Impact of Information and Communication Technology on the Management of Entrepreneurship Education in Kogi State

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Abstract
Information and communication technology is a phenomenon that is affecting every aspect of human endeavour. It has contributed in making the world a global enclave via the diverse tools it has provided. This paper discussed the emerging issues in ICT such as the concept of information communication technology (ICT), common types of information communication technology (ICT) gadgets, the concept of entrepreneurship, and role of information communication technology (ICT) in entrepreneurship education. Also discussed were objectives of entrepreneurship education, management of entrepreneurship education, the significance of information communication technology (ICT) in teaching and learning process, and challenges bedeviling information communication technology (ICT) utilization in Nigerian schools. The Theory of technology acceptance was adopted because it is most appropriate for the study. In order to achieve the desired result, the writer exploited internet searches and documentary sources in the collation of data. Findings show that there is poor level of students' knowledge of information communication technology (ICT) in the learning of entrepreneurship education subjects in schools. There is also lack of information communication technology (ICT) infrastructural facilities. It was concluded among others that information communication technology (ICT) supported education enhances the attainment of values, skills, and abilities which would empower students for positive and permanent change in behavior, especially in this era of globalization. The paper recommended that, government should support teachers and management of schools in the sensitization of students in information communication technology (ICT) facilities for instructional purpose. Also, there should be adequate provision and maintenance of information and communication technology (ICT) infrastructural facilities.
Keywords: Education, Entrepreneurship, ICT, Impact, Management.

1.0. Introduction

The significance of information communication technology (ICT) in the development of a nation's educational advancement cannot be overemphasized. Information communication Technology

(ICT) makes work more sustainable; saves energy and material resources by creating more value from less physical input, increasing quality of life for more people without compromising the future generation's ability to meet their needs. Information communication technology (ICT) enables schools to adapt to modern facilities. Information communication technology has become key tool and has tremendous impact on how we live and relate to the world and make dynamic changes in society. Taking a swift glance at the population explosion in our institutions, the use of information communication technology (ICT) in the teaching and learning process becomes very imperative because its adoption by the teachers will facilitate effective teaching (Dawodu, 2005).

Within a very short time, information communication technology (ICT) has become catalyst for transforming the world. Many countries now regard understanding the basic skills and concepts of ICT as part of core education, alongside reading, writing and numeracy.

According to Uwabueze and Ozionko (2011), sustainable development leads to fulfillment of societal ideas considered relevant to the needs and aspirations of the society. Information technology means a set of tools that helps you work with information and perform task related to information processing. Information communication technology (ICT) is a general-purpose technology and as such has a pervasive impact on global economy. It introduces a new paradigm for the configuration of economic activities radically changing the approach to technology for development (UNCTAD, 2007).

Furthermore, information communication technology offers enormous opportunities to reduce social and economic inequalities, particularly those related to income generation, education, health, environment and gender equality and thus helps to achieve broader development goals. On the same note, Panos (2010) stated that ICT based knowledge and products contribute directly to wealth creation. Panos (2010) stated further that entrepreneurs use ICTs in a number of ways by substituting phone calls for travel, which saves time and money and using ICTs to obtain information on prices for their own produce and purchases. Duncombe and Heeks (1999) opined that ICTs have done the most to reduce costs, increase income and reduce uncertainty and risk.

The need for the integration of ICT into entrepreneurship education has opened new challenges because of the future uncertainties due to the pace at which ICT is taking over the global world. Over the last two decades, the use of ICT has been a significant aspect of education, and studies have shown that ICT can enhance teaching and learning outcomes (Yusuf, 2011). One of the barriers to effective ICT implementation in schools is poor level of students' knowledge of ICT in learning entrepreneurship education subjects in schools. Uwabueze and Ozioko (2011) asserts that majority of students have low level knowledge of ICT. It is worthy of note that adequate awareness of the significance of ICT on the part of students whom the exercise is meant to benefit would go a long way in aiding effective teaching and learning. ICT infrastructure plays a very significant role in ensuring effective teaching learning process. It is unfortunate to realize that in most cases, ICT infrastructure in not available in schools. This scenario makes information communication technology (ICT) compliance to be impossible in most of the schools. It is against this premise that this study seeks to find out the impact of ICT on the teaching and learning process in Secondary Schools.

