

ENTREPRENEURSHIP OPPORTUNITIES IN INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

¹*Eze, N. Gloria & ²Eze L. Ifeoma*

^{1&2} *Department of Computer Science Education*

Federal College of Education (Technical), Bichi, Kano, Kano State

¹Email:gloriachinedu@gmail.com & ²Email:ifeomaezelov@gmail.com

Abstract

The rapid changes in information and Communication Technology can help in minimizing social and economic problems caused by the rapid growth of urban youth population in a developing country like Nigeria. ICTs have the potential to accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change. This paper examines Entrepreneurial skills for self-reliance through ICT. The paper also x-rayed ICT opportunities in Entrepreneurship. The concept of ICT, Entrepreneur, Entrepreneurship and Entrepreneurial skills, were discussed. The paper concludes that Youth employment and employability requires important integrated effort that includes actions in the areas of Education, Skill development, job supply and support for young low-income Entrepreneur, particularly in the knowledge intensive sectors. It was recommended among others that youths should be exposed to training in technology (especially new discoveries) from time to time. This will keep them in tune with trends of the technological world and thus avoid drudgery in their business.

Key Words: **Information and Communication Technology, Entrepreneur, Skills, Entrepreneurship Skills,**

Introduction

Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with students and technologies. Information and Communication Technologies (ICTs) have become commonplace entities in all aspects of life. The use of ICT has fundamentally changed the practices and procedures of nearly all forms of endeavour within business and governance (Anthony, Saidu, Mohammed & Jungura, 2019). ICT is defined as the integration and utilization of the innovation of computer technology for the purpose of organizing, encoding, packaging and dissemination of information and skill acquisition to target destination or consumer without the constraint of time and space (Okoye, 2005). ICT is the combination of three words which are information, communication, and technology. Information is the manipulated or processed data that are useful in decision making. When data are processed, organized, structured or presented in a given context so as to make them useful, they are called information. Technology on the other hand refers to methods, systems and devices which are used to marry information and communication. Technology includes such things as computer technology, the internet technology, telephone, and broadcasting technologies.

The rapid change in information and Communication Technology (ICT), can help in minimizing social and economic problems caused by the rapid growth of urban youth populations in a developing country like Nigeria. ICT offer opportunities to young people for learning, skill development and employment. One of the important goals of education is for it to be functional and utilitarian, preparing the individuals for life in the community and reforming the society for relevance, adequacy and competitiveness in the world (Bena, 2009). A change in the economy has been identified as moving from knowledge based activities to creativity, innovation, entrepreneurship and imagination (van den, Cools & Maenhout , 2008; Oke, Munshi, & Walumbwa 2009). Increasing globalization and technology effects have resulted in more business opportunities but the marketplace has also become more crowded and competition has increased (McMullan & Shepherd 2006). Creativity enables the entrepreneur to act on these opportunities in ways which can result in competitive advantage for the organization. It can provide the basis for innovation and business growth, as well as impacting positively on society generally.

Conceptual Definitions

Entrepreneur. An entrepreneur according to Ezeudu (2008), comes from the French word *entreprendre*, which means to undertake i.e. one who undertakes to supply goods and services to make profit. Onuh (2020) defines entrepreneur as a person who possesses the ability to recognize and evaluate business opportunities, assemble the necessary resources to take advantage of them and take appropriate action to succeed. Agomuo (2001) opined that the entrepreneur is not just a manager who receives remuneration like other workers; rather he is the founder of the business whose reward for undertaking innovation and risk of capital is profit. The entrepreneur will either “swim” with his business or sink with it. Profit is the motivation. Thus, an entrepreneur according to Osioma (2009), is an innovator or developer who recognizes and seizes opportunities, converts those opportunities into workable ideas, and – realizes the rewards from these efforts. The above definitions show that an entrepreneur is a creative person who readily bears all forms of risk associated with an enterprise.

Entrepreneurship. Entrepreneurship occurs in all types and sizes of organizations, from the domestic microenterprise to the global corporation. Entrepreneurship can be defined as the process of creating value for business and social communities by bringing together unique combinations of public and private resources to exploit economic, social or cultural opportunities in an environment of change (Ian, 2010). Entrepreneurship involves setting up of business ventures through willingness and ability of an individual to explore investment opportunities and being able to run them successfully, through making them profitable or suffering loss of invested capital (Abigail, Mfon & Emmanuel ,2017). It involves combining resources to increase value and introducing change and innovation into the production process and creating wealth and employment opportunities According to Ezeudu (2008), entrepreneurship development is a programme of human capital which aims at increasing the supply of adequately trained entrepreneurs who are motivated to make success out of Business. Entrepreneurship has three central underlying dimensions:

innovation, risk-taking and proactiveness. Innovation is the manner in which the entrepreneur searches for new opportunities, or the way in which ideas are brought to a profitable conclusion. The test of innovation lies in its success in the marketplace of ideas, rather than in its novelty alone. Risk-taking refers to the manner in which innovation is embedded in the organization, society or community. It also relates to the willingness of people to commit significant resources to opportunities that are calculated to succeed. Pro-activeness is concerned with making things happen by perseverance, adaptability and by breaking with the established ways of doing things.

