

Information and Communication Technology (ICT) Education and Youth Entrepreneurship in Uyo, Akwa Ibom State of Nigeria

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Abstract: *Entrepreneurship is increasingly being accepted as an important and innovative strategy for improving the livelihood and economic independence of young people. Also, information and communication technology (ICT) is believed to help the youths develop varied skills including entrepreneurial skills. This paper examines the role of ICT education in enhancing youth entrepreneurship in Uyo, Akwa Ibom State, Nigeria. Relying on Bandura's theory of self efficacy, the paper explains that youth's firm belief that they can radically change their life influences their motivation, decision, and ability to establish and run an enterprise; and that ICT education plays a crucial role in developing appreciable levels of self efficacy and entrepreneurial spirit in the youths. Data for the study were generated through the questionnaire administered to 1,890 respondents. Results of the study show that: youths in urban areas are increasingly accessing ICT education; ICT education enhances entrepreneurship in many ways; and more youths have high self efficacy as a result of the ICT education they have received. However, the study found that only few youths are into entrepreneurial activities, owing to the challenges influencing entrepreneurship in Nigeria. The challenges listed by the youths include poor education or illiteracy, inadequate access to factors of production, insufficient capital, poor motivation, lack of credit facilities, inadequate entrepreneurial training, constrained access to local and international markets, and inadequate infrastructural facilities including access road and electricity. The paper concludes that helping the youths to overcome these challenges will position them to contribute to national development.*

Keywords: *Information and Communication Technology (ICT), Education, Youth Entrepreneurship, Uyo.*

I. Introduction

Unemployment is a major problem among the youths in developing countries, including Nigeria. According to a global employment report given by the International Labour Organization (ILO), the global youth unemployment rate decreased from 12.3 per cent in 2009 to 11.3 per cent in 2011, increased again to 12.4 per cent in 2012 and grew to 12.6 per cent in 2013. By 2018, it is projected to rise to 12.8 per cent. However, 74.5 million youths under the age of 25 are currently unemployed globally (ILO, 2013). Thisday Newspaper of 25 March, 2014 (cited the Nigerian Bureau of Statistics who) put the current youth unemployment rate in Nigeria at 25%. This implies that over 40 million Nigerian youths are unemployed. According to Odi and Odi (2013), the unemployment rate of Nigeria was put at about 19.7 per cent above world average of 14.2 per cent by the World Bank and with 41.6 percent unemployment rate reported for youth in the 18 to 24 years age bracket. Corroborating this, Okonjo-Iweala (Nigeria's former Minister of Finance) was reported in the Vanguard Newspaper (April 14, 2014) to have said that 1.8 million Nigerian youths enter the labour market annually and not all are absorbed.

The unemployment crisis particularly in Nigeria is traceably to the disequilibrium between labour market requirements and lack of essential employable skills by the graduates. These critical skills gap inhibit the development of the entire nation (Diejonah and Orimolade, 1991; Dabaler, Oni and Adekola, 2000, cited in Oviawe, 2010). Interestingly, organizations and governments have recognized the capacity of information and communication technologies (ICTs) education to ameliorate the situation by providing youth empowerment programmes. It was reported by News 24 Nigeria on 26th May, 2013 that Akwa Ibom State government will train as many as three hundred youths on ICT and entrepreneurship program. The State Government was said to have signed a memorandum of understanding with NNPC and Mobil Producing Nigeria Unlimited (NNPC/MPN) to train youths in the State. Four hundred and fifty unemployed graduates have already been trained on ICT and entrepreneurship in the first phase of the programme.

Being a major contributor to socio-economic development of progressive nations, information and communication technology (ICT) knowledge and education promises to be a useful strategy for youth empowerment, employment and development. Most nations around the world have invested and are still investing substantially in ICT. It has become widely used to provide opportunities especially for marginalised groups to join emerging productive processes. Thus, advancement in ICT and its penetration into the structures of production, knowledge management, communication and culture has resulted in the demand for new skills and competencies and the loss of importance in others. This has brought major changes in societies and at the

individual level. ICT education is therefore critical to the survival of the 21st century youths, if they are to be relevant and productive.

The knowledge-driven economy of which Nigeria is seeking to become a key global player is ICT-focused. It demands for youths who are versatile in the use of ICT devices. Hence, ICT education has a role to play in the development of new skills and competencies among the youth. These competencies have often been described as 21st century skills due to their importance in a knowledge society. ICT education as a facilitator of youth entrepreneurship is without doubt, a tool for empowerment. It helps individuals to expand their consciousness, increase capacity for empowerment and broaden their perspectives on the nature of technology and its everyday usefulness in life. Knowledge and use of ICT increases access to a greater variety of information and improved quality of life. If young people know how to use ICT, they can tap into information and services that could empower them to initiate entrepreneurial activities. ICT education can be used to enhance the impact and effectiveness of young people as well as address the youth employment challenge.

According to the World Bank Development Report (1999), education is fundamental to the construction of knowledge economy and society in all nations. It is through education that knowledge and skills are transferred to individuals, and their competencies and abilities developed. Therefore, ICT education will enable our youths to acquire, develop and utilize entrepreneurial competencies. Adegun and Komolafe (2013) assert that entrepreneurship is the response to the diverse opportunities and potentials that exist within an individual and his environment. The concept refers to a creative and innovative response in socio-economic ventures, it involves setting up of business ventures through willingness and ability of an individual to explore investment opportunities and being able to run it successfully, by making it profitable or suffering loss of invested capital. It involves combining resources to increase value and introducing change/innovation into the production process and creating wealth and employment opportunities.

A number of youths are taking up the challenge by starting up businesses. ICTs are transforming the global economy and creating new opportunities for advancement. Those who cannot access the ICT services become increasingly marginalized within the modern world (Najam, 2012). ICT education offers socially and economically excluded groups the chance to enter the knowledge-based economy. ICT education also promises to equip the Nigerian youth with the competencies needed to explore entrepreneurial opportunities, develop his latent entrepreneurial talent and contribute to the economy through his entrepreneurial activities. Fostering youth entrepreneurship therefore requires practical, targeted strategies, based on an understanding of the specific conditions faced by youths in a particular region or area. ICT education is a veritable platform to engage the Akwa Ibom State youths to explore and exploit their potentials and take on meaningful economic activities to curb joblessness or idleness, youth poverty, youth unemployment, youth restiveness and other social problems.

