ASSESSMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY TOOLS REQUIRED IN ENTREPRENEURSHIP EDUCATION TOWARDS POVERTY ALLEVIATION AMONG GRADUATES IN ONDO STATE, NIGERIA

Adewuyi, Lydia Aduke (Phd)
Adeyemi Federal University of Education, Ondo State, Nigeria
Department of Business Education
lydisticadewuyi @gmail.com

Ajisafe, Olatunbosun Emmanuel(Phd)
Adeyemi Federal University of Education, Ondo State, Nigeria
Department of Business Education
safebosun@gmail.com

Adewuyi, Joel Adeyanju
Bowen University, Iwo, Osun State, Nigeria
Department of Computer Science
adewuyijoeladeyanju@gmail.com

Abstract

The focus of this study is to carry out an assessment of Information and Communication Technology (ICT) tools required in entrepreneurship education among graduates in Ondo State, Nigeria. The study adopted a descriptive research design of survey type with a population of three hundred and forty-six (346) graduates registered with the Ondo State Ministry of Commerce and Industry out of which one hundred (100) was purposely selected because they reside in the urban centres of Akure and Ondo which are the two metropolitan towns in the State. The only instrument was a structured questionnaire constructed by the researchers titled: Assessment of ICT Required in Entrepreneurship Education among Graduates (AICTREDQ) questionnaire on a four (4) likert scale responses of Highly Required (HR), Moderately Required (MR), Required (R) and Not Required (NR). The questionnaire was validated by experts in ICT and Entrepreneurship Education and reliability was established with 20 entrepreneurs trial tested using a split-half reliability technique. A reliability co-efficient of 0.72 was returned and the instrument was considered reliable. The study reveals that graduates should be equipped with the nitty-gritty of modern technology so as to be job creators. The paper therefore recommends that graduates need constant training and retraining in the use of modern technologies in business operation to ease the way of cloud business with the end result of poverty alleviation in our society.

Keywords: Information, Communication, Technology, Entrepreneurship Education, Poverty Alleviation

Introduction

There is no gain saying the fact that graduates that want to become entrepreneurs must be versatile in the use of information and communication technology because they need to inform, communicate, persuade and interact with customers, without which the business will not move on well particularly now that e-business is the main stay of business across the globe. Information   and communication technology gadgets which include computer, internet facilities, cellular phone, photocopier, video-conferencing, satellite system, fax, laminating machine among others have great influence on the enterprises where graduates set up their computer centers, cyber cafés and selling of modern gadgets and other entrepreneurship outfits which made them self-reliant and employers of labour thereby reducing poverty in the society. In addition, this makes them employ additional hands.

The roles of Information and Communication Technology (ICT) in entrepreneurship education cannot be over emphasized because it contributes a great deal to the economic growth of any nation where graduates can hold on to in order to become functional entrepreneurs in future. The arrival of information and communication technology has brought great improvement to the modus operandi of business operations both in public and private organizations across the globe. Virtually every aspect of human endeavours globally is technology-driven and this has impact of a great deal on the livelihood of the populace. Modern gadgets such as photocopier, computer, scanner, telephone, fax, among others are inevitable for the day to day activities because of the functions and task they help in performing. In the olden days, manual machines like typewriter and cyclostyling which at times delayed work and thereby rendered the work ineffective were used. The information and communication technology has brought a great improvement to the business world. The constant transmission of new information and communication technology and e-business technologies among firms is a current example of the dynamics of technological change and economic development (Koellinger 2006).

Yeo and Oh (2008) see information and communications technology as the combination of information processing, computing and communication technologies. ICT is changing the way people learn, work and live in society and are often spoken of in a particular context, such as in education, health care or libraries. A good way to think about ICT is to consider all the uses of digital technology that already exist to help individuals, businesses and organizations use information. ICT covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form and is concerned with these products. Hence, it has influenced greatly every facet of human life, including entrepreneurship education which is a tool of poverty alleviation.

Entrepreneurship education as posited by Micheal (2004) is an education that makes one to be a self-sufficient and a creative individual. "Entrepreneurship has become one of the most sought-after areas of study among collegiate business students. Graduates of these programs are not only increasing in number, they are reshaping our understanding of market, technology and management leadership. Entrepreneurship education equally boosts a graduate's ability to create wealth world over.