Objectives of the Study

The general objective of this study is to examine the impact of ICT on management of entrepreneurship education in secondary schools. Specifically, the study is intended to:

i. Examine the impact of students' knowledge of ICT in teaching and learning of entrepreneurship education in secondary schools.

ii. Assess the influence of availability of ICT infrastructure in teaching and learning of entrepreneurship education in secondary schools.

Information, Communication, and Technology

Information in a general sense is processed, organized, and structured data which provides context for data and enable decision making, or a numerical quantity that measures the uncertainty in the outcome of an experiment (Madden, 2000). Madden (2000) asserts further that information is part of human behaviour and meanings are embodied in people than in words. Madden (2000) lists 4 ways of looking at information (4 concepts); information as a representation of knowledge, information as part of data in the environment, information as part of the communication process, and information as a resource of commodity.

Communication is simply an act of transferring information from one place, person or group to another. According to Lunenberg (2010), communication originated from Latin word 'communis' and asserts that it means 'common', which suggest that there must be a common understanding of the message between the source and the receiver concerning the message being communicated. The general view of communication is that it is an interaction within a social context. Communication usually involves a sender and a receiver. It involves the interlocutors exchanging signals. These signals could be verbal or graphic, it could be gestural or visual-photographic (Fatimayin, 2018). In essence, communication involves using codes that are done with body movement, or sounds made with the voice. This is true when Daniel (2013) asserts that it is when feedback, which involves the receiver responding to the signal by initiating another circle of exchange that the communication process has gone full circle and become complete.

Technology is the sum of techniques, skills, the methods and processes used in the accomplishment of objectives, such as scientific investigations (Sazali, Raduan and Osman, 2012). To MacKenzie and Wajcman (1985), technology is the integration of physical objects or artifacts, the process of making objects and the meaning associated with the physical objects. According to Kumar (1999), technology consists of two primary components: 1) a physical component which comprises of items such as products, tooling, equipment, blueprints, techniques and processes; and 2) the informational component which consists of know-how in management, marketing, production, quality control, reliability, skilled labour and functional areas. Sahal (1981) on the other hand, views technology as 'configuration', observing that the transfer object (the technology) relies on a subjectively determined but specifiable set of processes and products. Dunning (1994) averred that contemporary studies have connected technology directly with knowledge and more attention is given to the process of research and development.

Information and Communication Technology (ICT)

The acronym ICT stands for "Information and Communication Technology". It refers to technologies which provide access to information via telecommunication (Ratheeswari, 2018). It is similar to Information Technology (IT) but is focused primarily on communication technologies. These include the internet, networks, wireless, cell phones, and other communication mediums.

As averred by UNESCO (2007), "ICT is a scientific, technological and engineering discipline and management technique used in handling information, its application and association with social, economic and cultural matters. ICTs are making dynamic changes in society. They influence all aspects of human endeavour. The influences are felt more and more at schools. This is because information and communication technology (ICT) provide both students and teachers with more opportunities.

Computers and the internet are in constant quest to transform the economy and society, thus making the role of information and communication technology (ICT) in nurturing development becomes more widely acknowledged. In the view of Wade (2001), information communication technology (ICT) is a techno-quick-fix for solving development problems that have spanned generations. The internet is the largest, most powerful computer network in the world. It encompasses 1.3 million computers with internet addresses that are used by up to 30 million people in more than fifty countries (Willis, 2001).

According to Tinio (2002), to effectively harness the strength of the new information and communication technologies (ICTs), the following essential conditions must be met:

a. Students and teachers must have sufficient access to digital technologies and the internet in their classrooms, schools, and teacher education institutions.

b. High quality, meaningful, and culturally responsive digital content must be available for teachers and learners.

c. Teacher must have the knowledge and skills to use the new digital tools and resources to help all students achieve high academic standards.

