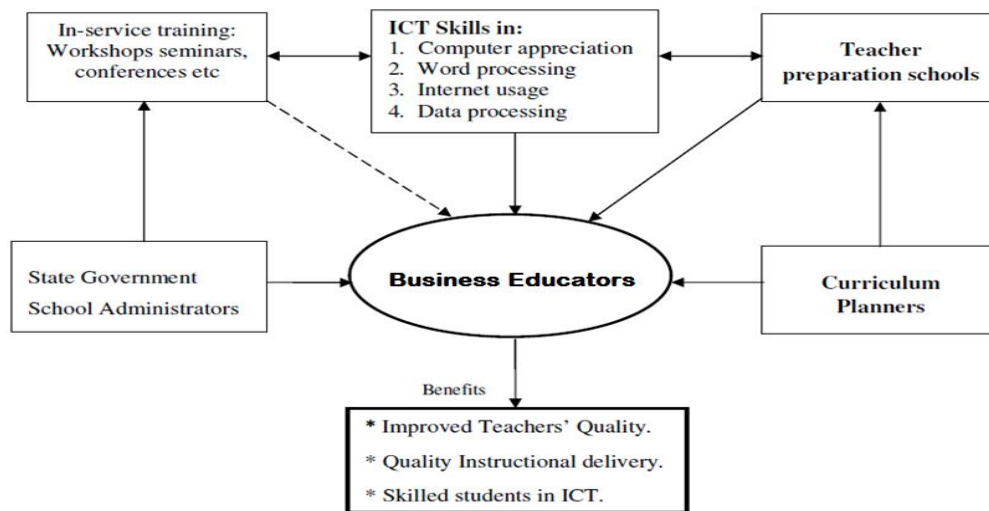


Figure 1: Conceptual Framework of the Study

Source: Authors' Concept

Method

Research Design

The study adopted a quantitative survey research design.

Population and Sample

The population for this study consists of 100-level, 200-level, and 300-level students of business education in Federal College of Education (Technical) Akoka Lagos. The total population of all business education students in Federal College of Education (Technical) Akoka Lagos stands at (415). Using the Raosoft sample size calculator to determine the recommended sample size 200, the study adopted a simple random technique in selecting the students.

Data Collection Instrument

The data used in this study were gathered by the authors using questionnaire, entitled ICT and in teaching and learning of Business Education courses. This implied that the primary data were collected through questionnaire administrations. The questionnaire contained closed-ended questions and specific questions related to the objectives, the research questions and the hypotheses.

Data Collection Instrument Reliability

The instrument's reliability was pilot tested; this was done by administering the instrument to 30 undergraduate students of the Business Education Department of St. Augustine College of Education Akoka Lagos, which is not the institution used for the main study. The pilot study data were analyzed to ensure that the techniques, instruments, and procedures developed for the exploratory study could generate the information required to achieve the study's aims. The collected data were analyzed using the Cronbach alpha coefficient to determine the degree of reliability of the instrument. The Cronbach alpha coefficient yielded a result of 0.807, considered valid and reliable enough for the study. This is used to test the internal consistency of the instrument using Statistical Package for Social Sciences (SPSS) 21.0.

Data Analysis

Descriptive and inferential statistics was used to analyze the data collected from the respondents obtained to achieve the objectives of the study. After the data were collected from the respondents, their responses to the questionnaire were coded and analyzed using various statistics, such as Mean and Standard Deviation for answering the research questions and Pearson Product Moment Correlation Coefficient (PPMCC) were used to test the research hypotheses at a 0.05 levels of significance.

Result

Mean and Standard Deviation (Answering Research Questions)

Research Question 1: To what extent do ICT availability associate with business education students' learning at Federal College of Education (Technical), Akoka Lagos?

Table 1: ICT availability and its association with business education students' learning at Federal College of Education (Technical) Akoka Lagos

ITEMS	VHE	HE	LE	VLE	Mean	SD
Availability of ICT gadgets encourage students to have personal study habits.	131(65.5)	65(32.5)	3(1.5)	1(0.5)	3.63	0.543
Availability of ICT gadgets stimulates my interest in the business education program.	75(37.5)	114(57.0)	8(4.0)	3(1.5)	3.31	0.620
The availability of ICT equipment encourages me to collaborate with students in other institutions	115(57.5)	82(41.0)	2(1.0)	1(0.5)	3.56	0.546
The availability of ICT improves my understanding of concepts in business education	100(50.0)	89(44.5)	11(5.5)	0(0.0)	3.45	0.599
The availability of ICT and its uses has so much impact on the teaching and learning of business education	105(52.5)	77(38.5)	12(6.0)	6(3.0)	3.41	0.737

Percentages in parenthesis

The table above shows the extent that ICTs availability facilitate business education students' learning at Federal College of Education (Technical), Akoka Lagos. More than 75% of the respondents accepted all five (5) items as accurate. The five (5) items' mean ratings are above the 2.50 benchmark for accepting a statement on a four-Likert scale. This confirms the result found from

the frequency and percentages analyses. Conclusively, in the opinion of the majority of the respondents, the extent to which ICT availability facilitate business education students learning is high.