ICT education offers particular advantages to the youth in starting or managing businesses. It has the capability of enhancing quality life and economic performance. The youths are often the leading innovators in the use and spread of ICT. They adapt quickly and are adventurous for new knowledge and therefore if provided with opportunities, they can translate it into livelihood ventures. This paper therefore assume that ICT presents wide ranging opportunities especially for developing societies like Nigeria to empower their youths, and that through effective ICT education policies, youth unemployment could be effectively reduced to tolerable level. Obviously, many youths, especially in the urban areas, have ICT education and training, and are seemingly willing to engage in entrepreneurial activities. However, we have observed that only few of these youths successfully establish and run their enterprises. As a result, it is pertinent to ask: "Why are these youths with ICT education not engaging in entrepreneurship?" "What are the challenges facing youth entrepreneurship in Nigeria?" "How can these challenges be effectively tackled?" "How does self efficacy enhance youth entrepreneurship?" Against this backdrop, this study examines the influence of ICT education on youth entrepreneurship in Uyo, the capital city of Akwa Ibom State. Specifically, the study tries to understand ICT knowledge among youths in Uyo, ascertain the relevance of ICT education to youth entrepreneurship, examine the relationship between ICT education and youth entrepreneurship, identify challenges facing youth entrepreneurship, and understand the influence of self efficacy on youth entrepreneurship.

Research Questions

The following questions were proposed to guide the study:

- a. What is the level of ICT knowledge among youths in Uyo?
- b. How is ICT education relevant to youth entrepreneurship?
- c. Does ICT education enhance youth entrepreneurship?
- d. What are the challenges of youth entrepreneurship?
- e. How does self-efficacy enhance youth entrepreneurship?

II. Conceptual Issues

Conceptual issues in this paper revolve around the explanation of such key concepts as youth entrepreneurship, information and communication technology (ICT), and ICT education; and the nexus between ICT education and youth entrepreneurship.

Youth Entrepreneurship

Although the concept of youth has been variously defined by scholars and agencies because of attempts at considering vital issues such as age, economic strength, marital status, level of mental strength, among other things (Brown, 2006), the United Nations Population Fund (UNFPA) defined the term “youth” in 1997 as that segment of the population comprising young people who fall between ages 18 and 35 years. Like Yusuf (1998), we adopt the UNFPA’s definition of youth as simply the befitting definition. The term “youth” is seen sociologically as an ascribed status, or socially constructed label, rather than simply the biological condition of being young (Ress, Markson, and Stain, 1992; Schaefer and Lamm, 1995); and an interface between childhood and adulthood (Chigunta, 2002). Youths in any society have the potentials to stimulate economic growth, social progress and overall national development (Echebiri, 2005). Ukpong (2003) has observed that “youth” connotes not only age but economic empowerment or disempowerment as well as political disenfranchisement and social exclusion. The youths constitute a significant size of the labour force of any country. Known by agility and vigour, most youths are willing to work but they don’t get job anywhere. This has resulted in youth unemployment, which has a high profile in the Nigerian society currently. However, entrepreneurship is seen as an innovative strategy to the menace of youth unemployment.

Historically, the study of entrepreneurship dates back to the work of Richard Cantillon and Adam Smith in the late 17th and early 18th centuries respectively, but was largely ignored theoretically until the late 19th and early 20th centuries. It was also ignored empirically until a profound resurgence in business and economics in the last 40 years. In the 20th century, the understanding of entrepreneurship owes much to the work of economist Joseph Schumpeter in the 1930s and other Austrian economists such as Carl Menger, Ludwig von Mises and Friedrich von Hayek (Anyadike, Emeh, and Ukah, 2012). Entrepreneurship refers to the willingness and ability of an individual or a group to develop or establish and run an enterprise successfully. In this case, the individual or persons become self-employed and can employ others. Entrepreneurship simply means creating business outfits and becoming an employer of labour.

The concept of entrepreneurship has also been variously defined to mean many things. Oviawe (2010) sees entrepreneurship to mean the willingness and ability of an individual to seek out investment opportunities, establish and run an enterprise successfully, the ability to seek investment opportunities and establish an enterprise based on identified opportunities. The entrepreneur takes risks, is focused and energized by an inner drive. The ability to develop a new venture or apply a new approach to an old business is the sole idea of entrepreneurship. In other words, the individual gives the market place a product or service by using resources in a new way. Entrepreneurship is therefore the effective manipulation of human intelligence as demonstrated in a creative performance. This singular risk taking act leads an individual to create something of value from practically nothing.

Entrepreneurship is a way of thinking, reasoning and acting. It is much more than starting a new business. It is the process whereby individuals become aware of self-employment career options, develop ideas, take and manage risks, learn the process and take the initiative in developing and owning a business. Entrepreneurship is only one source of livelihood; employment in a paid job is the other main source (Schoof, 2006). The whole idea about entrepreneurship is about self-employment which will also generate employment opportunities to others that must work with him as he cannot work alone. Entrepreneurship is the most effective method for bridging the gap between science and the market place, creating new enterprises, and bringing new products and services to the market. These entrepreneurial activities significantly affect the economy of any nation by building the economic base and providing jobs (Baba, 2013). According to Ikeme and Onu (2007), entrepreneurship is the use of human courage to seek investment opportunities and establish a profit-oriented enterprise. For Aina and Salako (2008), entrepreneurship is seen as the willingness and ability of an individual to seek out investment opportunities and take advantage of scarce resources to exploit the opportunities profitably. It is the process of creating something new with value by devoting the necessary time and efforts, assuming the accompanying financial social risks at the end receiving resulting reward.

Schumpeter (1954) sees entrepreneurship as synonymous to innovation, creativity and risk-taking. An entrepreneur is the person who risks time, effort and money to start and operate a business (Udeh, 1990). Carland, Hoy, Boulton and Carland (1984) defined an entrepreneur as an individual who establishes and manages a business for the principal purpose of profit and growth. Entrepreneurs are also seen as people who have the ability to see and evaluate business opportunities, to gather the necessary resources, to take advantage of them, and to initiate appropriate action to ensure success (Meredith, Nelson and Neck, 1982). The entrepreneur is able to recognize potentially profitable opportunities, to conceptualize venture strategies, and to become the key force in successfully moving an idea from the mind to the market place (Stanford, 1975).