Entrepreneurial Skills. Skills according to Agwagah (2005) denote the mastery of logically linked series of activities that can be easily learnt. It is therefore a quality of performance which does not depend solely upon a person's fundamental innate capacities but must be developed through training, practice and experience. Skills forming are closely associated and any omission of performance skills in a chain can be fatal to the development of complex skills. Entrepreneurial skills according to Eze (2009) can therefore be seen as the type of skills given to a set of people to be able to instill in them the principles and practices required to see and evaluate business opportunities, to gather the necessary resources and the desire to take advantage of them as well as initiating appropriate action to ensure success in any chosen profession or occupation. Entrepreneurial skills are related to identifying business opportunities and receiving a sustainable income from these opportunities. Entrepreneurial skills include both the cognitive abilities needed to make informed judgments, leading to creative and effective activity and the disposition to meet challenges as varied as public speaking, musical performance, physical activity etc (Atare, 2009).

ICT Opportunities in Entrepreneurship

The evolution of ICT is a known fact that appears to be growing stronger and stronger. With more and more companies understanding the importance of it for the labour market, ICT sectors is taking over massive industries (Curtain, 2003). They have contributed to the automation of processes making some workers redundant and closing off jobs many young people could have been expected to begin their careers with.

More and more opportunities are being created especially for young people in the field of entrepreneurship because of ICT. At the same time, more businesses are focusing on the enhancements and evolution of business practices based on ICT. Nowadays, an entrepreneurial venture of any kind cannot exist without a proper ICT sector. ICT offers some of the fastest growing jobs in the modern labour market. Some of the immediate job opportunities for youths in the field of ICT Education are:- computer programmers, computer information system analyst, data communication analyst, data base programmer and administrator, desktop/application support specialist, network and system security specialty, website developers, wireless network technician, technical sale specialist, sales engineers, computer graphic artist, computer education/instructor, computer operation, data entry operator, cyber café assistant, software engineers, computer hackers among others .

Entrepreneurship is characterized by many thing; one of which is innovation.

An entrepreneurial venture needs to be innovative. Innovation is utterly linked to ICT. Some of the ICT opportunities in entrepreneurship according to Curtain (2003) include the following:

1. **E-commerce.** E- Commerce is the activity of electronically buying or selling of products on online services or over the internet. E- Commerce can be found everywhere. Companies from across the world can be connected with consumers and deliver products and services through ICT. Platforms like Jumia give entrepreneurs access to markets in all parts of the country and all over the world.
2. **ICT is changing industries.** Another important industry that has been affected and utterly changed by ICT is the marketing and advertising industry. Everything is digital nowadays because everyone is always online. The marketers now reach out to more people, they can send their messages faster and easier and as a result increase their revenue. Communication with the emergence can be reached with advertising messages via a tweet on twitter, a post on Facebook or videos on YouTube etc at very cheaper rate. These two industries as well as many others have gained a lot of benefits for ICT with saved time being one of the most important one.
With ICT, entrepreneurs' no longer need an actual physical store or even an office to provide people with products or services. Everything can be done online, from telecommunication to purchases and shipping of products.
3. **Changing the price rates.** Courses and lesson are now taking place online, through ICT platform specifically created for that purpose. Once the utility costs are being minimized, prices drops. As prices drop, more and more people can have access to products and services that can help them increase their life quality. Entrepreneurs are taking advantage of this new turn of events to create more complex products with more functions and enhance their services to accommodate new practices and needs on a worldwide level.
4. **Increasing revenue streams and saving time/money.** Technology has provided new and exciting opportunities to increase revenue. Such opportunities include the provision of movies and games, for relaxation at a fee, for example, Netflix.
5. **Teleconferencing.** Important meetings can be also be held via video conferencing technology systems which allow two more locations to communicate via simultaneous two-way audio and video transmissions, eliminating the logistics of travelling, saving time and money. It is also common practice to reach out to audience by streaming seminars, conferences and programs live in the internet.

Entrepreneurial Skills for Self-reliance in ICT Education

ICT education has a lot of potentials that if identified and developed, could serve as a source of sustainable income to the unemployed youths. Some identified areas in ICT that has the potentials for improving entrepreneurial skills include the following:

1. **Website Design.** Young school leavers can be fully engage in website design thereby bringing market information close to the rural farmers through the use of local language that is understood by the people.