Common Types of ICT Gadgets

As technology is continuously advancing, more new devices are being developed that can be used. These products have become very popular because they offer a lot of opportunities in terms of versatility when it comes to how we communicate and connect through them. There are many types of ICT gadgets in the world. Okoro and Agholor (2014) gave examples of ICT gadgets and their functions. These are: Smart Phones; Laptop and Tablets; Head Phones; Ear Phones; Wear Tracker; Mouse; Fax Machine etc

a. Smart Phones: These devices are cell-phone which serve the same function as a tablet, and are much more portable. They can also take photographs and record video footage which is ideal for people who like to capture every moment of their lives through social media or blog posts.

b. Laptop and Tablets: A laptop computer tends to be used by professional commuters and business travellers due to its ability to provide them with connectivity where there may be none otherwise available. Even those without these requirements will find many uses for this device in 2019/2020 such as watching TV shows on long flights or studying at home while your partner studies elsewhere in the house. A laptop computer is often used for editing documents or watching movies on the go, whereas a tablet is primarily an entertainment device that can be used to watch films in bed without disturbing your partner or serve as a navigation system when driving.

c. Head Phones: Head phones come in all shapes and sizes, catering for various needs. Some have built-in microphones that let you use voice commands to interact with your device, while others offer noise-cancelling features for times when a noisy environment threatens to disturb the experience.

d. Ear Phones: Ear phones are popular among runners and exercise enthusiasts because they sit in the ear canal providing excellent sound quality without any cords getting in the way of movement. They also come with built-in protection against sweat so they stay clean even at high intensities for long periods of time.

e. Wear Tracker: An activity tracker is worn on the wrist or clipped onto clothing. It monitors how active people are throughout each day by tracking things like a heart beat rate and amount of sleep experienced during the nights. This kind of information can be used to set goals and measure progress.

f. The Mouse: This gadget has remained unchanged in its basic form since it was invented over 50 years ago, but there are some newer versions available today which feature optical technology that means they require less cleaning because the surface doesn't get dirty like traditional mice do from contact with oils from your hand or fingers. Mouse operations and functions include; open, manipulate, move cursor and spring-load pull-down menu from cascade button.
g. Fax machine: For office workers who need to send and receive documents quickly, a fax machine is the perfect solution. As long as your office has a phone line dedicated for use by the fax machine, you'll be able to send copies of electronic files at high speeds without having to wait hours while they're printing out.

Concept of Entrepreneurship

Entrepreneurship includes an opportunity recognition, idea generation, drawing up of business plan, and implementation (Peters, Frehse & Buhalis, 2009). Schumpeters (1934) conceives entrepreneurship process as encompassing a deliberate disruption of market via human creativity, which leads to value-creating opportunities. Therefore, according to this prospect perspective, entrepreneurship means a series of pioneering, ground-breaking affairs, comprising new ideas, technology, products, ways of doing things and other novelties for solving problems.
Tarawira (2016) posits that "entrepreneurship is the process of creating something different with value by devoting the necessary time and efforts; assuming the accompanying financial, psychological, and social risks, and receiving the resulting rewards of monetary and personal satisfaction". Tarawira (2016) refer to entrepreneurship as "the willingness to take calculated risks, both personal (time, intellectual) and financial, and then doing everything possible to fulfil one's goals and objectives. Timmons (1989) sees entrepreneurship as initiating, doing, achieving, and building an enterprise or organization, rather than just watching, analyzing or describing. It is the knack for sensing an opportunity where others see chaos, contradiction, and confusion.