Currently, almost every business requires the use of information and communication technology; therefore, stories abound of the vast social, economic and educational benefits of entrepreneurship. This has culminated into entrepreneurship education programs thriving in colleges and universities around the country. In the past, only a handful of schools offered courses in entrepreneurship, but today almost all colleges and universities offer some form of entrepreneurship education or training.

Elena (2008) was of the opinion that worldwide, people belief globally is that information and communication technology has led to growth especially in the area of education. World Bank (2004) points out that "educators and policymakers agree that ICTs are of paramount importance to the future of education" and that "ICT in education initiatives are likely to successfully contribute to meeting Millennium Development Goals." Parents and teachers are of the view that teaching and learning entrepreneurship education in school is a link to progress. Though, modern technology had improved the life of students at all levels by provoking high hopes and create great potential for increasing personal and social relationship, but not much has been done on nationally business know-how. Alberta (2006) opined that the use of these new technologies has produced dependency for many individuals who have gripped and included ICTs into their daily communication and information-seeking and-giving activities.

Concepts of Information and Communication Technology

Glen & Cédric (2003) viewed "Information and communication technologies (ICTs) as technologies used to communicate and to create, manage and distribute information. A broad definition of ICTs includes computers, the internet, telephones, television, radio and audiovisual equipment. However, ICT can be regarded as any device and application used to access, manage, integrate, evaluate, create and communicate information and knowledge, including but not limited to radio, television, cellular phones, computer hardware and software, network hardware and software, satellite systems, peripherals, connections to the internet, etc. Digital technologies are included in this definition as services and applications used for communication and information processing in the world of business including social and personal relationships. The importance of ICT to entrepreneurship education cannot be overemphasized. Modern technologies play a major role in the enhancement of enterprises. Adhiraj (2017) listed out reasons why entrepreneurs should incorporate technology in their businesses which include:

*   **Communication**: There is no gain saying the fact that effective communication promotes free flow of information between the seller and the buyer, this is done through mobile phones and internet. Technology provides numerous channels for businesses to communicate both internally and externally. Whether it's setting up virtual workspaces where employees can interact and develop ideas, or connecting to international businesses through the use of video conferencing technology can be used as a passage

which allows businesses to collect feedback from their customers, which can be used to improve or alter a product to suit the needs of the customers better.

*   **Research and Development**: through the use of technology, businesses can explore the market through the use of secondary data. This is extremely useful as it provides businesses with in-depth knowledge about markets before penetrating them. Along with secondary research, businesses can use technology to conduct primary research in addition to using online surveys and customer feedback.

•   **Web Based Advertising**: one the most valuable use of technology is advertising to millions of people around the globe just at a click of a button. Web based advertising consists of websites and social media. Websites can be built using DIY tools such as WordPress or SquareSpace or professional web developers can be hired to create them. Unlike websites, social media accounts are very easy to build for your business and provide exposure on a wide variety of platforms such as Facebook, Twitter and YouTube.
Hence, National Open University of Nigeria, (NOUN, 2009) noted that computer technology has transform businesses and organizations all over the world. Nearly every company, large and small, now depends on information processing equipment to computerize or assist all parts of business world. Computers are necessary in meeting the challenges of meeting global competitiveness, where business must be efficient and responsive, without computers to produce accurate and up-to-the-second information needed to produce strategic decisions and to manage production processes, many businesses and organizations will find it difficult to survive.

Need for Entrepreneurship Education

Jeffrey (1998) asserted that entrepreneurship education has become popular because it is a needed area of study to alleviate poverty. It is therefore a programme of education needed as the study of enterprise creation and the development of business plans which allows students to put together accounting, economics, finance, marketing and other business disciplines, to offers an inspiring and integrative educational experience. Hence, it is needed to:
•   promotes the starting of new businesses by graduates and builds vital
          decision-making skills that improve the success of graduates in the job market.
*   increases technology shift from the university to the market through the development of
          technology-based business plans and student involvement with technology licensing.
*   create links between the business and academic communities.
          The above need for entrepreneurship education has left no one in doubt that it is an essential education to create wealth, be self-reliant and alleviate poverty. How then would it achieved its aims in this dynamic global society where ICT has taken over every facet of human life? This is the crux of this study to carry out an assessment of ICT tools required in entrepreneurship education towards poverty alleviation among graduates in Ondo State, Nigeria.