Entrepreneurs are creative and innovative, and they have the ability to see opportunities when others cannot see them. They have the tenacity to take risks in order to successfully establish and run their businesses. Clear examples of successful entrepreneurs in Nigeria include Michael Adenuga of Globacom Nigeria, Aliko Dangote of Dangote Group of Company, Innocent Chukwuma of Innoson Group of Companies, and Onyishi Maduka of Peace Mass Transit. Other insignificant entrepreneurs still exist in the country.

Drawing from the foregoing avalanche of definitions, we define youth entrepreneurship as the ability of the youths to seek investment opportunities and establish a profit-oriented enterprise. Salami (2011) has identified two types of entrepreneurship: opportunity-based entrepreneurship (OBE) and necessity-based entrepreneurship (NBE). OBE occurs when an entrepreneur perceives a business opportunity and chooses to pursue it. Ernst and Young (2009, cited in Anyadike et al., 2012), found that majority of entrepreneurs saw economic slowdown as the perfect time to pursue new market opportunities. In addition, economists, academics and industry leaders agree that recession tend to favour the naturally innovative temperament of entrepreneurs. On the other hand, NBE occurs when an entrepreneur is left with no other viable option to earn a living. It is borne not as a choice but compulsion which makes him or her choose entrepreneurship as a career. Drawing from the foregoing, it is pertinent to state that youths can be motivated by opportunities and/or necessities of life to engage in entrepreneurship.

Generally, entrepreneurships are vital to the economy of a nation with respect to economic development and poverty reduction (Weber, 1904; Schumpeter, 1934; Adejumo, 2001; Morris & Lewis, 1991; Reynolds, 1987; Shapero, 1981; McClelland, 1961). Galbraith (2008) argued that the economy of developing nations can be improved through entrepreneurship development. According to Inegbenebor and Igbenomwanihia (2011), entrepreneurship is important for economic development: it creates jobs or generates employment, eases fiscal burden, provides competition, increases productivity through innovation, facilitates the transfer/adaptation of technology, stimulates growth in those sector which supplies it with inputs, reinvigorates large-scale enterprises and public enterprises, encourages and sustains economic dynamism that enables an economy to adjust successfully in a rapidly changing global economy, and enables people to use their potentials and energies to create wealth, independence, and status for themselves and the society at large.

Several studies have documented the barriers bedeviling entrepreneurship. They include: inadequate access to factors of production and trade, lack of credit facilities, lack of training opportunities and skill acquisition, limited access to appropriate production technologies and social services (Saito, 1994; Kwesiga, 1999; Ikeduru, 2002), repressive and/or discriminatory cultural beliefs and traditions (Zakaria, 2001; Mordi, Simpson, and Singh, 2010; Okafor and Amalu, 2010; Kinbanja and Munene, 2009), lack of education or training (Halkias, 2011; Woldie and Adersua, 2004); absence of or inadequate infrastructural facilities like access road and power/electricity; inadequate working capital; low standard of education; socio-economic factors like policy reversals, high and double taxations, difficulty in procuring business approvals, high inflation and unstable exchange rates; and political factors such as corruption and favoritism in awarding contracts (Onwubiko, 2011); and constrained access to local and international markets (Agbeze, 2012).

Successful entrepreneurship is dependent on a lot of factors. These include entrepreneurial attributes such as motive of venturing into the business (money, achievement and learning opportunity), business and innovative skills, education and networking ability (Mitchell, 2004; Porter and Nagarajan, 2005). Other factors include self drive, commitment and creativity (Ying, 2008); entrepreneurial skills, networking to get market information, customer information, finance and strategic planning (Reavley and Lituchy, 2008); physical capital and connection networks as well as training (Jill, Thomas, Lisa and Susan, 2007); social capital, motivation and opportunity to engage in collaborative exchange (Tata and Prasad, 2008). Furthermore, Idris and Mahmood (2003) suggested that being ambitious, self-confident and high-level of energy were the entrepreneurial characteristics. Also, successful entrepreneurs were expected to be less emotional, educated, and having previous entrepreneurial exposure and managerial occupation, and belong to women associations. Other characteristics that ensure success entrepreneurs include having previous entrepreneurial exposure, and training before entrepreneurial activity (Jill et al., 2007; Kuzilwa, 2005; Reavley and Lituchy, 2008; Robinson and Malach, 2004; Ying, 2008).

Entrepreneurship culture should be promoted in all human societies. Schnurr and Newing (1997) have earlier justified the need for promoting entrepreneurship culture on the ground that youth in all societies have sterling qualities such as resourcefulness, initiative, drive, imagination, enthusiasm, zest, dash, ambition, energy, boldness, audacity and courage which are all valuable traits for entrepreneurship development. Supporting this assertion, Bennell (2000) maintained that governments, NGOs and international bodies seeking to improve youth livelihoods could best pursue their empowerment objective by tapping into the dynamism of young people and build on their strong spirit of risk-taking through entrepreneurship development. In Zambia, it was shown that 25% of the youth are self-employed (Chigunta, 2001), and findings in Ghana of small scale enterprises reveal that young people owned almost 40 percent of the enterprises (Osei, Baah-Nuakoh, Tutu, and Sowa,

1993). Attempts should therefore be made to engage all Nigerians economically so that unemployment, poverty and social vices will be drastically reduced.

Essentially, the government of a country is required to provide the enabling environment for entrepreneurship development in terms of favorable financial, economic, socio-cultural, legal policies and functional infrastructure (Coleman and Kofi, 2008; Iganiga, 2008; Stephen and Wilton, 2006; William and Thawatchai, 2008). However, entrepreneurs themselves have roles to play so as to complement government's effort in enterprise development. These include making good business decisions, having the right motive, making effort to acquire appropriate education or training, business experience or skills, innovation, market information, social networks and so on.

