
The Role Of Information And Communication Technology (ICT) In Teaching And Learning Of Accounting

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Abstract

The world is being referred to as a global village because of the speed with which information and communication technology (ICT) has radically transformed the whole world. This revolution in ICT has drastically changed the image and direction of teaching and learning in the 21st century and accounting is not an exception. Accounting is concerned with the collection of financial information, analysis, interpretation and communication of this information to interested parties. ICT provides, at a very fast rate, the necessary information the stakeholders might need in decision making. ICT stimulates students interest in accounting by availing them the opportunity of having access to machines that facilitate higher-order problem solving skills. It also reduces the work-load of the teacher by providing him, with ease; the necessary information he needs in teaching. This paper examines the role of ICT in teaching of Accounting. Recommendations were also proffered.

Today, the world is being referred to as a global village because of the speed with which information is being collected, processed, stored and disseminated to various users. This accelerated rate of information dissemination was made possible by Information and Communication Technology (ICT). This is an era where virtually most activities are no longer done manually but electronically and this was also made possible by ICT.

The speed with which information is being processed and disseminated can simply be referred to as globalization and this was facilitated through advancements in science and technology which in turn culminated in the rapid development of ICT. Maikanti (2004), in line with the above statement, observed that the recent link of all socio-cultural, political and economic advancements of the world through ICT can be referred to as globalization.

The world is dynamic and ICT is a fast developing one that keeps on changing with the ever- changing world. Literature and statistics have revealed that the rate of

people's access to ICT is alarming .Adejola (2012) stated that as at the year 2012, over 7 billion people exist on earth with Nigeria coming 6th with an estimated population of 169 million. Examining the rate at which ICT impacted on the society, Kayode (2005) in Adejola (2012) reported that it took 38yrs for radio to get to 50 million people and 13years for television (TV) to get to the same number of people. Amazingly, it took just 4 years for 50 million people to access the internet.

Information Technology (IT) or information and Communication Technology (ICT) have been used by some authors to depict different meanings or ideas. While the forme (IT) first appeared in 1958 article published in the Harvard Business Review in which authors Leavitt and Whisler commented that the new technology has no single established name but should be called Information Technology (IT), the latter was first used in 1997 in a report by Stevenson to the United Kingdom (UK) government and was promoted by the National Curriculum documents for the United Kingdom in 2000. ICT is often used in the context of "ICT Roadmap" to indicate the path that an organization will take with their ICT needs. The term, Information Technology (IT) is no longer in vogue. Information and Communication Technology (ICT) is generally used and it is more embracing ([http www. google com/baraza /en/thread](http://www.google.com/baraza/en/thread)).

ICT is often used as an extended synonym for IT but is usually a more general term that stresses the role of unified Communications and integration of communications (telephone lines and wireless signals), intelligent building management systems and audio- visual systems in modern IT. Rusten and Hudson (2002) defined ICT as a diverse set of technological tools and resources used to communicate, create, disseminate , store and manage information and these technologies include computers, the internet, telecommunication and electronic devices and telephony. Agusiobo and Umendu (2004) described ICT as the physical structure of network of computer based system (hardware, software and media) used for the purpose of organizing, processing, communicating, assessing, presenting, storing, retrieving and simplifying information when needed and in the form it is needed. ICT therefore consists of all the technical means used in handling information and communication and these include; computer and network hardware, communication middleware as well as necessary software. The term. ICT can be used to refer to the merging (convergence) of audio- visual and telephone networks with computer networks through a single cabling and link system.

The application of ICT in education has become an indispensable tool in global economic transformation and integration. The global knowledge now comprises diverse technologies featuring computer networks (Nwachuchukwu, 2010). These revolutions, according to Ogwo (2005) have automatically changed the image and the direction of teaching and learning in this 21st century especially in the developed countries of world.

