Assessment of Information and Communication Technology in Business Education Programme in Tertiary Institutions in Delta State

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Abstract

The study assessed the availability and utilization of information and communication technology tools for business education programme in tertiary institutions in Delta State. Six research questions were raised to guide the study and two null hypotheses were tested at 0.05 level of significance for the study. The population of the study comprises of the Delta State University of Science and Technology, Ozoro; Delta State University, Abraka Polytechnic, Delta State College of Education, Warri, and Delta State College of Education, Mosogar. The descriptive survey design was used for this study. The instrument used was validated by three experts. Pearson's Product Moment Correlation coefficient was used to compute reliability of the instrument which yielded a correlation coefficient of 0.89. The entire sampled population was used for data analysis. Questionnaire was the instrument used for data collection. Data collected were analyzed using descriptive statistics. The t-test was used to test the hypotheses. From the results of the analysis, it was concluded that *the job performance of secretaries in tertiary??? institutions in Delta State is largely enhance positively by ICT tools utilization in the area of internet, spreadsheet, desktop publishing as well as available hardware while the challenges of ICT Tools pose a danger to business education programme. Respondents did not differ significantly on the utilization of ICT tools for business education programme based on gender and experience. Consequently, it was recommended among others that management of institution and organization should ensure that workable and effective ICT tools are made available to enhance and boost the performance of business education programme in tertiary institution in Delta State. Tertiary Education Trust Fund should assist to organize, seminars, training and re-training programme regularly and also purchase these ICT tools to improve business education performance. Focus should be on the provision of internet services in the institutions.*

Keywords: Business Education, Programme, ICT Tools, Tertiary Institution, Organization.

Introduction

In most countries of the world, the information revolution has altered many aspects of life significantly: education, commerce, employment, medicine, security, transportation, and entertainment. Consequently, information and communication technology (ICT) has affected in both good and bad ways- community life, family life, human relationships, education, careers, freedom and democracy Stanford (2015). The future looks bright for office and effective business education programme in the 21st century, as a result of major changes in the way the outside world operates. In the fast changing technological age in which we are, the importance of technological facilities to any business activities and indeed secretarial work in particular cannot be overemphasized and the development of skills cannot be achieved without practical work adequately furnished with the modern technologies. The role of the business education programme has changed over the past decades and management in the business world has changed. Technical advances, new business procedures, and global markets have contributed to the new demands of today.

The changes that have affected business education students in the work place also affect curriculum changes in programs training individuals for the education professionals, the course have only changed in nomenclature and not in scope. Igbinedion (2010) stated that business education which gave birth to office technology and management started in the United States of America in the 17th and 18th centuries, by the 19th and 20th centuries the course expanded rapidly to some developed countries and developing countries. Igbinedion (2010) also explained that business education programmes is a specialized phase of vocational education that prepares students to enter teaching and office occupations as capable and intelligent members of the office force. According to Igbinedion (2010), business function with particular reference to secretarial education has changed everywhere in the world and have undergone a lot of technical changes.

The diversities of these office technologies require the office manager to possess new skills and sub-skills to enable her to be relevant in the modern office work. The role of business education has changed tremendously. (Atakpa 2010), Technology has reshaped the way information is created, stored and disseminated. Business education practitioners are assuming new administrative duties in the electronic office. This new role includes gathering of information, selection of relevant data, incorporating meaningful graphics and presentation of a final report to management. In the new office, business educators must have the ability to make independent decisions and to deal with business internationally. Business professionals are becoming information specialists. Technology is the driving force behind much of the change. Today's business education programmes in addition to word processing are knowledgeable in dealing with voice mail and electronic mail, local area network, budgeting, computer maintenance, desktop publishing, spreadsheets and database applications. The indispensable role of information communication technology forms the bedrock and overall development of any nation. Based on this, great attention is given to the need of information technology to business education programs in higher institutions that would enhance their job performance. The rapid advancement in technologies and new innovations has made tremendous impact on information and communication technology (ICT). Informative tools are application that provide large amounts of information in various forms such as e-business, e-communication, e-purchasing, e-marketing, e-financing, e-learning and e-service and has practically permeated every spheres of human Endeavour. The internet is a huge electronic database and researchers consider the internet as the most significant ICT tool. Apart from created various business needs, wants and challenges and has opened new opportunities like all these make use of electronic devices to conduct business practices on-line. These new opportunities pose enormous challenges to business education programmes.