Entrepreneurship can unleash the economic potential of young people. The importance of promoting youth entrepreneurship, according to Chigunta (2002), include: creating employment opportunities for self-employed youth as well as the other young people they employ; bringing alienated and marginalized youth back into the economic mainstream and giving them a sense of meaning and belonging; helping address some of the socio-psychological problems and delinquency that arises from joblessness; helping youth develop new skills and experiences that can then be applied to other challenges in life; promoting innovation and resilience in youth; promoting the revitalization of the local community by providing valuable goods and services and capitalizing on the fact that young entrepreneurs may be particularly responsive to new economic opportunities and trends.

One potential way of integrating young people into the labour market is to increase youth entrepreneurship. Entrepreneurship offers benefits to the youth by deepening the human capital attributes (self-reliance, skill development) and increasing their level of happiness. It also offers societal benefits and other positive externalities. A young person setting up a new business may act as a role model for other young people. It further offers an indigenous solution to economic disadvantages. It suffices to say that entrepreneurship may not be the panacea to youth problems, but it is an innovative strategy that can personally and professionally develop vibrant individuals and raise entrepreneurial potential of the youths Information and Communication Technology (ICT). Information and communication technology (ICT) has been defined by Manuel Castells as the converging set of technologies in microelectronics, computing (machines and software), telecommunications/broadcasting, and optoelectronics" (Castells, 1996:30). Curtain (2003) sees it as encompassing the production of both computer hardware and software as well as the means of transferring the information in digital form. Information and communications technologies (ICT) are changing the way the world does business. New technologies in particular can improve the delivery of information and services in sectors as diverse as education, manufacturing, agriculture, and health. The growth of the ICT sector itself has opened new avenues for youth employment and entrepreneurship, as the costs of developing ICT skills is within the reach of low-resource communities. According to Ananidou and Claro (2009), ICT applications make up a particularly appropriate environment for higher order abilities such as management, organization, critical analysis, problem resolution and the creation of information. They added that ICT applications strengthen and increase the possibilities of communication and reinforce the development of skills of coordination and collaboration between peers.

ICT is increasingly being used to improve access to education and employment opportunities, which supports efforts to eradicate poverty. However, while ICT clearly has the potential to empower young people and improve their lives in many respects; several questions have been raised regarding its roles in deepening existing inequalities and divisions in the world. The important concerns surrounding the global digital divide apply as much to youth as to any other age group. ICTs have extensive potential to generate employment for young people. However, this potential will not be realised unless a country has a range of supporting strategies in place, including an enabling environment. The enabling environment includes opportunity to participate in skill training in technology, access to data and information, economic support to young people who needs to develop or improve skills, fair distribution of jobs and wages, free education for the ones that cannot afford, and quality work and training environments (Yigitcanlar and Baum, 2009).

The role of ICT in facilitating job creation for the youths, especially developing countries, cannot be over emphasized. ICT can facilitate developing countries' ability to combat the several socio-economic challenges confronting them. Increasing access to information, through the power of the internet infrastructure, and creation of several innovative tools and accessories, could create several opportunities which can be exploited by entrepreneurs (Danso, Affum and Hayfron-Acquah, 2012). ICT has introduced new forms of entrepreneurship based on the use of information. These benefits of ICTs include increases in the pace and quality of innovations, as well as macroeconomic benefits such as per-capita GDP growth, job creation, and rapid improvements in labour and total factor productivity. ICT, along with education/training and research and development (R&D), is one of the most important elements in building a platform for entrepreneurship and innovation. The positive contribution of ICT to economic growth and innovation in emerging and advanced countries has been repeatedly established through both quantitative and qualitative research. On a

macroeconomic level, ICT usage has been shown to be correlated with global competitiveness, total factor productivity growth, increases in GDP, and many more direct economic benefits (World Bank report, 1999). ICT has also been found to improve enterprise performance in emerging countries by increasing sales, employment, profitability, and labour and total factor productivity.

ICT supports entrepreneurship and innovation through: increasing interconnectedness and collaboration; allowing smaller, entrepreneurial companies to compete in global markets; reducing the cost of entry for new entrepreneurs; facilitating research diversification and interdisciplinary approaches; enhancing the ability of entrepreneurs to develop new business models, products, services, and processes; shortening product development cycles; providing new tools to create, organize, store, and transmit information; supporting disruptive business models that transform industries; and facilitating faster access to regional and international markets (INTEL White Paper, 2011). Curtain (2003) listed some ICT entrepreneurial opportunities to include: selling telephone based services; young people as information intermediaries (accessing vast information on the internet and interpret it in the light of the local context); developing websites in local languages or facilitate communication between NGOs; use of e-mail to respond on behalf of program beneficiaries to feed back on specific local issues of concern to them; telecentres as income generators for young people; and income generation through cable television, among others.

ICT facilitates access to information, capital, markets and training needed to pursue a career or studies; increased participation in political processes, and recognition of youth as responsible citizens in today's society. Entrepreneurship which is enabled by access to technology, the internet and information is fast being positioned as a solution for youth employment. ICT therefore does not only facilitate entrepreneurship but there are also entrepreneurial opportunities in ICT. The youth must also develop his business skills in addition to the ICT expertise for the business established to succeed.

ICT Education shapes what you know; the content of education provides knowledge and experience that facilitate civic and social engagements. It can also help one apply knowledge by developing skills and competencies (Campbell, 2006). Education plays a role in encouraging learner's creative and emotional development. Education can be said to be the whole process of the development of an independent and integrated personality. It entails training and acquisition of special skills, knowledge, attitudes and values needed by an individual to be responsible and which would enable him to contribute his own quota to the growth of the society of which he is a member. Education is a life-long process and aims at imparting skills needed to live a productive life and for an individual to adjust well to his immediate environment and the ultimate world or universe in which he finds himself (Jekayinfa and Kolawole, 2008).

Education is also defined as the act or process of imparting or acquiring general knowledge and skills, developing the powers of reasoning and judgment, and generally preparing oneself or others intellectually for mature life. Education is one of the main keys to economic development and improvements in human welfare (Emeh, 2012). As global economic competition grows sharper, education becomes an important source of competitive advantage closely linked to economic growth, and a way for countries to attract jobs and investment. Education is also one of the key determinants of lifetime earnings. As a result, nations of the world see rising educational attainment as a way of tackling poverty and deprivation (Caincross and Poysti, 2011). ICT education is therefore, one of the ways of tackling youth unemployment.