Research Question 2: To what extent does ICTs adoption associate with teaching of business education courses at Federal College of Education (Technical), Akoka Lagos?

Table 2: ICTs adoption and its association with effective teaching of business education courses

ITEMS	VHE	HE	LE	VLE	Mean	SD
Adoption of ICT aids collaboration among lecturers for sharing of expertise on effective teaching	93(46.5)	80(40.0)	22(11.0)	5(2.5)	3.31	0.765
ICT made it easier for lecturers to produce Individualized instructions to cater to all learner types	92(46.0)	91(45.5)	13(6.5)	4(2.0)	3.36	0.694
The use of ICT made improvisation and the use of suitable instructional materials possible	115(57.5)	71(35.5)	12(6.0)	2(1.0)	3.50	0.657
The use of ICT made information on curriculum content available for lecturers for optimal teaching efficiency	91(45.5)	87(43.5)	18(9.0)	4(2.0)	3.33	0.722
ICT adoption aids in clear content delivery to enhance effective teaching	84(42.0)	92(46.0)	21(10.5)	3(1.5)	3.29	0.712

- Percentages in parenthesis

The table above shows the extent that ICT adoption improves the effective teaching of business education. More than half of the respondents accepted all five (5) items as accurate. The five (5) items' mean ratings are above the 2.50 benchmark for the acceptance of a statement on a four Likert scale. This is confirmation of the result found from the frequency and percentages analyses. Conclusively, in the opinion of the majority of the respondents, the extent that ICT adoption improves the effective teaching of business education is high

Research Question 3: To what extent does Lecturer's exposure to ICT associate with quality of instructional delivery in Federal College of Education (Technical), Akoka Lagos?

Table 3: Lecturer's exposure to ICT and its association with quality of instructional delivery

ITEMS	VHE	HE	LE	VLE	Mean	SD
Lecturers' ability to use ICT depends on their experience using the latest software to enhance teaching and learning in business education.	102(51.0)	87(43.5)	7(3.5)	4(2.0)	3.47	0.850
Modern days Business Educators and innovative lecturers adopt ICT for optimal teaching performance.	93(46.5)	85(42.5)	15(7.5)	7(3.5)	3.32	0.762
The lecturer's length of teaching and experience is independent of using ICT in business education.	80(40.0)	81(40.5)	30(15.0)	9(4.5)	3.16	0.841
Periodic training of lecturers in the use of ICT facilities does not improve the exposure of students to their use	98(49.0)	60(30.0)	28(14.0)	14(7.0)	3.21	0.933
Lecturer's use of ICT tools helps them present their lectures in a clear and precise manner	102(51.0)	85(42.5)	10(5.0)	3(1.5)	3.43	0.661

- Percentages in parenthesis

The table above shows the extent that Lecturer's exposure to ICT improve the quality of instructional delivery. More than half of the respondents agreed to all five (5) items as accurate. The five (5) items' mean ratings are above the 2.50 benchmark for the acceptance of a statement on a four Likert scale. This confirms the result found from the frequency and percentages analyses. Conclusively in the opinion of the majority of the respondents, the extent that Lecturer's exposure to ICT improves the quality of instructional delivery is high.

Research Question 4: To what extent does ICT utilization associate with students' interest in learning business education courses at Federal College of Education (Technical), Akoka Lagos?

Table 4: ICT utilization and its association with student's interest in teaching and learning of business education courses.