International Association of Administrative Professionals (IAAP) (2015) the future of information and communication technology will be increasingly mobile with the use of multifunctional wireless office technology and information system such as mobile note-taker, web-based conference services and telecommunicating enabling office workers to perform their duties from virtually everywhere. Thus, it has become imperative that people from all works of life acquire some level of knowledge in the use and application of ICT. They also require skills in planning, organizing, communicating, time management and setting priorities. The nation's line and cry for basic skill had given impetus in the National Policy on education (2014). The first area to be given prominence was the search for technological *know-how,* the second was the pressure on the part of the employers of labour as well as the society in general, for courses that prepare students for jobs that would made them self-reliant as stipulated in the National Policy on Education 2014.

Information and Communication Technology (ICT) is those aspect of scientific, technological and engineering knowledge and administrative methods that are used to access and process information and its application, that is, the interaction between computers and tools with human beings and their social, economic and cultural matters, United Nations Educational, Scientific and Cultural Organization (UNESCO) (2004),   Since computer courses are being offered at various levels and different institutions such as Colleges of Education, Polytechnics, Colleges of Technologies and Universities and they produces different personnel to act at different capacities in the field of work where they can contribute their quota to the nations development and business organization. In higher institution, the availability and utilization of computers had added to the training of business education students emerged as the need of human competences and material resources especially the availability of ICT facilities such as word processing, internet facilities like satellite disc, modern, computer private scanning, photocopiers, projectors, storage drive like flash, CD, video/DVD, television. Electronic record management no doubt is quite beneficial to administrative secretaries which include secretarial staff and office technology and management students as it assists them in the effective and efficient management, handling and use of records electronically. However, the management of records via electronic require electronic skills, knowledge and competence well as knowledge of the rudiments of how records are managed in an electronic environment. Igbinedion (2010), job performance is the extent to which the individual tend to maintain the same level of output overtime depending on the intrinsic rewords such as working conditions, status, motivation et cetera.

Statement of the Problem

The world is undergoing a rapid change due to the innovation of ICT as the new evolution continue, in order to cope with the age needs and to know how to assess the available ICT tools in business education programmes, it is an established fact that technology has reshaped the way information is created, stored and disseminated, it is the driving force behind much of the change. Today's business education graduates, in addition to word processing are knowledgeable in using photocopier, printer, computer, fax, voice mail, desktop publishing, spreadsheets database applications and internet. They also require skills in planning, organizing, communicating, time management and setting priorities and assuming new administration in the business world, among Delta State Polytechnic students in Nigeria, business education graduates are becoming information specialists.

The purpose of the study involved the assessment of Information and Communication Technology tools available for business education programmes in tertiary institution in Delta State. Specifically, the study sought to identify the following:

1. To find out the type of ICT tools available for business education programmes in Delta State tertiary institution.
2. The extent to which the available ICT tools are used by business education graduates to enhance their job performance.
3. The extent to which the business education graduates are utilizing these ICT tools extensively to increase their job performance.
4. The extent to which Today's business education graduates in addition to word processing are knowledgeable in dealing with voice mail and electronic mail, local area network, budgeting, computer maintenance, desktop publishing, spreadsheets and database applications in tertiary institutions in Delta State.
5. The extent to which the new opportunities pose enormous challenges to business graduates' job performance in Delta State tertiary institution.
6. The extent to which business education programmes rely on the internet as a virtual textbook and reference library.
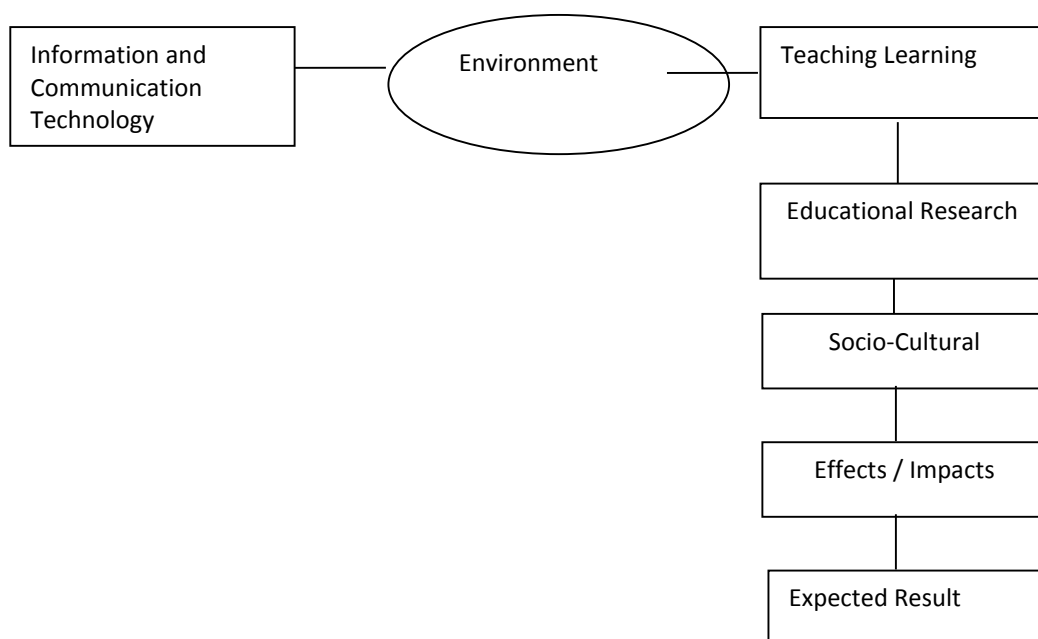

Figure 1: Conceptual model for the relationship between information and communication technology ICT the teaching learning process in some selected tertiary institutions in Delta State

Source: *Desk Research (2024)*

Research Questions

1. Does information and communication technology contribute to teaching learning activities?

2. To what extent does information and communication technology contribute to educational research activities?

3. Does information and communication technology have any impact on the socio-cultural activities of education?

4. What is the level of impact of information and communication on; the teaching learning environment in tertiary institutions in Delta State?

Research Hypotheses

Hypothesis One
Ho: There is no significant relationship between information and communication technology and the teaching learning environment.

Hi: There is significant relationship between information and communication technology and the research environment.

Hypothesis Two
Ho: There is no significance relationship between information and communication technology and educational research environment.

Hi: There is significant relationship between information and communication technology and educational research environment.

Hypothesis Three
Ho: There is no significance relationship between information and communication technology and socio-cultural environment.

Hi: There is significant relationship between information and communication technology and socio-cultural environment.

Literature Review

Concept of Information and Communication Technology

The term information and communication technologies (ICT) refers to forms of technology that are used to transmit, process, store, create, displays, share or exchange information by electronic means. The broad definition of ICT includes such technologies as radio, television, video, DVD, telephone (both fixed line and mobile phones), satellite systems and computer and network hardware and software, as well as the equipment and services associated with these technologies, such as video conferencing, e-mail and blogs. Njoku (2012) opines that ICT as the traditional and modern technologies of disseminating information. The traditional ICT products are the printed page, radio, television films and so on, while the modern technologies include e-mail, voice mail, fax, internet, electronic bulletin boards and cellular telephones. He goes further that communication is essentially central to every human activity.   ICT in any giving society are facilities for normalizing, enhancing and improving the communication process in the society. Miller and Akume in Akpomudjere (2014) asserts that the term information and communication technology (ICT) originated from earlier terms such as information technology (IT) and new technologies (NT) which deal with accessing, gathering, manipulating and making available information communication for an enhanced learning and such technologies can be found in a host of devices, software applications, computers and connectivity, access to network, local networking, infrastructure, teleconferencing or web-conferencing among others.