ICT education refers to the creation of human resource to meet the Information Technology (IT) needs of the knowledge economy. Developing countries, especially in Asia, are trying to create a pool of manpower to address job opportunities in computer hardware, software and engineering (Reddi, 2009). Very often, an ICT in Education policy of a government describes the steps by which computers will be placed in schools, and how teachers and students will be provided with the basic computer programming skills to cater for the growing job market in computer based technologies. In this 21st century, an individual with ICT education would be equipped to serve the nation and use his acquired skill to develop and maintain the tools that are essential for the scientific and technological development of the nation. ICT enabled education requires ICT access and also requires that the learner use ICTs as a primary or basic medium of instruction. The exposure of youths to ICT during educational instructions via formal and informal learning institutions would prepare them to know if they have flair for technologies and be prepared to apply their ICT education.

ICT Education and Youth Entrepreneurship

Establishing the Nexus Increasingly, educators, employers, and policymakers have realized that in order for young people to succeed in today's rapidly changing and globalized world, they need an educational foundation that includes more than just academic and technical skills. Youths need comprehensive, integrated employability training to motivate them to succeed and to fully prepare them for work, and this is within the provisions of ICT education. Guerhazi and Satola (2005) averred that young people are more likely to adopt these ICTs for economic, physiological, and social reasons. As with migration, longer working lives mean that young people have more time to gather the benefits from investing in new technology. The cost of investing in the skills required to learn how to use the new ICTs is also likely to be less for youth, who are better educated

than older generations and may receive training through school. Moreover, the youths find it easier to acquire complex information processing tasks. The tendency of youth to use these technologies is amplified by the desire to use these technologies for entertainment, and reinforced through peer learning and network effects (the value of a mobile phone or internet connection increases when more of one's peers are using it).

Youths have a particular interest and ability with regard to modern technology. ICT can empower the youths by providing them with the opportunity to overcome the barriers of distance and socio-economic disadvantages. Through the Internet, for example, young people can have access to information on a range of issues that directly affect them, including employment and entrepreneurial opportunities. This information can be used to improve the quality of life of youth and their communities. Governments can also capitalize on the interest of the young in ICT to alleviate poverty. For example, youth can become engaged not only in the use of ICT, but also in the development of locally relevant software and hardware.

Theoretical Underpinning: A Focus On Bandura's Self Efficacy (SE) Theory

Bandura's self-efficacy theory provides an insightful understanding of the role of ICT in facilitating youth entrepreneurship. The self-efficacy theory, as propounded by Albert Bandura (1982, 1997), is of the view that people's belief that they can perform certain actions influences their cognitive patterns of problem solving, motivation, emotional and physiological arousal, patterns of behaviour and consequently their quality of performance. This construct (self-efficacy) has been widely used in diverse fields of study, including career choice. But in recent time, self-efficacy has been applied to the pursuit of entrepreneurial activities, perseverance in difficult fields, and personal effectiveness (Markman Balkin & Baron, 2002; cited in Akanbi, 2013). People take decisions and actions based on the belief that they are capable of doing great things, and this can radically change his/her life. Thus, Bandura believes the SE is a key factor of success in the academic, professional, interpersonal and health plan. Bandura's studies indicated that those with high self efficacy for a certain task are more likely to pursue and then persist in that task. Markham et al (2002, cited in Wilson, Kickul and Marlino, 2007) suggest that self efficacy reliably predicts scope of career options, occupational interests, perseverance in difficult fields and personal effectiveness. Wilson et al (2007), therefore, averred that self efficacy or the belief in one's ability to succeed as an entrepreneur becomes very important, given the complex tasks involved for an individual to locate an opportunity, assemble the resources, set up a business, and build it into a successful entity.

Bandura (1997) suggests that self confidence in one's abilities to successfully perform specific tasks comes from four key sources: mastery experiences, vicarious experiences or modelling, verbal persuasion and physical indicators. Mastery experiences (our personal experiences) are the first and the most powerful source of self-efficacy. These, in fact, represent the memories of past successful experiences that individuals may revert to while facing current or future situations. Positive mastery experiences reinforce self-efficacy, while negative mastery experiences weaken it. The second major source of self-efficacy is vicarious experience or modelling, based on observation of behaviour of another person (role models) and the consequences of that behaviour. The third presumed source of self-efficacy is verbal persuasion. If the credible person (family member, friend, teacher), appropriately provides real support or encouragement to a particular activity, it is very likely that more efforts will be put in that activity, which will consequently result in an increased SE. Finally, a fourth source of self-efficacy is to estimate the physical indicators, respectively physiological and affective states that can occur in an accompanying activity. Individuals often consider that their skills are (strictly) related to the way they feel in a particular moment, where a state of stress or tension may be an indication of failure.

Individuals with a high sense of self-efficacy may employ these kinds of emotional states to improve their performance. Those individuals with a low sense of self-efficacy consider these states as a negative influence on the activities they are engaged in (Bandura 1997). Educators have long recognized that youths' beliefs about their academic capabilities play an essential role in their motivation to achieve (Zimmerman, 2000). An understanding of self efficacy is valuable, because it influences thoughts, feelings and behaviours. Self efficacy is important because research has shown that it is a robust predictor of task performance and personal variability in entrepreneurship. Without minimal levels of entrepreneurial self efficacy, it is unlikely that potential entrepreneurs would be sufficiently motivated to engage in new venture creation process. According to Cooper and Artz (1995), cited in Hmieleski and Baron (2008), the higher the confidence of entrepreneurs in their ability to develop and grow their new ventures, the greater their satisfaction, regardless of the actual performance of the firms. This shows that self efficacy may help mitigate some of the stresses associated with being an entrepreneur.

Growing a sense of belief and confidence in one's ability can be learnt from the environment. This is in agreement with the study of Gist and Mitchell (1992, cited in Urban, 2006) who posited that self efficacy can be developed through training and modelling; also task-specific and regulates behaviour by determining task choices, effort and persistence; and can change as a result of learning, experience and feedback. Eden and Aviran (1993) study also revealed that training boosts self efficacy. Therefore, ICT education or training will

boost the SE of the youths in entrepreneurial capabilities. Of course, youths naturally tend to exhibit higher level of self efficacy as they believe that they are still young with a lot of time to make mistakes and learn from them. They are not averse to taking risks. Targeted ICT education can play a crucial role in developing appreciable levels of self efficacy and entrepreneurial spirit in the youths.