The world, ICT, may sound so strange to some people in the developing countries and as such, some accounting educators may remain adamant to the change. This is quite in contrast to what is obtainable in the developed countries. In Europe and America and some parts of Asia like Japan, Taiwan, China, for instance, ICT has almost replaced the conventional ways of teaching and learning. The use of computers (as major instruments of ICT) has drastically facilitated the flow of ICT. For instance, computer facilities like the Computer Assisted Instruction (CAI), Computer Assisted Learning (CAL), e- mail, interactive computer display, internet, etc, can positively assist in the teaching and learning of accounting.

Accounting is concerned with the collection of financial information, analysis, interpretation and communication of these information to the interested parties. Thus, information gathering, analysis and dissemination are very vital components of accounting and ICT has helped in accelerating the pace. ICT has touched every profession, vocation or occupation and has impacted positively in ways of doing things in organizations and society at large. Of immense importance is the electronic accounting aspect which has brought about speedy, timely and efficient information processing which is very significant for day-to- day accounting and reporting as well as decision making.

Accounting Information and the Users

Accounting is concerned with the classification, recording and analysis of business transactions either to prepare periodic statements of performance or to provide information to management for decision making. Accounting extends beyond the process of creating records and reports. The objective of accounting is the use of this information, its analysis and interpretation to various interested parties to the accounts such as the management, investors, creditors, the government, the general public, banks, etc.

The underlying purpose of accounting is to provide financial information about the economic entity (that is, business entity). Drury (2000) observed that the objective of accounting information is to provide sufficient information to meet the needs of the various users at the lowest possible cost.

The financial information provided by an accounting system is used by management to help them plan and control the activities of the economic entity. Accounting information is also needed by outsiders – shareholders, creditors, potential inventors, financial analysts, the government and the public - who have supplied money to the business or who have some other interest in business that will be served by information about its financial position and operating results. Marshall, McManus and Viele (2002) opined that in order to provide useful financial information about a

business, we need some means of keeping track of the daily activities and summarizing the results in accounting reports.

The person(s) receiving accounting reports are termed users of accounting information. Okezie (2006) stated that accounting information about a business entity or enterprise is required by a variety of users; the need dictates the fundamental objectives of accounting and the mode of reporting the information. Marshall, McManus and Viele (2002) maintained that the type of information a specific user will require depends upon the kinds of decisions that a person must make. For example, managers require accounting information that will assist them in their decision making and control activities. They need detailed information about daily operating costs for the purpose of controlling the operations of the business and setting reasonable selling prices. Okezie (2006) stated that managers in an enterprise need accounting information to measure performance, plan and control operations. Shareholders require information on the value of their investments and the income that is derived from their shareholding (Drury, 2000). Thus, individuals, financial institutions, shareholders or group of investors need accounting information to determine the liquidity, profitability and viability of the enterprise. Employees require information on the ability of the firm to meet wage demands and avoid redundancies. Okezie (2006) opined that employees and customers of an enterprise need accounting information to produce goods and or to render services on continuous basis. Government agencies like the central statistical office collect accounting information and require such information as the details of sales activity, profits, investments, stocks, dividends paid, proportion of profits absorbed by taxation, etc (Wood and Sangster, 2005). Okezie (2006) posited that the government and regulatory bodies need accounting information in order to be able to impose and collect taxes, to regulate certain business activities and plan, execute and evaluate projects.

Since information needs of various users differ, it then stands to reason that the accounting system of a business entity must be able to provide various types of accounting reports. The information in these reports must be presented in accordance with certain 'ground rules' and assumptions so that users of the reports will be able to interpret the information properly (Akamobi, 2004). Obviously, the users of any accounting report needs to understand the standards and assumptions which have been used in preparing that report. More so, the standards employed in the preparation of an accounting report must relate to the information needs of the users.

Accounting information can be used for the following purposes:

- Making decisions concerning the use of limited resources including the identification of crucial decision areas and determination of objectives and goals.

- Effectively directing and controlling of an organization's human and material resources.
- Maintaining and reporting on the custodianship of resources, and,
- Facilitating social functions.