ITEM	SA	A	D	SD	Mean	SD
ICT utilization aids collaborative study and sharing of knowledge among students	125(62.5)	63(31.5)	11(5.5)	1(0.5)	3.56	0.623
The use of ICT contributes immensely to knowledge acquisition by business education students	81(40.5)	93(46.5)	15(7.5)	11(5.5)	3.22	0.809
ICT utilization aids access to information on all aspects of the program.	106(53.0)	78(39.0)	13(6.5)	3(1.5)	3.44	0.684
The use of ICT for teaching motivates students for high academic achievement	96(48.0)	84(2.0)	17(8.5)	3(1.5)	3.37	0.703
The use of ICT resources helps in the practical problem-solving skills of students	109(54.5)	74(37.0)	14(7.0)	3(1.5)	3.45	0.692

- Percentages in parenthesis

The table above shows the extent that ICT utilization stimulate students' interest in business education courses. More than 70% of the respondents accepted all five (5) items as accurate. The five (5) items' mean ratings are above the 2.50 benchmark for accepting a statement on a four Likert scale. This confirms the result found from the frequency and percentages analyses. Conclusively in the opinion of the majority of the respondents, the extent that ICT utilization stimulates students' interest in business education courses is high.

PPMCC (Testing Research Hypotheses)

Research Hypothesis 1: There is no significant relationship between ICTs availability and students' learning engagements in Federal College of Education (Technical) Akoka Lagos based on gender.

Table 5: Pearson's correlation on the relationship between ICT availability and students' learning of business education courses based on gender.

Variable	N	Mean	SD	r	p	Decision
Gender	197	1.54	0.500	0.233**	0.002	Sig.
ICT Availability and student learning engagement	197	17.355	1.850			

Sig.–Significant

A PPMCC was calculated for the relationship between ICT availability and students' learning of business education in Federal College of Education (Technical), Akoka Lagos based on gender. A very weak positive correlation which was significant, was found ($r = 0.233$; $p=0.002$). Therefore, there is a significant relationship between ICT availability and students' learning of business education in Federal College of Education (Technical), Akoka Lagos based on gender.

Research Hypothesis 2: There is no significant relationship between ICT adoption and effective teaching and learning of business education in Federal College of Education (Technical) Akoka Lagos based on levels of study.

Table 6: Pearson’s correlation on the relationship between ICT adoption and effective teaching and learning and students’ level of study

Variable	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>r</i>	<i>p</i>	Decision
Level of study	197	2.28	0.741	-0.032	0.657	NS
ICT Adoption and effective teaching	197	17.355	1.850			

NS –Not Significant

A PPMCC was calculated for the relationship between ICT adoption and effective teaching and learning of business education in Federal College of Education (Technical), Akoka Lagos based on students' levels of study. A very weak negative correlation which was not significant, was found ($r = -0.032$; $p=0.657$). Therefore, there is no significant relationship between ICT adoption and effective teaching and learning of business education in Federal College of Education (Technical), Akoka Lagos based on students' levels of study.

Research Hypothesis 3: There is no significant relationship between Lecturer's exposure to ICT and quality of instructional delivery of business education based on gender.

Table 7: Pearson’s correlation on the relationship between Lecturer’s exposure to ICTs and quality of instructional delivery of business education based on gender

Variable	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>r</i>	<i>p</i>	Decision
Gender	197	1.54	0.500	-0.046	0.073	NS
Lecturer’s exposure to ICTs and quality of instructional delivery	197	17.01	2.236			

NS – Not Significant

A PPMCC was calculated for the relationship between Lecturer's exposure to ICT and quality of instructional delivery of business education based on gender. A very weak negative correlation which was significant, was found ($r = -0.046$; $p=0.073$). Therefore, there is no significant relationship between Lecturer's exposure to ICT and quality of instructional delivery of business education in Federal College of Education (Technical), Akoka Lagos based on gender.

Research Hypothesis 4: There is no significant relationship between ICT utilization and students' interest in learning business education courses in Federal College of Education (Technical) Akoka Lagos based on levels of study.

Table 8: Pearson's correlation on the relationship between ICT utilization and students' interest in learning business education courses based on levels of study

Variable	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>r</i>	<i>p</i>	Decision
Levels of study	197	2.28	0.741	0.106	0.073	NS
ICT utilization and students' interest	197	17.01	2.236			

NS – Not Significant

A PPMCC was calculated for the relationship between ICT utilization and students' interest in learning of business education courses in Federal College of Education (Technical), Akoka Lagos based on levels of study. A very weak significant positive correlation was found ($r = 0.106$; $p=0.073$). Therefore, there is no significant relationship between ICT utilization and students' interest in learning of business education courses in Federal College of Education (Technical), Akoka Lagos across levels of study.