Federal Ministry of Education (2010) refers to information and communication technology as the art and applied sciences that deal with data and information which comprising all equipment and tools (inclusive of traditional technologies of radio, video and television to the newer technologies of computers, hardware, firmware as well as the methods, practices, process, concepts and process. Information and communication technology ICT is technology that supports activities involving information. Such activities include gathering, processing, storing and presenting data. Increasingly these activities also involve collaboration and communication.   Hence information technology has become ICT. Information and communication technology, or ICT, is defined as the combination of informatics technology with other related technologies, specifically communication technology. It is a concept which is used to describe the strength and divergent used of computers and telecommunication devices for data and information interchange. ICT provides access to information through scientific convention founded on the forte of computers and telecommunication facility which enables a companies located anywhere in the world has a business link. Information and communication technology (ICT) depends on the local culture and the particular ICT available and how it is configured and managed. Many countries now regard understanding ICT and mastering the basic concepts of ICT as part of the core of education, alongside reading, writing and numeracy.

Concept of Information and Communication Technology in Business Education Programme
The development of business education programme could be traced to the early missionaries who came to Nigeria with the mission to spread the gospel. They recruited and trained some local natives whom they used as interpreters and clerks, Osuala (2018). The European traders who traveled widely through the coasts and creeks of the Niger Delta purely on trade mission, later established trade station at designated points and appointed local trade agents who performed the complex tasks of receiving goods, keeping records of transaction, making payments and rendering accounts to the European trade masters regularly. To a great extent, the quality of trust, confidence and honesty desired of every business professionals seemed to have been associated with the early trade agents who doubled both sales representative and secretaries. The view of Monka (2019), the emergence and subsequent development of office administration and business education programme in Nigeria could be traced to two angles namely, office administration in both private companies and in the civil service. Monka recorded that the earliest European companies such as Royal Niger Company, West African company, the William Brothers and James Pinnock, all establishes trade offices in Lagos and Ibadan to achieve their objectives; these firms depended on the missionaries for trained local natives as interpreters and recording clerks. Ebeku & Ebenezer (2019), outlined that the amalgamation of the four major companies in the then West African into what was known as United African Companies (UAC) boosted the growth and development of secretarial work alongside general increase in trade volume in Nigeria.

The Impact of Information and Communication Technology (ICT) on the Teaching Learning Process.
Learning ICT skills is not sufficient, but using them to improve the teaching and learning environment is the key for pedagogy-technology integration. Understanding the changing role of teachers from instructors to facilitators, teacher-led instruction to learner centered instruction is the key to the successful implementation of pedagogy integration for teacher and learning environment is crucial. Nigerian teachers need to be equipped with the fundamentals of how ICT tools and to have a sufficient understanding of how the integration of these tools in the effective teaching-learning process can be smoothly facilitated. Effort must be oriented towards changing the teachers' mind-set by developing positive attitude towards ICT applications in teaching and learning Shyamal, 2015. Teaching and learning for the effective business education programme should be effectively and efficiently reorganized to reflect the emphasis on the use of ICT in educational service delivery. Information and Communication Technology should be effectively utilized in business activities to match graduate with the current demands of modern organizations. An elaborate use of ICT in business education programme will, in no small measure, assist Nigeria to achieve her vision 2020. According to Shyamal (2015), ICT include all the electronics means for gathering, processing, storing, sharing and distributing information, knowledge and ideas. Information and Communication Technology has integrated the world into a global village thereby making the processing, production, marketing and consumption of knowledge, skills, goods and services very easy without distance barriers.

It encompasses all forms of information delivery systems that use multi-media among others. It is one of the major innovations that are taking place in Nigeria education system, particularly in tertiary education level. The introduction of ICT in teaching and learning methods in Nigeria has affected the whole process of educational service delivery (Eze, 2019).