Accounting education had experienced some changes in the later part of the 20th century and these changes were carried forward to the new millennium. The overriding reason for this revolution in accounting can be found in the rapidly changing and complex environment facing the accounting teacher, advancing technology, proliferating regulations aimed at meeting up with the societal challenges, globalization of businesses and complex transactions, incessant government policies, continuous curriculum changes and innovations in the profession, etc. (Akamobi, 2004).

Having examined the various users of accounting information and their various information needs, it then implies that a good accounting teacher must keep himself abreast with the relevant changes in the profession and ever- dynamic society. ICT has radically affected and influenced all human endeavour including accounting profession. The knowledge of ICT is a necessary and a sufficient condition for meeting up with today's societal requirements in accounting. A good Accounting teacher should therefore have the knowledge of ICT in order for him to teach students all the necessary skills that would make them functional in this modern society.

ICT as an Aid in Teaching and Learning of Accounting

The use of ICT has brought in, inter alia, modern approaches in the art of teaching and learning. ICT is designed to facilitate the acquisition and absorption of knowledge, enhance educational system, improve policy formulation and execution and create a wide- range of opportunities for businesses.

The on-going development in digital and information technology demand that an accounting educator or teacher must acquire the necessary ICT skills and be able to impart knowledge on the learners if he still wants to be relevant in this information age. This revolution in ICT drastically affects the methods of teaching and learning of Accounting in this millennium.

Some of the ICT facilities used in teaching and learning of accounting include, radio, television, computers, overhead projectors, internet, electronic notice boards, digital multi-media and slides. Obeta (2010) maintained that these arrays of techniques have been touted as potentially powerful enabling tools for educational change and reform. Akaenyi and Obi-Uchendu (2010) posited that computer facilities like computer Assisted Instruction (CAI), Computer Assisted Learning (CAL), simulation, multi - media websites, e-mail, e-learning, are employed in teaching and learning.

The shift from the traditional method of teaching and learning to the modern method through the use of ICT is as a result of inventions and innovations in science and technology which had, in turn, resulted to the emergence of computers. Satir (2005) stated that the computer is the most important of all the ICT facilities and is now used in almost every field or profession in performing different functions. Olasama (2011) opined that ICT powers r access to information, enables new forms of communication and provides many on–line services in the spheres of commence, culture, entertainment and education. ICT provides more personalized direct function, makes education available to more people, avails people opportunities to have access to machines which permit higher- order problem solving skills (Akor and Ekuje, 2006).

ICT has made the teaching and learning of accounting easier by helping teachers and students to access information, process information, synthesize concepts and creatively express ideas and exchange knowledge with one another. Ajasife (2010) stated that ICT also supports the development of skills such as flexibility, adaptability, critical thinking, problem solving and collaboration which are essential to success in this information age. Nwabuona (2005) maintained that students’ access to information super-highway would dramatically increase collaborative work – study and improve competitiveness by improving information gathering ability and students’ interaction.

Accounting students could be taught the use of all the necessary ICT facilities like e-mail (for sending or receiving necessary information) video conferencing and electronic data bank services to carryout research as well as gain access to new knowledge skills and attitudes in order to overcome the technological challenges prevalent in the modem business environment . ICT can bring the teacher and the learner together through video conferencing for lectures, tutorials on one -on - one basis irrespective of the distance or location.

ICT could serve some different purposes and would be efficiently utilized in teaching and learning of accounting. Udeze (2005) identified five levels of teaching methods which ICT could enhance. These include presentation, demonstration, drill and practice, interaction and collaboration. The application of each of the above methods would accelerate, enrich motivate and deepen students’ interest in learning. The importance of ICT in teaching and learning of accounting cannot be over-emphasized. ICT provides, at a very fast rate, the necessary information needed by the stake-holders for decision making purposes. It also stimulates students’ interest in accounting by availing them the opportunities of having access to machines which enhance problem solving skills. ICT reduces the work-load of the teacher by providing, with ease, the necessary information he needs in teaching at a very fast rate. The ever-increasing need for effectiveness, efficiency and continuity in view of the rapid expansion of businesses world over and ever-increasing commercial transaction have

made it very necessary for accounting teachers to acquire the necessary ICT skills and be able to impart them on the on the learners.