III. Materials And Methods

The study was carried out in Uyo metropolis, the capital of Akwa Ibom State that has a population of 309,573 (153,113 males and 156,460 females), (NPC, 2006). Uyo is a fast growing city and has witnessed massive infrastructural growth in the past years. It has, among other things, an intensive network of roads and highways such as the IBB Way, Atiku Abubakar Avenue, Udo Udoma Avenue, Nsikak Eduok Avenue, and Edet Akpan Avenue; notable housing districts such as the Ewet Housing Estate and Shelter Afrique; major industrial estates including the Itam Industrial Estate; public recreational areas such as the Ibom Plaza, Le Meridien Ibom Hotel & Golf Resort, and Ibom Tropicana Resort; banks and other financial institutions; and institutions of higher learning such as the University of Uyo and Uyo City Polytechnic. The foregoing suggests that entrepreneurship will flourish in Uyo.

The research design adopted for the study was descriptive survey. Data for the study were obtained through questionnaire which was randomly administered to 1,890 respondents. Initially, a total of 2,000 copies of the questionnaire were distributed, but only 1,890 were retrieved and used for the study. This represents a return response rate of 94.5%, whereas 110 copies (5.5%) were not appropriately filled and so were not used for the study. The questionnaire was both close-ended and open-ended. Close ended questions were structured on a five-point Likert scale: strongly agree, agree undecided, strongly disagree and disagree. In close-ended questions, the respondents choose from a list of possible answers (Babbie, 2008). Divided into two sections, Section 'A' focused on the socio-demographic data of the respondents and Section 'B' focused on of ICT education and/or use and youth entrepreneurship. In the final analysis, simple percentages and frequency distribution were use as the analytical tools.

IV. Results And Discussions

Table 1 shows demographic characteristics of the respondents. It reveals that more males (61.9%) than females (38.1%) were used in the study. This could be attributed to the cultural inclination of the area of study. Males/men are bread winners and so have to look for ways to improve their economic power through the acquisition of necessary skills. The males have natural inclination towards science and technical subjects, although some females are now catching up. On the other hand, most females after the acquisition of basic secondary education or at most the first degree would settle into marital life.

Respondents used for the study were all youths, as they were within the ages of 18-35 years. Youths between ages 30-35 years (48.2%) constituted the highest respondents used for the study, 29.6% were aged 24-29 years, and those aged 18-23 years were 22.2% only. The educational levels of the respondents were also captured. Majority of the respondents were undergraduates (57.1%), graduates constituted 22.2%, and only 20.7% of the respondents had primary and secondary education. When asked of their employment statuses, 38.1% said that they were students, 14.3% were employed in formal sectors, 16.4% were self-employed, and 31.2% were employed by entrepreneurs. It appears that people, informed by the high rate of unemployment, use studentship as employment status.

Table 1: Demographic characteristics of the respondents

Characteristics	Measures	Frequency	%
Gender	Male	1170	61.9
	Female	720	38.1
Age	18-23	420	22.2
	24-29	560	29.6
	30-35	910	48.2
Educational Level	Primary/Secondary	390	20.7
	Undergraduate	1080	57.1
	Graduate	420	22.2
Employment Status	Student	720	38.1
	Employed	270	14.3
	Self-Employed	310	16.4
	Employed by entrepreneurs	590	31.2

Researchers' fieldwork, 2014

Table 2 shows respondents' level of ICT knowledge. Majority of the respondents (47.6%) admitted that they had average knowledge of ICT, 23.8% had a fair knowledge of ICT, 20.1% had a perfect knowledge of the ICT, and only 8.5% had no knowledge of ICT. Interestingly, the respondents are not totally ignorant about ICT,

as a greater percentage of the youths have fair to good knowledge of ICT. This indicates that the youths are consistently receiving ICT education. The reasons for this development are not far-fetched. Most schools have introduced ICT courses in their curricular. Though some of these courses may be theoretical in nature, they motivate students and youths to seek further knowledge in ICT and also utilize such knowledge for entrepreneurial advancement. As a result, some youths own ICT tools and others who do not may use them in computer laboratories, cybercafés or borrow from friends.

The society is changing and ICT is being applied in almost all facets of life. Many young people are also exposed to ICT during church and social activities. The youths are early adopters and adapters of ICT, as there are many free online ICT tools out there where people (especially youths) can teach themselves and develop their own skills. In addition, there is an explosion of online learning opportunities and resources for job seekers and digital entrepreneurs. The proliferation of cybercafés within the urban centre could also be a factor that had contributed to the youths having an appreciable knowledge of ICT. It is also possible that with the incessant strikes by educational institutions, Nigerian parents would enrol their children in computer training classes to avoid idleness and other social misbehaviours. According to Alampay's 2006 study, younger people are expected to be motivated to use technologies especially because most of them have been exposed to them in the school curriculum. He observed that a national survey carried out by San Joaquin in 2005 found that people between the ages of 18-29 were the principle users of technologies.

Table 2: Respondents' level of ICT knowledge

Knowledge of ICT	None		Fair		Average		Perfect	
	F	%	F	%	F	%	F	%
	160	8.5	450	23.8	900	47.6	380	20.1

Researchers' fieldwork, 2014

Table 3: Respondents' Opinion on the relevance of ICT education to youth entrepreneurship

ICT education is relevant in youth entrepreneurship	Strongly Agree		Agree		Undecided		Strongly Disagree		Disagree	
	F	%	F	%	F	%	F	%	F	%
	76	40.2	113	59.8	-	-	-	-	-	-

Researchers' fieldwork, 2014

Table 3 reveals that all the respondents agreed that ICT education is relevant in youth entrepreneurship. It is baffling to find out that even those who do not have ICT knowledge recognize this relevance. ICT is generally appreciated as a driving force in the acceleration of entrepreneurship and innovation, making it easier to identify and develop good ideas, create and disseminate new products and services. The pervasive use of ICT, including hardware, software, applications, and telecommunications, drives entrepreneurship and innovation in virtually every market sector (from farming to computing and government services). This is validated by the study of Danso, Affum and Hayfron-Acquah (2012) who affirmed that increasing access to information through the power of the internet infrastructure, and creation of several innovative tools and accessories, could create several opportunities which can be exploited by entrepreneurs. We want to add here that it is important that youths should equip themselves with ICT education, because claiming ignorance in this 21st century would spell doom for any youth entrepreneur. Obviously, youths need ICT skills to equip and develop themselves and at the same time explore business opportunities.