The Role of Information and Communication Technology in Entrepreneurship Education

Information and communication technology (ICT) is an electronically based system of information transmission, reception, processing and retrieval (Akpokiere & Abdul-Salam, 2011). It is an umbrella term that includes any communication device which encompasses radio, television, cellular phones, computer and network hardware and software, satellite system as well as various services and applications associated with them such as video conferencing etc (Sadiq, 2012). Through ICT, students are exposed to learning packages like spreadsheet, corel draw, word processing, power point, data base, among others. Entrepreneurship skills can be provided to the jobless youths in these areas with a view to setting up their businesses. This will reduce poverty to the barest minimum among the populace (Okafor, 2009). Anyakoha (2005) asserts that electronic commerce is also emerging as a way of reducing the cost of a business transaction; hence entrepreneurs wouldn't have to travel to certain distance places before business transaction take place. Enormous improvement of telephone facilities in Nigeria brought about by GSM has provided employment opportunities for Nigerians. Through the internet and virtual library, ICT is also playing a major role in providing access to information for students and readers in various fields of endeavour (Okafor, 2009). Sadiq (2012) observed that access to reading material is made easier through ICT and as such, intending entrepreneurs can have access to relevant information required in business.

Objectives of Entrepreneurship Education

According to Abubakar (2016), the objectives for entrepreneurship education include, but not limited to the following:
a. To offer functional education for the youths that will enable them to be self-employed and self –oriented.
b. To serve as a catalyst for economic growth and development.
c. Examine the link between Science, Vocational and Technical education.
d. To provide the youth graduates with adequate training that will enable them to be creative and innovative in identifying noble business opportunities.
e. Develop the spirit of creativity, logical thinking, self-reliance, independence and freedom in making one's own decision.

Management of Entrepreneurship Education

According to Ayeni and Adesua (2010), a poor education system does not guarantee good employment for the people. The above submission underscores the significance of effective management of entrepreneurship education. Nigerian governments have suddenly realized the need for the country to break away from the grip of backwardness, and other social problems (Emmanuel, 2016). Due to lack of necessary knowledge and skills, individuals have difficulties in translating their ideas to realities (Arogundade, 2011). From the beginning, an education curriculum was oriented towards making school leavers suitable only for white collar jobs. However, with the introduction of National Policy on Education (NPE) in 1981, the foundation for entrepreneurial education was established in Nigeria.

The Significance of Information Communication Technology in Teaching and Learning Process

Information communication technology application and use will prove beneficial in improving an educational system and give students a better education. Schools where new technologies are used have access to tools that adjust to their attention feedback for literacy enhancement which is currently not fully implemented in Nigeria school system. The ability to use computers effectively has become an integral part of education (Yusuf, 2011). The effects of information communication technology (ICT) in teaching and learning process are as follows:
a. Education researchers have easy access to current literature materials.
b. It reduces time and cost of conducting educational investigation.
c. Data, irrespective of size, can be stored and retrieved when needed.
d. Researchers in different areas can collaborate more easily.
e. Data and library resources can be shared by institutions in different location.

For the students, information communication technology (ICT) usage allows for increased individualization of learning. Information communication technology (ICT) application and use has proven beneficial in improving Nigeria's educational system and giving students a better opportunity in education (Nwabueze, 2011).

Challenges Bedeviling Information Communication Technology (ICT) Utilization

Information communication technology (ICT) has assisted in advancing Western and Asian worlds, while African countries notably, Nigeria are still backward in this aspect. This phenomenon has continued to widen the gap in the digital and knowledge acquisition.

According to Stephen (2020), the following are challenges being faced in the implementation of computer education in Nigeria:

a. Lack of qualified teachers to teach Information Communication Technology (ICT) in schools. Computers are still very exorbitant despite spirited efforts by government agencies.
b. Many schools are still not yet connected to electricity facilities. Nigeria being a developing country has not been connected to the national electricity grid, and as a result, most communities are still in darkness.
c. Most schools are not able to connect to internet facilities partly due to the high cost involved in the connectivity.
d. Many countries notably Nigeria, have not been able to employ qualified teachers and provide resources to keep up with this demand. This situation brings about compromised quality of education.