Problem of using ICT in Teaching and Learning of Accounting in Nigeria

The following are some of the problems inherent in using ICT in teaching and learning accounting.

1. Dearth of ICT Skills

Teachers' competence is a prerequisite for effective learning of ICT skills in accounting. Most of the accounting teachers are not computer literate and as such cannot impart the necessary ICT skills. Thus, the dictum, *nemo dat quod non habet*, which means that one cannot give out what one does not possess, applies here. The on-going wave in digital and information revolution demands that an accounting teacher must join the race if he wants to remain relevant in this information age.

2. Cost of Procuring and Maintaining ICT Equipment

As aforementioned, there are many ICT equipment and facilities; but the most important is the computer. The cost of procuring a computer in Nigeria is very high. Even the fairly used ones, otherwise known as "TOKUMBO" with all their associated risks, are not easy to come by. Furthermore, these computers are not easy to maintain. Often quacks in the streets either damage the computers completely or put the computers in more risky condition or even out of use.

3. Power Supply

Development in science and technology must go in concomitant with the availability of power. None availability of power or incessant power failures or fluctuations affect the use of computer in teaching and learning.

4. Loss of Data

Failure of the computer system may result in the loss of some vital information stored especially if there is no back-up. This is a major problem especially when the teacher is "computer illiterate" or not literate enough to manipulate the computer.

5. Reduction of Students' Manipulative Skills

The use of computers affects students especially when it comes to using their brains to solve problems. Human brain is the first computer and as such feeds the 'man-made' computer with the information it must process. Students who constantly use computers and calculators find it very difficult to use their brains in manual problem solving.

Conclusion

ICT is a diverse set of technological tools and resources used to communicate, create, disseminate, store and manage information and these technologies include computer, the internet, telecommunication and electronic devices and telephony. ICT has touched almost all human endeavour and has impacted positively in the teaching and teaching of accounting. Accounting is concerned with the collection of financial information analysis, interpretation and communication of these information to the interested parties. Thus, information gathering, analysis and dissemination are very vital components of accounting and ICT has helped in accelerating the pace. A good accounting teacher should keep himself abreast of the necessary developments in ICT if he still wants to be relevant in this information age. ICT has made the teaching and learning of accounting easier by helping teachers and students to access information, process information synthesize concepts and creativity express ideas and exchange knowledge with one another. The knowledge of ICT is a necessary and sufficient condition that must be met in the modern day teaching and learning of accounting.

Recommendations

The following recommendations are made

1. There is need for training and re-training of accounting teachers (through sponsorship) in order to up- date their knowledge and enhance their skills in the modern –day technology. This could be achieved by encouraging the teachers to attend workshops, conferences, in-service training and other staff development programmes that could help in up-dating their knowledge and skills.
2. Government can assist by providing computer to schools. It is not very proper to supply schools with computers without supplying the teachers especially accounting teachers with personal computers considering the cost of procuring a computer and the “meager” salary of the teacher. Practice leads to increase in dexterity and a skilled accounting teacher benefits both the students and society.
3. The supply and maintenance of ICT equipment like the computer should not be left in the hands of greedy contractors. Most ICT companies like the Zinox are very efficient and guarantees the repair and maintenance of their products at a very minimal cost.
4. Power supply is very necessary in ICT. Teaching and learning of accounting requires a steady power supply. However, since power supply through the National Electric Power Authority (NEPA) which now goes with the sobriquet, the Power Holding Company of Nigeria (PHCN) is beyond all governments in Nigeria. The government can still encourage ICT through the supply of power generating sets. This can assist in teaching and learning of accounting and can as well minimize loss of data or other vital information in the computer.

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