The knowledge of ICT no doubt will help the youth entrepreneur to manage his business better from the simple Microsoft word, spreadsheet, and presentation software to publicize their entrepreneurial effort to the sophisticated graphic designs. Some of the ways that ICT education can enhance youth entrepreneurship include: increased interconnectedness and collaboration; increased opportunity to compete in global markets; enhanced ability of entrepreneurs to develop new business models, products, services, and processes; provision of new tools to create, organize, store, and transmit information; facilitates faster access to regional and international markets; allows smaller, entrepreneurial companies to compete in global markets; and provides new tools to create, organize, store, and transmit information (INTEL White Paper, cited in Curtain, 2003).

Table 4: Respondents' Opinions on ICT education and enhancement of youth entrepreneurship

ICT education and enhancement of youth entrepreneurship	Strongly Agree		Agree		Undecided		Strongly Disagree		Disagree	
	F	%	F	%	F	%	F	%	F	%
Imparts entrepreneurial skills and development.	1084	57.4	707	37.4	99	5.2	-	-	-	-
Develops latent entrepreneurial talent.	1541	81.5	296	15.7	53	2.8	-	-	-	-
Exposes youths to global business culture.	938	49.6	952	50.4	-	-	-	-	-	-
Improves business efficiency	1206	63.8	637	33.7	47	2.5	-	-	-	-
Enhances capabilities, creativity and knowledge.	1349	71.4	541	28.6	-	-	-	-	-	-
Increases communication & customer relations.	1407	74.4	483	25.6	-	-	-	-	-	-
Contributes to national economy.	489	25.9	1235	65.3	166	8.8	-	-	-	-

Researchers' fieldwork, 2014

Respondents' opinions on the role of ICT education in enhancement of youth entrepreneurship were sought. Available data in Table 4 show that ICT education enhances youth entrepreneurship through skills development (94.8%); developing latent entrepreneurial talent (97.2%); exposing youths to global business culture (100%); improving business efficiency (97.5%); enhancing capabilities, creativity and knowledge (100%); increasing communication and customer relations (100%); and contributing to national economy(91.2%). Very few respondents were indecisive on some issues: skills development (5.2%), development of latent entrepreneurial talent (2.8%), improvement of business efficiency (2.5%), and contribution to national economy (8.8%).

Respondents were asked to enumerate various challenges facing youth entrepreneurship. Their responses include: poor education or illiteracy, inadequate access to factors of production, insufficient capital, poor motivation, lack of credit facilities, inadequate entrepreneurial training, constrained access to local and international markets, and inadequate infrastructural facilities like access road and power/electricity. These corroborate the studies/findings of Saito (1994), Kwesiga (1999), Ikeduru (2002), Woldie and Adersua (2004), Halkias (2011), Onwubiko (2011), and Agbeze (2012). It is quite unfortunate that in a developing country like Nigeria, youths are faced with inadequate access to finance and credit facilities to establish and run enterprises. It is quite difficult and challenging for youths who are just starting businesses to get loans from the banks because of the stringent conditions of providing collaterals or referees and other things. It is obvious that these young people's integrity has not been tested or accepted, and thus it becomes difficult for them to find individuals who would give them referral to funding institutions. This makes the youths to be poorly motivated to engage in entrepreneurial activities. A way out of this challenge is perhaps for youths to form cooperatives and pool their resources together for entrepreneurial activities.

It is true that entrepreneurial studies have been introduced in our institutions of higher learning, but it is not every youth that have access to higher education. Even, those in the higher institutions of learning are not adequately taught the rudiments of entrepreneurship and, as a result, lack entrepreneurial skills and are not adequately motivated or equipped to start and run businesses. It is pertinent to note here that introduction of mentoring programmes for the youths will provide them with sources of information to maximize opportunities in the entrepreneurial world. In the face of these challenges, frustrated youths can abandon their entrepreneurial visions/acumen and turn to the public sector where they are certain of monthly income without the anxiety of running a business. Nigerians' penchant for the patronage of foreign goods to the detriment of locally produced goods has always been a source of discouragement to youth entrepreneurs.

Table 5: Self-efficacy and enhancement of youth entrepreneurship

	Agree		Strongly Agree		Undecided		Strongly Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
I can always manage to solve difficult problems if I try hard enough	673	35.6	1006	53.2	211	11.2	-		-	
If someone opposes me, I can find the means and ways to get what I want	962	50.9	384	20.3	-	-	544	28.8	-	
It is easy for me to stick to my aims and accomplish my goals	861	45.6	1029	54.4	-		-		-	
I am confident that I could deal efficiently with unexpected events	34	1.8	847	44.8	706	37.4	-		303	16.0
Thanks to my resourcefulness, I know how to handle unforeseen situation	557	29.5	730	38.6	603	31.9	-		-	
I can solve most problems if I invest necessary effort	590	31.2	1202	63.6	98	5.2	-		-	

Researchers' fieldwork, 2014

The self efficacy importance on youth entrepreneurship reveals that 45.6% and 54.4% of the respondents agreed and strongly agreed respectively that it is easy for them to stick to their aims and accomplish their goals; 31.2% and 63.6% agreed and strongly agreed respectively that they can solve most problems if they invest necessary effort, and only 5.2% of the respondents were indecisive; 35.6% and 53.2% agreed and strongly agreed respectively that they can always manage to solve difficult problems if they try hard enough, but only 11.2% were indecisive; 50.9% and 20.3% agreed and strongly agreed respectively that they can find the means and ways to get what they want even if someone opposes them, but 28.8% disagreed with the position; 29.5% and 38.6% agreed and strongly agreed that they know how to handle unforeseen situation because of their resourcefulness, but 31.9% were indecisive on the issue; and 1.8% and 44.8% agreed and strongly agreed that they are confident that they could deal efficiently with unexpected events, whereas 37.4% and 16.0% were indecisive and strongly disagreed respectively.

