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Creating Self-Reliant Opportunities through Entrepreneurial and Functional Educational Technology: A Panacea for Nigeria's Youth Unemployment

Dr. (Mrs.) C.C. Nsofor
Department of Science Education,
Federal University of Technology, Minna Niger State
E-Mail: chinnansofor@gmail.com

Dr. Ann E. Umeh,
Department of Science Education,
Federal University of Technology, Minna Niger State
Email: umehann22@gmail.com

Bello Ahmed,
Department of Science Education,
Federal University of Technology, Minna Niger State
Email: ahmadbellow@gmail.com

A.W. Idris
College of Education Minna, Niger State
E-mail: ahmadbellow@gmail.com

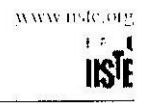
Abstract

In this rapidly changing world, the quest for self-reliance through education has always been the desire of many nations especially in the present face of global economic challenge. This has triggers many countries of the world to re-evaluate their position and question their roles as nations and consider investing heavily in education. Consequently, repeated call for massive reform of current educational practices has consistently been the dream of many Nigerians and has resulted in an increasing recognition of entrepreneurial and functional educational technology as a panacea to the clarion call. This paper examined the concepts of entrepreneurship and functional educational technology. It further highlighted how Nigeria youth unemployment can be solved through entrepreneurial and functional educational technology as well as the entrepreneurship skills in a functional educational technology for self reliance.

Keywords: Innovations, Creativity, Self-reliance, entrepreneurship

Introduction

The abundance of natural resources in any nation does not in itself make it to be ranked among the developed, rather it is the specialized skills, competence and ability possessed by it is populace which can be harnessed to utilize these resources. Nigeria as a developing nation need a comprehensive functional education that will impart and impact the right knowledge, skills and attitudes as well as stir up the productive potentials of the citizenry to achieve self reliance. In this rapidly changing world, the quest for self-reliance through education has always been the desire of many nations especially in the present face of global economic challenge. This has triggers many countries of the world to re-evaluate their position and question their roles as nations and consider investing heavily in education. Molenda, (2008) sees education as a light that shows the mankind the right direction to surge and that its purpose is not just making a student literate produce computers or robots but adds rationale thinking, creativity and self sufficiency for self reliance which are cherished in every civilized society. Supporting this, Udofia, (2009) hold the view that education must reflect the diversity of needs, expectations, interests and cultural contexts. Additionally, Udofia, (2009) observed that to achieve a sustained and purposeful self reliant nation, an effective innovation within the education system is required to harness the potential offered by modern science and technology to its social and economic advantage. This awareness has however, replaced an earlier belief that heavy investment in scientific and technological research and the purchase of technology from abroad were sufficient to achieve these goals. According to Cachia, (2010) innovation in its broadest conception is the means through which individuals seek to acquire, exploit and diffuse knowledge for the achievement of individual and collective goals. Molenda, (2008) remarked that educational technology experts nowadays do not have to teach information but how to use information for self reliance. This is based on the believe that educators have the power to unlock the creative and innovative potential of the young.



Overview of Educational Technology

Educational technology is a relatively new field of study. With the rapid development in educational technology, the concept has come to mean different things to different people who have variously express their views. However in a bid to streamline these views the Association for Educational Communication and Technology (AECT) came up with a universally accepted definition of Educational Technology as a complex integrated process involving people, procedures, ideas, devices and organization for analyzing problems and devising, implementing, evaluating and managing solutions to those problems involved in all aspects of human learning. In support of this, Nsofor, (2010) remarked that educational Technology from all indications includes all educational processes, strategies and activities designed to achieve excellent in education. Spector, Merrill, & Driscoll, (2008) posited that educational technology is rooted in a primordial human drive to find ways of teaching that are more efficient. In continuation, Spector et al, (2008) viewed it as a rational problem solving approach to education where the opportunities for incorporating business values and self reliant skills lie at its disposal. Moreover, the programme in Educational Technology trains not only for the salaried jobs but more so for self-employment based on skill acquisition with minimal capital requirement. The pressing need for Universities to package programmes that are capable of meeting the employment opportunities for the teeming number of graduates is therefore partially served by this programme. The field is endowed with the following laudable objectives:

- a) Exhibit high level skill in the design, production, selection, improvisation and evaluation of instructional and educational media, including those associated with the print and broadcasting (electronic) media;
- b) Design and package educational programmes for a wide category target audience; in-school and non-face-to-face, and for different purposes;
- c) Adopt the acquired skills in the research, improvisation and management associated with instructional and educational media, methods and modes;
- d) Demonstrate competency in the manipulation of instructional and educational hardwires to achieve maximum result for a wide variety of target audience;
- e) Enjoy the combined use of the hand, head and heart in creativity as a mark of self-reliance and dignity of labour; and
- f) Investigate through research, observations and experimentation, the various areas associated with instructional media design, production, utilization and their effects on performance and goal attainment.