Statement of the Problem

Despite the introduction of information and communication technology and entrepreneurship education in tertiary institutions and the diverse skills such as communication, ability to identify strengths and weaknesses, ability to connect via social networking, ability to focus on customers, ability to spot new trends, ability to deal with failure and the desire to improve their worlds rooted in them, many students still do not embrace it while in school. Many skills already acquired would have led to job creation for many who embrace and know their usefulness. Information and communication technology in entrepreneurship education is supposed to greatly boost employment among graduates, in order to make job makers and not job seekers. In spite of the numerous importance of information communication and technology, there are some negative sides which slow down the progress of business among young entrepreneurs particularly graduates. There is acute shortage of the knowledge on the use of the modern technologies where some of the entrepreneurs do not know how to utilize some of these technologies effectively thereby rendering their services ineffective, hence the need for the study.

Purpose of the Study

The main purpose of conducting this study was to carry out an assessment of information and communication technology tools required in entrepreneurship education towards poverty alleviation among graduates. Specifically, the study seeks to determine the:
(1)   Modern office technologies available to graduates in promoting their businesses.

(2)   Skills required by graduates in the use of modern technologies.

Research Questions

The following research questions guided the study:

(1)   What are the modern office technologies available to graduates to enhance their performance towards poverty alleviation?
(2)   What are the skills required by graduates in the use of modern technologies toward efficiently and effectiveness of business operations?

Methodology

The study adopted a descriptive research design of survey type with a population of three hundred and forty-six (346) graduates registered with the Ondo State Ministry of Commerce and Industry out of which one hundred (100) was purposely selected because they reside in the urban centres of Akure and Ondo which are the two metropolitan towns in the

State. The only instrument was a structured questionnaire constructed by the researchers titled: Assessment of ICT Required in Entrepreneurship Education among Graduates (AICTREDQ) questionnaire on a four (4) likert scale responses of Highly Required (HR), Moderately Required (MR), Required (R) and Not Required (NR). The questionnaire was validated by experts in ICT and Entrepreneurship Education and reliability was established with 20 entrepreneurs trial tested using a split-half reliability technique. A reliability co-efficient of 0.72 was returned and the instrument was considered reliable. The results were analyzed with the use of descriptive statistics of mean and standard deviation

Research Question 1:   What are the modern office technologies available to business education graduates to enhance their performance?

Table 1:   Modern office technologies available to graduates

N = 100

S/N	Items	X	SD	Decision
1.	Availability of computer	2.5	6.20	Required
2.	Computers are connected to internet facilities.	2.5	6.20	Required
3.	Accessibility to printers	23.5	5.90	Required
4.	Availability of photocopiers	24.8	6.19	Required
5.	Scanners are available	20	5.0	Required
6.	Use of video-conferencing facility in transacting business	1.89	.85	Not Required
7.	Provision of fax machine to transmit data/information	8.75	2.19	Not Required
8.	The use of cell phones in business is on the increase	2.5	6.20	Not Required
9.	There are intercom facilities available to related to workers within the premise of the organization	23.8	5.94	Not Required
10.	There are sufficient electronic media like radio, television in the offices.	24.8	6.19	Required

Source: Field Study, 2025

In the table above, item 1 shows that all the respondents accepted that there are adequate computers. Item 2 reveals that computers are connected to internet facilities so as to be able to connect to customers outside the country. Item 3 shows that there is enough provision of printers in graduates' shop because without it, they will not be able to print out the information, that is the hard copies which attract some amount thereby promoting the business. Item 6 confirms that availability of video-conferencing facility is slim because many business education graduates do not have the facility in their shop. Item 7 reveals that the availability of fax machine is low compare with the availability of some other modern technologies like computers, printers, photocopiers among others. Item 8 shows to a great extent the availability of cell phones. Any organization without these will not function effectively and efficiently because communication is very paramount in dealing with customers. Item 9 reveals that there are intercom facilities in the shop of most graduates because they have been in use before the

advent of cell phones. Item 10 reveals that there is sufficient electronic media like radio, television in the offices. All these modern technologies are very essential because they serve as means of communication with which to advertise the existence of new products in the market thereby attracting more customers.