The foregoing shows that the youths have high self efficacy. The youth age is a period of risk taking and of testing the waters to know where an individual could settle his oars and fish for livelihood. It is a time for the exploration of the business world if given the push. The youth at this period mostly have this believe of invincibility. Some youths have high self efficacy, but some have low self efficacy. According to Bandura, self efficacy can be developed through exposure to training, mentorship, and experiences. It is possible for an individual to be talented without knowing it, but latent his or her talents could be discovered and nurtured through training and encouragement. A study by Eden and Aviran (1993) has revealed that training boosts self efficacy. Therefore, ICT education and training will inevitably boost the self efficacy of the youths in entrepreneurial capabilities in the ICT and other sectors. It is important for youths venturing into entrepreneurship to believe that they are capable of doing well in spite of the odds and challenges they may face. They should be motivated by the fact that great inventors and achievers made it in the face of several severe trials and challenges.

Self efficacy can also be influenced by ethnic learnings, cultural values and the environment. Some of the youths may have low to medium self efficacy because of their backgrounds; some have been told and indoctrinated into believing that they cannot do well in the entrepreneurial world. They see impossibilities everywhere. A concerted reorientation therefore becomes necessary. This is validated by Bandura (1982) who reasoned that self efficacy influence is partially socially constructed and such construction may differ as a function of national culture. It can be said therefore that self efficacy can be adapted to any culture. This claim is supported by Earley (1994, cited in Urban, 2006) who posited that self efficacy is influenced by different sources of information that are more or less persuasive depending on a person's cultural values. Entrepreneurial activity in a society is heavily influenced by cultural traits. Some individuals with different cultural roots tend to be more prolific in initiating and managing ventures (the Igbo people in Nigeria), others will have to be encouraged and initiated into entrepreneurship through thorough training.

V. Conclusion and Recommendations

Inspired by the increasing importance of the deployment of ICT in all spheres of life, increasing entrepreneurial opportunities in the ICT sector and the necessity to equip the youth with ICT education to explore these potentials, this study examined ICT education and youth entrepreneurship in Uyo metropolis, Akwa Ibom State. Results show that ICT education is necessary for youth entrepreneurship. Although majority of the youths have a fair knowledge of ICT and have received ICT education or training, a significant number of youths are not into entrepreneurship. This is as a result of the challenges which youth entrepreneurship is facing in recent times, including poor education or illiteracy, inadequate access to factors of production, insufficient capital, poor motivation, lack of credit facilities, inadequate entrepreneurial training, constrained access to local and international markets, and inadequate infrastructural facilities like access road and power/electricity. Helping the youths to overcome these challenges will position them to contribute positively to development through ICT knowledge and successful entrepreneurship.

Entrepreneurship is seen in this economic-crisis 21st century as the engine that fuels innovation, employment generation and economic growth. In fact, entrepreneurship has never been more important than it is in today's financial crisis or economic melt-down. At this time that the global society is facing massive economic (and other) challenges, entrepreneurship provides a way forward for solving the global challenges of the 21st century, creating jobs for youths and others, generating renewed economic growth, building sustainable development, and advancing human welfare.

Technology has the capability of enhancing quality of life and economic performance. When youths do not have the knowledge or skills to use the latest technology, it affects their outlook of life. The Internet and other Information and Communications Technology (ICT) infrastructure are not available in rural areas where majority of the Nigerian youth reside. Efforts should therefore be made to reach rural youths with ICT and entrepreneurial training. Also, since there is a strong linkage between the education of young people and their employment prospects which similarly exists between ICT education and youth entrepreneurship, concerted efforts must therefore be made to equip youths with ICT skills so as to enhance their employability and maximum performance in the global competitive markets of this 21st century.

Youth entrepreneurship is not essentially different from entrepreneurship among adults. It involves risk-taking and engaging in socially useful wealth creation through application of innovative thinking and execution to meet consumer needs, using one's own labour, time, and ideas. The only difference is in the age of the entrepreneur. What differs between youth and adult entrepreneurship, given the inherently different levels of intellectual and behavioural maturity, is how entrepreneurship is taught and how it is learned. Helping young people to liberate their innate entrepreneurial skills and learn about entrepreneurship calls for educational practices that differ in key ways from those used in workplaces, in universities, and in other adult learning environments. In fact, entrepreneurship education, as Volkman et al (2009), must itself be entrepreneurial and not theoretical. So, efforts should be made to practicalize entrepreneurship, and even ICT education. It is painful

to recall the grotesque approach given to ICT education in our institutions of higher learning, where students are compelled to go through such compulsory courses as “Introduction to Computer” and “Computer Applications” without having a practical idea of what the computer looks like.

Finally, efforts at enhancing the standards of ICT education and youth entrepreneurship should be prioritized by everyone in all fronts, especially the government, private sector, non-governmental organizations (NGOs), faith-based organizations (FBOs), corporate organizations, parents or adults, and youths. While it remains the responsibility of government to move beyond promises (and declarations) to the actual modelling and provision of conducive entrepreneurial environment, the private sector must see the need to at least cooperate with the academia and corporate organizations on capacity building and improved corporate social responsibility (CSR). Non-profit organizations must be consistent in its intervention, especially for rural youth empowerment and supplementary support. The African academia must embrace new learning models that focus on entrepreneurship and not on creating jobseekers.

The government should adequately fund education at all levels. This will give opportunity for functional ICT education to be integrated into the curricula of all levels of education. Through this, the youths will become ICT literate and fully integrated into the entrepreneurial world where they can explore and maximize the various opportunities offered by ICT. In addition to creating conducive entrepreneurial environment, government should provide take-off capital or money for young entrepreneurs.

In order to foster an ICT-savvy and innovative labour force, government should also promote ICT skills development in extracurricular educational settings, meaning that one can acquire ICT skills almost anywhere. This ICT skills training and development should be either free or subsidized so as to give more youths opportunity to become computer literate. Finally, private-public partnership intervention in ICT education and youth entrepreneurship should be explored so that more youths would be exposed to entrepreneurship mentoring programmes through placements with successful entrepreneurs. This will go a long way to motivate prospective youth entrepreneurs.

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