Integrating Information and Communication Technology as a tool in Research and Socio-Cultural Education

Information and communication technology is an umbrella term that includes any communication device or application, encompassing, radio, television, cellular phones, computer and network hardware and software, satellite systems and as well as the various services and application. Abduluraham (2017) adds that ICT is the integration of data with wired or wireless devices to transforming messages from one point to another across networks linking the various devices to achieve a desired result. It is the process of conveying information through automated electronics devices, such as computer, television, cell phone, electronic mail among others. If Information and Communication Technology can contribute to universal access to education, equity in education, the delivery of equality learning and teaching, teacher's Professional development and more efficient education management, governance and administration. UNESCO (2017) took a holistic and comprehensive approach to promoting ICT in education. Access, inclusion and quality are among the main challenges they can address.

The Organization's Intersectional Platform for ICT in education focuses on these issues through the joint work of three of its sectors: Communication and Information, Education and Science. It has been demonstrated that integrating ICT into education systems can increase the quality of education delivery. All governments aim to provide the most comprehensive education possible for their citizens within the constraints of available finance. Because of the pivotal position of ICT in modern societies, its introduction into tertiary institutions will be highly on any political agenda. In any educational system, the level of available resources places a restriction of the degree to which any new subject can be introduced into the school curriculum, especially where only the most basic facilities have so far been provided. The support services necessary for the effective delivery of an ICT-based curriculum should rank high in any set of government priorities. With a broad base of support, ICT in education will not only be in a position to continue its activities but will be able to develop new approaches and strategies.

Methodology

The study adopted the cross-sectional survey in its investigation of the variables (factors). Primary source of data was generated through structured questionnaire. The population of the study was 100 office personnel randomly selected from the organizations. A sample of fifty (50) respondents was calculated using the Taro Yamen's formula for sample size determination. 36 copies of questionnaire were returned and used for data analysis. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.07. Data generated were analyzed and presented using both descriptive and inferential statistical techniques. The hypotheses were tested using the chi-square formula.

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The tests were carried out at a 0.05 level of significance.

Data Table and Result

Table 1:

S/n	Variables	Research Questions	Response (Optional)	Male	Female	Percentage %	Row Total
1	Information and Communication Technology and the Teaching Learning Process.	Does information and communication technology have any positive effect on the teaching learning process in education?	Yes	10	16	72	26
			No	6	4	28	10
			Column Total	16	20	100	**36**
2	Information and Communication Technology and Educational Research Process.	Does information and communication technology impacts on educational research process?	Yes	20	16	100	36
			No	-	-	-	-
			Column Total	20	16	100	**36**
3	Information and Communication Technology and the Socio-Cultural Education..	Does information and communication technology have any role to play in the socio-cultural aspect of education?	Yes	12	8	56	20
			No	11	5	44	16
			Column Total	23	13	100	**36**

Source: Field survey 2024.

Data Analysis and Results

Ho1: There is no significant relationship between information and communication technology and the teaching learning process in education in tertiary institutions in Delta State.

From table 1 above to get the frequency expected the following formula was used.

$$Fe = \frac{\text{Row total x Column total}}{\text{Grand total}}$$

Fe for 10 = $\frac{26 \times 16}{36}$ = 11.5

Fe for 16 = $\frac{26 \times 20}{36}$ = 14.4

Fe for 6 = $\frac{10 \times 16}{36}$ = 4.4

Fe for 4 = $\frac{10 \times 20}{36}$ = 5.5

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The Chi-square formula was applied $= \frac{\sum (fo - fe)^2}{fe}$

Fe	Fe	Fo – Fe	$(Fo - Fe)^2$	$X^2 = \frac{\sum (fo - fe)^2}{fe}$
10	11.5	-1.5	2.25	2
16	14.4	1.6	2.56	2
6	4.4	1.6	2.56	2
4	5.5	-1.5	2.25	2
			Calculated value	8

To get the Degree of freedom (Df) we apply the following formula:

(Row -1) (Column -1)

= (2-1) (2-1)

= 1 x 1 =1

Level of significance = 5% (0.05)
Degree of freedom 1 at 5% level of significance = 3.841
Table value = 3.841

Decision – since the calculated value of 8 is greater than the table value of 3.841, we reject the null hypotheses and accept the alternate hypothesis, meaning there is a significant relationship between information and communication technology and the teaching learning process in tertiary institutions in Delta State.