Discussion

The purpose of this study was to find out how ICT is an integral part of instructional materials required in teaching and learning of Business Education courses. It was found out that availability of ICT facilitates to a high extent the learning of business education courses by the students. The study discovered that the adoption of ICT in an educational programme improves the effective teaching of business education courses. This study supported the work of Yusuf (2005) which states that the field of education has been affected by ICTs, which have undoubtedly affected teaching, learning, and research. This showed that the exposure of lecturer to ICT resources improves their quality of instructional deliveries in the classroom. The utilization of ICT by the lecturers stimulates the students' interest in business education courses.

The result of the study showed that there is significant relationship between the opinions on the influence of ICT availability on students learning in business education. Another hypothesis tested showed that there is no significant relationship between the opinions on the influence of ICT adoption on effective teaching and learning of business education courses across students' level of study. The result of the PPMCC showed that there is no significant relationship between the opinions on the influence of the lecturer exposure to ICT and the quality of instructional delivery of business education courses among the gender. The fourth hypothesis tested stated that there is no significant relationship between opinions on the influence of ICT utilization on the stimulation of students' interest in learning business education courses across level of study.

Conclusion

The findings have led researchers to conclude that using ICT facilities in teaching and learning business courses is effective. Based on the findings of this study, it was concluded that the availability of ICT facilities in the college stimulates the interest of students in learning business education courses. The adoption of ICT aids collaboration among lecturers in sharing of expertise on effective teaching. The use of ICT facilities in teaching and learning of business education courses depends on the lecturers experience, ability to use it and students readiness. However, the government's lukewarm attitude to make adequate provision of ICT facilities in colleges should change and be more supportive. The training of lecturers and students in ICT skills is necessary to promote effective teaching and learning.



Recommendations

Based on the findings of this study, the following recommendations were made:

1. The use of ICTs should be monitored and evaluated regularly and closely to meet a variety of educational objectives.
2. Proper training/workshops on ICT should be given to lecturers and even students of different categories of education levels.
3. Government and other significant stakeholders should focus their attention and invest their resources in tertiary institutions so as to address pressing issues in the use of ICTs in business education at the college of education level.
4. Government should also see to the adequate funding of ICTs in our educational system.
5. Business education needs to be well equipped to anticipate and respond to challenges and opportunities ICTs present.

References

- Abe, T.O. & Adu, E.T. (2007): Impact of Information and Communication Technology (ICT) on Teacher Education in Ikere, *Journal of Education, Ikere-Ekiti*, 5, 169-175.
- Adomi, E. E. & Kpangbam A. (2010).Application of ICTs in Nigerian Secondary Schools. *Library Philosophy &Practice (e-journal)*, March 1-8. <http://digitalcommons.unl.edu/hshipract/345>.
- Edokpolor, J. E., & Owenvbiugie, R. O. (2017). Business education in Nigeria: Issues, challenges and way forward for national development. *Journal of Collaborative Research and Development*, 5 (1), 150-161.
- Falobi, O.V. (2019). Assessment of entrepreneurial skills needed by business education students to be self-reliant in colleges of education in Lagos. *Port Harcourt Journal of Educational Studies*, 4(1). 294-301.
- Falobi, O.V. (2022). Entrepreneurial skills acquisition among business education students of universities in southern Nigeria: Constraints and solutions, *Zamfara International Journal of Education*, 2(1). 31-37.
- Falobi, O.V., & Ononiwu, B, E, (2022). Business education university curriculum and students' entrepreneurial skills empowerment in Lagos state, Nigeria. *Multidisciplinary Journal of Language and Social Sciences Education*,5(2). 1-10.
- Federal Republic of Nigeria (2004).*National Policy on Education 4th Edition*, Published by NERC. Yaba Lagos.
- Igboke, S.A. (2012).Strategies for reducing management constraints in business teacher education programmes in Nigeria. *Ebonyi State University Journal of Education* 2(1), 5-12.
- Nwezeh, C. M. T. (2010). The impact of internet use on teaching, learning and research activities in Nigerian universities: A case study of Obafemi Awolowo University, *The Electronic Library*, 28(5), 688-701.
- Ogunsola, L. A.,&Wahab A. (2005). Information and communication technology in Nigeria: Revolution or Evolution. *Journal of Social Sciences* 11(1). 1-5.



- Okoro, J. (2013). Strategies for enhancing the functionality of business studies in the universal basic education programmes in South South Nigeria. *Journal of Education and Practice*, 4(17), 131-136.
- Yusuf, M. O. (2005). Information and communication technologies and education: Analyzing the Nigerian national policy for information technology. *International education journal*, 6(3), 316-321.
- Zhang, C. (2013). A study of internet use in EFL teaching and learning in Northwest China. *Asian Social Science*, 9(2), 48-52.