Challenges to Effective Management of Entrepreneurship Education in Nigeria

The neglect of effective management of entrepreneurship education in Nigeria is rubbing the nation the contribution her school leavers would have made in the economy. It is obvious that the current state of affairs in our institutions of learning is not conducive for effective management of entrepreneurial education. Esomonu (1997) maintained that effective management of entrepreneurial education is bedeviled by the following:

a. Examination malpractices initiated and sustained by the desperate need to acquire a certificate. This phenomenon has denied individuals of the creative ability and knowledge.
b. The deplorable conditions in most of our schools.
c. Parental interference in the choice of their children which adversely affects entrepreneurial education and development.
d. Lack of continuity, especially the incessant strikes in the Nigerian educational system which has greatly affected entrepreneurial development.
e. Effective Management of Entrepreneurship Education in Nigeria for effective management of entrepreneurial education in Nigeria, Esomonu (1997) suggested the following strategies:
a. Entrepreneurship education should motivate students to seek for success in a new venture through effort and skill, not by chance.
b. Teaching and learning of entrepreneurship education should involve making of references to the experiences and exploit of successful entrepreneurs who started from scratch, waded through the storm, employing their resourcefulness to create, manage, and control scarce resources which ultimately brought them to limelight.
c. Career education should orient young Nigerians towards creative and honourable means of livelihood.
d. Entrepreneurship education should emphasize the need for honest desires, dedication to duty, determination to achieve success and self-discipline in service.
e. Entrepreneurs in particular, should be educated on innovation in products, distribution channels, and marketing methods.

Theoretical Review

Technology Acceptance Theory

After a thorough consideration of the various theories related to ICT, the technology acceptance theory was selected; hence it is the most appropriate for the study. Technology acceptance theory is largely credited to Fred Davis (1986) when he was part of the Computer and

Information Systems Graduate School of Business Administration at the University of Michigan in the United States of America. Technology acceptance theory states that the success of the new technology adoption is based on positive attitudes towards two measures: Perceived usefulness, and perceived ease of use. Some technology acceptance theories such as Theory of Planned Behaviour and Technology Acceptance Model developed over the TAR concept in order to explain the individual usage behaviours (Venkatesh & Davis, 2000). The research work of Triandis (1979) resulted in a framework that described how the behaviour happened, and what are the variables that encourage the individual to do the behaviour while using the personal computer (PC). According to Triandis (1979) explanation for his framework, the behaviour has objective consequences which are interpreted by an individual. The result of these interpretations revealed that the individual feels reinforced. This reinforcement affects in two ways on the perceived consequences of the behaviour: "it changes the perceived probabilities that the behaviour will have particular consequences, and it changes the value of these consequences". Some other determinants such as: habit, relevant arousals, facilitating conditions, and social factors affects behaviour.

Methodology

The study was carried out with the objective to ascertain the impact of students' knowledge on the use of information communication technology (ICT) in teaching and learning of entrepreneurship subjects, and to also evaluate the extent to which ICT infrastructure influence teaching and learning process. Secondary data generated from documentary sources and internet provided baseline were used.

Findings

The study can state categorically that most secondary school students have very poor knowledge of information communication technology (ICT) as a medium of instruction of entrepreneurship education. Besides, this can be attributed to the fact that most of the students have no access to ICT facilities.

Conclusion

The adoption of information and communication technology (ICT) in schools has a positive impact on teaching and learning process. In spite of the positive role of ICT, schools in Nigeria are yet to extensively adopt them for teaching and learning process. All efforts towards integration of ICT in schools system have not yielded desired results. Problems such as poor policy and implementation strategies militate against these efforts. Nigeria must re-focus her educational system in order to meet global demand.

Recommendations

Based on findings, the following recommendations would be beneficial: Critical stakeholders such as teachers, Management of educational institutions, and the government should sensitize students in ICT facilities for instructional purpose. An ICT policy implementation commission should be established and properly funded with the sole mandate to provide ICT infrastructural facilities in schools, and monitor their use and operations for positive results.

The study was focused more on utilizing the potentials inherent in information and communication technology (ICT) to groom young minds that will be more productive with the use of ICT. Therefore, this study has contributed to knowledge by stating that there is no alternative to the provision of ICTs in the teaching and learning in our schools.

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