Ho2: There is no significant relationship between information and communication technology and educational research process in tertiary institutions in Delta State.

From table 1 above to get the frequency expected the following formula was used.

Fe = $\frac{\text{Row total x Column total}}{\text{Grand total}}$

Fe for 20 = $\frac{20 \times 20}{36}$ = 11.1

Fe for 16 = $\frac{16 \times 16}{36}$ = 7.1

Fe for 0 = $\frac{0 \times 20}{36}$ = 0

Fe for 0 = $\frac{0 \times 16}{36}$ = 30

The Chi-square formula was applied $= \frac{\sum (fo - fe)^2}{fe}$

Fe	Fe	Fo – Fe	$(Fo - Fe)^2$	$X^2 = \frac{\sum (fo - fe)^2}{fe}$
20	11.1	8.9	17.8	2
16	7.1	8.9	17.8	2
0	0	0	0	0
0	0	0	0	0
			Calculated value	4

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To get the Degree of freedom (Df) we apply the following formula:

(Row -1) (Column -1)

= (2-1) (2-1)

= 1 x 1 =1

Level of significance = 5% (0.05)
Degree of freedom 1 at 5% level of significance = 3.841
Table value = 3.841

Decision – since the calculated value of 4 is greater than the table value of 3.841, we reject the null hypotheses and accept the alternate hypothesis, meaning there is a significant relationship between information and communication technology and educational research activities.

Ho₃: There is no significant relationship between information and communication technology and the socio-cultural aspect of education in tertiary institutions in Delta State.

From table 1 above to get the frequency expected the following formula was used.

Fe = Row total x Column total
          Grand total

Fe for 12 = $\frac{20 \times 23}{36}$ = 12.7

Fe for 8 = $\frac{20 \times 13}{36}$ = 7.2

Fe for11 = $\frac{16 \times 23}{36}$ =10.2

Fe for 5 = $\frac{16 \times 13}{36}$ = 5.7

The Chi-square formula was applied = $\frac{\sum (fo - fe)^2}{fe}$

Fe	Fe	Fo – Fe	$(Fo – Fe)^2$	$X^2 = \frac{\sum (fo - fe)^2}{fe}$
12	12.7	-0.7	-1.4	1
8	7.2	0.8	1.6	2
11	10.2	0.8	1.6	2
5	5.7	-0.7	-1.4	2
			Calculated value	7

To get the Degree of freedom (Df) we apply the following formula:

(Row -1) (Column -1)

= (2-1) (2-1)

= 1 x 1 =1

Level of significance = 5% (0.05)
Degree of freedom 1 at 5% level of significance = 3.841
Table value = 3.841

Decision – since the calculated value of 7 is greater than the table value of 3.841, we reject the null hypotheses and accept the alternate hypothesis, meaning there is a significant relationship between information and communication technology and the socio-cultural aspect of education.

Discussion of Findings

Based on the data analyzed on this research article, the following findings were deduced;'

Ho$_1$: - this hypothesis (variables) is based on the relationship between information and communication technology and teaching learning process. From the data gathered through the questionnaire, 26 respondents representing 72% of the total respondents agree (Yes) that information and communication technology is significant to the performance and efficiency of the teaching learning process in education. 28% of the total respondents disagree (No), representing ten (10) respondents. However, from the above analysis it is agreed that information and communication technology contributes greatly to the teaching learning process.

Ho$_2$: - this hypothesis (variables) is based on the relationship between information and communication technology and educational research activities. From data collated in table 1 above, all thirty-six (36) respondents representing 100% agree (Yes) that information and communication technology have a significant relationship with educational research activities. This very much implies that information and communication technology is 100% contributory to educational research activities.