Research Question 2: What are the skills required by graduates in the use of modern technologies towards efficiency and effectiveness of business operations?

Table 2: Skills required by by graduates in the use of modern technologies

N = 100

S/N	Items	X	SD	Decision
11.	Ability to use word processing to enter, edit, store and retrieve information properly.	2.5	6.20	Required
12.	Ability to use accounting programme such as tally, pastel and quick books.	21.3	5.31	Required
13.	Ability to use spreadsheet such as (Microsoft excel and access).	22.0	5.50	Required
14.	Ability to use microsoft power point to produce electronic slides.	22.0	5.50	Required
15.	Ability to use internet/e-mail for sending and receiving messages	23.8	5.94	Required

Source: Field Study, 2025

Table 2 shows the level of skills required by graduates in the use of modern technologies towards efficiency and effectiveness of business operations. The means of item 11 to 15 were greater than the criterion mean (2.50). This implies that graduates accepted that they required and can make use of all the software like Microsoft word, accounting programme, such as pastel and quick book, spreadsheet, Microsoft power point and ability to use internet/e-mail for sending and receiving messages.

Conclusion

Information and communication Technology is a sine-qua non in entrepreneurship education because of the acquisition of several skills inherent in it. ICT flushes out idleness and laziness from future entrepreneurs, which are the graduates. Various opportunities abound in the use of modern technologies because they make intending entrepreneurs to be employers of labour instead of job seekers. This will consequently make them self-reliant and not depending on government for sustenance, alleviate poverty and thereby contribute to economic growth of the nation.

Recommendations

The following recommendations were made by the researchers:
1.   Procurement of functional modern technologies by the entrepreneurs.

2. Constant training on the use of modern tools should be introduced to prospective entrepreneurs in order for them to be useful in the business world.

3. Enough capital should be provided to establish businesses through loans of zero digit by the government.

4. Non-governmental organization, philanthropists and individual should assist the future entrepreneurs in raising the needed capital, training and retraining from time to time on the latest ICT and its functions as it relates to entrepreneurship development.

5. Qualified lecturers should be employed in order to impact sound skills knowledge and skills to the students on ICT and entrepreneurship education to alleviate poverty.

References

Adhiraj, A. & Rajkishan, G. (2011). The need for i*nformation communication technology* (*ICT*) in education today.

Alberta (2001). The impact of information and communication and technology on interorganizational coordination: Guidelines from theory.

Elena, A .(2008). Benefits of entrepreneurship education, http://www.smallbusinessnotes.com/choosing/whatishtml retrieved 25th January, 2017.

Glen, F. and Cédric W.(2003). Meta-survey on the use of technologies in education in Asia and the Pacific 2003-2004 UNESCO.

https://dl.acm.org/citation.cfm?id=2062588 retrieved on 25th January, 2018.

http://www.ets.org/Media/Products/ICT_Literacy/demo2/index.html retrieved on 25th January, 2018.

National Open University (2009). *Course Guide*. Information and communications technology, Abuja: National Open University of Nigeria.

Michael, S. (2004). Entrepreneurship Education: Is the impact as impressive as the demand? Ibadan : Adio Publishers.

Educational Testing Service (2003). *Succeeding in the 21stccentury: What higher education must do to address the gap in information and communication technology proficiencies*.

Jeffrey A. T (1998), in www.entreworld.org. Impacts of entrepreneurship education. Retrieved on 6th February 6, 2018.

Koellinger, P. (2006). *Technological change - An analysis of the diffusion and implications of e-Business technologies.* Humboldt-Universität zu Berlin, http://edoc.huberlin. de/docviews/abstract.php?lang=ger&id=26708.

National Open University (2009). *Course Guide*. Information and communications technology, Abuja: National Open University of Nigeria

Yeo and Oh, 2008, ICT and Our Society Fourth Edition. http://www/floweradvisor. com.lifestyle/technology/information_technology/556/information_technology/

World Bank (2004). Doing Business in 2005: Removing Obstacles to Growth Washington, D.C. Publications.