2. **Maintenance.** One of the major requirements in the ICT world is the technical skill to service the computer and other ICT facilities. Youths can develop themselves in this area and then become self-reliant as they can even serve as consultant to big organizations
3. **Programming.** Many Small Medium Entrepreneurs (SMEs) today employ the use of database in their business transaction. Young programmers can adequately earn a living, coding the programs that will run these SMEs.
4. **Commercial Computer Outfits.** There is a great demand for printed document in today's society. The youth can empower himself with the necessary computer skills that can make him self-employed.
5. **Computer Training Centers.** Young people are increasingly been engaged in the training of other youths in acquiring computer literacy by getting their source of livelihood from running training centers.

Conclusion

Youth employment and employability requires important integrated effort that includes actions in the areas of education, skill development, job supply and support for young low-income entrepreneur, particularly in the knowledge intensive sectors. It is clear that there is an extensive potential for ICT to generate employment for young people. However, this potential will not be realized 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 need to develop or improve skills, fair distribution of jobs and wages, free education for the ones that cannot afford, and quality work and training environment.

Recommendations

1. Mentor support for starting ICT-related enterprises is a key service that governments, NGOs or international organizations could organize to provide advice and guidance to young entrepreneurs. The mentor program may also include providing incentives such as tax return, grants or micro-finance to encourage young people and their SMEs to undertake business.
2. Youths should be exposed to training in technology (especially new discoveries) from time to time. This will keep them in tune with trends of the technological world and thus avoid drudgery in their business.
3. Partnership with international organizations such as United Nations and its agencies may help in implementing new best practices. These organizations assist developing countries in building global, regional, national and local networks of partnership.
4. Government should set machinery in motion to provide an enabling environment for entrepreneurship. This includes formulation of policies, provision of good roads, pipe borne water, electricity etc.
5. Entrepreneurship teaching have to go beyond the traditional teaching in the classroom. This implies the need to involve youths in experiential training. This

could be through involving youths in internships in industries as well as involving experienced entrepreneurs in their training.

6 A special ICT intervention fund should be created and managed by the federal government geared towards the support for research and development in ICT to promote entrepreneurship

References

Abigail, A. E., Mfon,A.O. & Emmanuel, E.C. (2017). Strategies for integrating ICT in Entrepreneurial Education in Tertiary Institutions, *Nigerian Journal of Business Education*. 4(2), 1-10

Agomuo, E. (2001). Entrepreneurship Life Models for Civil Servants; Implications for Working Period and Retirement. Public Lectures Organized by the School of Business Education Federal College of Education, (Technical), Umunze 21st June.

Agwagah, U.N.V.(2005). Teaching Mathematics for Critical Thinking. An essential skills for effective living. *Journal of Mathematical Association of Nigeria (MAN)*, 30(1), 38-45.

Anthony, J.U, Saidu, A , Mohammed, M & Jungura, I. (2009) . Developing Entrepreneurial Skills in youths through Information and communication Technology (ICT). *Proceedings of 50th Annual conference of STAN*, 232-236.

Atare, F.U. (2009). *Initiating Entrepreneurial skills in Physical Education through Context Overview*. A workshop paper at STAN-PHE Subject Panel held at St. Paul University College, Akwa

Bena, U.C. (2009). Creativity through STM education. A Gateway to the Development of Entrepreneurial skills among Nigerian graduates. *Proceedings of 50th Annual Conference of STAN*, 357-361.

Curtain, R. (2003). Creating more opportunities for young people using Information and Communication Technology. *The world summit on information societies, Geneva*, 12-14, December.

Eze, J. E. (2009). Developing an Entrepreneurial Skills in Mathematics Education for Self-reliance. *Proceedings of 50th Annual Conference of STAN*, 278-282.

Ezeudu, E. O. (2008). Restructuring our Science, Technology and Mathematics (STM) Education for Entrepreneurship. *Proceedings of the 49th Annual Conference of Science Teachers Association of Nigeria (STAN)*, 268-272

Ian, F. (2010). The role of Creativity in Entrepreneurship. *Journal of International Business and economy*, 3(2), 24-15.

McMullan, J.S. and Shepherd, D.A. (2006). "Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur", *Academy of Management Review*, 31(1), 132-152.

Oke, A., Munshi, N. & Walumbwa, F.O. (2009). The influence of leadership on innovation processes and activities. *Organizational Dynamics*, 38(1), .64- 72

Onuh, M. E. (2020). Issues/Challenges of Entrepreneurship Education in Nigeria. *Bichi Journal of Education (BIJE)*, 13(1), 198-209.

Osioma, B. C. (2009). *Foundations of Entrepreneurship Practical Guide to Business Entrepreneurship* (ed). Yaba: ANAN Publications

Perry-Smith, J.E. & Shalley, C.E. (2003). The social side of creativity: a static and dynamic social network Perspective, *Academy of Management Review*, 28 (1) 89-106.

Van Den, B. H., Cools, and E. & Maenhout, T. (2008). A case study of Art economy: – building bridges between Art and Enterprise: Belgian Businesses Stimulate Creativity and Innovation through Art. *Journal of Management and Organization*, 14(1), 573-587.