Ho$_3$: - this hypothesis (variables) is based on the relationship between information and communication technology and the socio-cultural aspect of education. From data collated in table1 above, 20 respondents representing 56% of the total respondents agree (Yes) that information and communication technology is immensely contributory to the socio-cultural aspect of educational activities. While sixteen (16) of the respondents representing 44% disagree (No). This implies that the alternate hypothesis is accepted and the null hypothesis rejected. Thus, there is a significant relationship between information and communication technology and socio-cultural activities.

Conclusion

This work has been able to present and conclude the fact that information and communication technology is instrumental to the success of educational activities and processes, which could be applied in any dimension of educational activities. It has also proven that information and communication technology is very instrumental and paramount to the socio-cultural aspect of our education. Also this research work has proved that information and communication technology plays an important role in educational research activities. Thus, information and communication technology must be treated properly, if educational set goals and objectives are to be achieved.

Recommendations

Based on the findings of the research work, the following are recommended.

1. That information and communication technology tools should be provided adequately by government and private owned institutions and should be functional.

2. Institutions should evolve the practice and principles or periodically reviewing these information tools to suit and keep abreast with changing educational needs, as this will booster the teaching learning process.

3. Institutions be it government or private owned should ensure that these tools are practically used to enhance the educational quality of graduate students in the labour market.

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References

Abduhiraham, A. O. (2017).   Challenges and Strategies for Utilizing Information and Communication   Technology among Office Technology and Management Educators in Nigerian   Polytechnics. *21st Century Academic Forum Conference Proceedings, 2014 Conference   at Berkeley.*

Atakpa, R., A. (2010). *Office Practice and Management: Practical Approach.* Royal Pace Publications, Agbor.

Ebeku, C., A. & Ebenezer-Nwokeji C. C. (2015). Current issues and challenges in the acquisition of office technology and management skills. *International Journal of Vocational and Technical Education Research.*   Published by European Centre for Research Training and Development UK (www.eajournals.org).

Eze, F. O. (2019). *Modern office information technology: Effective Secretarial and Office Management,* Enugu State Local Government Commission.

Federal Republic of Nigeria (2014).   *National Policy on Education:* Nigerian Educational Research and Development Council NERDC.

Igbinedion, V., I. (2010. Knowing the Graduate Office Secretary, *Ozean Journal of Social Sciences, 3(1): 116-120.*

Information and Communication Technology Wikipedia, *Retrieved January, 11th, 2017* fromhttps://en.wikipedia.org/wiki/information_and_communication_technology.

Njoku, C. U. (2014). Critical incidents in Business Education. *Lead Paper Presentation, National Conference of Association of Business Educators 2014.*

Miller, I., A. and Akum A., H. (2014).*Modern Office Technology and the Performance of Professional Secretary in Contemporary Organization in Ghana.* Information and Knowledge Management: from www.iiste.org, 3(4) 2014

Monka, A. (2019). Capacity Building in Modern Office Technology: An imperative for Effective Secretarial Productivity. *Asian Journal of Business of Business Management 5(2): 193 196.*

Osuala, E. C. (2018). *Teaching Office Technology in an IT Era – A* Lecture Mimeograph of Prof. Esogwa Osuala. UNN.

Shyamal, M., (2015). *Emerging challenges and trends in technical education in Asia-Pacific Region.* Netherlands: Senase Publisher.

Stanford Encyclopedia of Philosophy (2015). *Computer and Information Ethics.* Retrieved 29th December, 2016 from https://plato.standford.edu/entries/ethics-computer/

UNESCO (2004). *Training Workshop on the Development of Literacy & Non-formal Education through Information Communication Technology (Workshop Report (26-30 Retrieved 12thJanuary, 2017* from http://portal.unesco.org/education.

UNESCO (2007). *Manual for pilot testing the use of indicators to assess impact of ICT use in education.* Retrieve 12th November, 2016 from http://www.unescobkk.org/education/ICT/resources.

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