With the increasing emphasis on 21st Century skills and workforce development for self reliance, educational technology specialist have in place innovative ways of using new generation audio-visual technologies such as live broadcast satellite, video conferencing, narrowcast television, hypermedia, multimedia, interactive television instruction, videotaped instruction, video discs, computer discs, interaction radio digital technology, portable FM radio, web television and non-linear desktop video and audio-editing system-to achieve these laudable objectives. However the extent to which these objectives can be achieved depend on the functionality of educational technology programme.

Functional educational technology

The term 'functional education' refers to education that meets the child's needs and interest for the purpose of developing the life of the mind with relation to practical life in the present and in the future. According to Spector et al, (2008) functional educational technology is the process for determining what characteristics or entrepreneurial skills a graduate in the field should have, resulting in a model of new generation of entrepreneurs and strategies for training them. In addition, Achufusi, Ume, & Okoye, (2009) described functional educational technology as a total process of bringing up individuals to develop their potentials (cognitive, affective, and psychomotor) to the fullest and consequently, be able to contribute nationally to the development of self and the society. This implies that the learner has to be considered in the curriculum planning. It goes without argument that functionality in educational technology teaching should be based on the standards of science and technology teaching worldwide which includes:

- Adequate laboratory and field skills in educational technology.
- Ability to apply educational technology (scientific) knowledge to everyday life.
- Reasonable and functional scientific attitude among skills.

For functional education to be achieved in the teaching and learning of educational technology, to bring the reality of self reliance, emphasis should be laid in developing entrepreneurial skills in educational technology students.

Entrepreneurial skills are skills and competences that enable people seek and run enterprises successfully. The skills are acquired through training that emphasizes the acquisition and development of appropriate knowledge and skills that will enable an individual maximizes the resources around him within the limit of his capability.

The full content of effective utilization of ideas, information and facts that help a learner develop competencies needed for career commitments, such as establishing a business, marketing, services or being productive employees of organization (Achufusi, Ume, & Okoye, (2009). The development of entrepreneurial skills will require that educational technology teachers will be trained to have the where-with-all in the skills needed for entrepreneurship education. There is also need to produce adequate resources (human and capital) for actual implementation of such skills through design, production, selection, improvisation and evaluation of instructional and educational media, including those associated with the print and broadcasting (electronic) media. Essentially, the discipline is structured to train students on cognitive, affective and psychomotor development, with the view to prepare them for the societal need in the areas of implementing technology in modern schools and using new technologies as external means for serving an internal need (Lowyck, 2008).

Entrepreneurship and entrepreneurial opportunities in educational technology

The word entrepreneurs has been viewed differently, according to Elechi, (2009), an entrepreneur is an individual who undertakes self directed initiatives and assumes personal risks in creating and operating a profit oriented business. An entrepreneur is characterized by hard working, self confidence, profit-oriented in approach, have capacity to cope with failure, demonstrate initiative, set his own standard, always goal oriented, possess reliability and integrity. On the other hand, Saidu, (2011) places emphasis on innovations to enable the recipient become more relevant to himself and to the society at large. It is also the creation of business enterprises by individuals or small groups. Thus entrepreneurship education is a carefully planned process leading to the acquisition of entrepreneurial skills for effective living. Entrepreneurship education is an instrument that that empowers the youths to be in control of their future, have more opportunities to exercise creative freedom, higher self esteem and overall greater sense of control over their own lives. This implies that entrepreneurship is a major source of job-creation and innovation and it is largely for this reason that it has been equated with new venture creation and small businesses development. However, the reasons for the contemporary interest in entrepreneurship according to Saidu, (2011) are probably much more profound than this. They includes:

- Job creation and economic development
- Strategic adjustment/realignment
- Deregulation and the privatization of public utilities and state-owned enterprises

Entrepreneurship educators are beginning to suggest, therefore, that the purpose should not be just to equip students with the functional management competences to start a business on graduation, but should be concerned with raising awareness of entrepreneurship – with teaching students about entrepreneurs and, in particular, their roles and functions in the economy and society (Carter & Jones-Evans, 2000). Continuing, for others it should be developing in their students the attributes of the successful entrepreneur- where an entrepreneur can see opportunity, cope with uncertainty and ambiguity, make sense out of chaos, initiate build and achieve, in the process not just coping with change but anticipating and initiating it. Consequently, Ray (1997) outlined the major attributes of an entrepreneur and these include, amongst others:

- Communication skills, especially persuasion
- Creativity skills
- Critical thinking and assessment skills
- Leadership skills
- Negotiation skills
- Problem-solving skills
- Social networking skills
- Time management skills

Educational technology is endowed with more new ventures and opportunities that can encourage graduates to start their own businesses upon graduation, and to develop graduates who can be innovative and take responsibility for their own destinies not just in a business or even a market economy context. This is the reason why educational technology is referred to as "the incubator that hatches the golden egg" (Kirby, 2003). Typically, an incubation program's main goal is to produce successful graduates that are financially viable and freestanding once they have left the incubator. Educational technology as a field of study is endowed with innovative ideas if converted into business opportunities can yield a tremendous result. For instance, Fayomi, (2007) stated that business opportunities can arise when entrepreneurs use their skills, expertise or aptitude to provide a product or service to the market through conscious, deliberate or creative process. Similarly, solving existing problems like lack of relevant instructional materials in schools that stand the taste of time, shortage of trained multimedia developers, graphic designers and animators, lack of relevant educational videos in the market and a challenge of knowing what educational software to buy and where? Could all become opportunities to start a business, especially in the following areas?

- **Educational video production:** Now that private and public schools are everywhere, educational

videos especially those that appeal to the learning needs of students are in high demand in schools. In addition, firms and small scale businesses are also advertising their products lines using videos. A graduate requires the basic skills of videography, a video camera, tripod stand and external microphone to set up the business.

- **Video editing:** This is the process of manipulating video images in form of cutting segments (trimming), re-sequencing clips, and adding transitions, and other special effects such as sound recordings and narrations. A mastery of video editing software's such as *Pinnacle studio*, *Premier Pro*, and *Final cut* coupled with a possession of a desktop or laptop computer is enough to set up the business.
- **Multimedia design:** involve a creative process of developing multimedia packages for online and offline training, as well as the design and development of classroom based lessons on some selected difficult concept. A multimedia developer combines computer programming and visual artistry skills to design software or hardware programs. Schools, businesses, marketing agencies or even entertainment companies may use these programs for remote or distant training. For example, some developers create instructional courseware, programs for CD- ROMS, websites or even touch screen kiosk using graphics, audio, video and animation aspects.
- **Graphic design and imaging:** This refers to the process of creating design solutions that have a high visual impact. The role involves listening to clients and understanding their needs before making design decisions. Graphic designs are required for a huge variety of products and activities such as websites, advertising, books, magazines, posters, computer games, product packaging, exhibitions and displays, corporate communications and corporate identity, i.e. giving organisations a visual 'brand' and pliers. A graduate who has acquired skills in media technologies particularly design programs such as *InDesign*, *QuarkXPress*, *FreeHand*, *Illustrator*, *Photoshop*, *3ds Max*, *Acrobat*, *Director*, *Dreamweaver* and *Flash* can establish his or her own business with minimum delay. They can also work as part of a team with printers, copywriters, photographers, stylist, and illustrators.
- **Illustrations:** Illustration is a process of creating drawings and designs for books and magazines, advertisements, film, television and multimedia. Illustrators work on two-dimensional (2D) and three-dimensional (3D) models. They may use a combination of traditional and computer based techniques, or work on screen only. Graduates who want to venture in to this business can specialise in illustrations for children's books, scientific work, technical manuals, fashion, websites or product packaging.
- **Animation:** Animation is a process of producing multiple images called frames, which when sequenced together rapidly create an illusion of movement known as animation. The images can be made up of digital or hand-drawn pictures, models or puppets. An animator can work with 2D or 3D model-making animation or computer generated animation which features strongly in motion pictures (to create special effect or animated films) as well as in aspect of television work, the internet and the computer game industry. Most advertisements nowadays are done through animation. Some videos are becoming more attractive when animations are converted to video. A graduate can therefore establish his/her business in animation design using Macromedia flash.
- **Development of educational materials:** This involved the production of computer-based resources and printed documents for teaching staff and students. This provides an avenue where students and teachers have access to quality educational materials in all the subjects such as a wide variety of interactive materials: educational games, tutorials, audio and video clips, linguistic capsules, diagnostic tests, guided exercises, revision strategies as well as interactive exercises. A knowledge of Netquiz Pro-a software application for creating web-based exercises or test without any programming or knowledge of HTML language is enough to set up the business.
- **Supplies, equipment and services:** Getting high quality products that can withstand the rigors of learning environment while saving time and money, with affordable price solutions at convenient location is a challenge for most schools and training organisations. Establishing a company that gathers classroom based technology products such as LCD/DLP projectors, high definition (HD) video cameras, printers, personal computers and accessories will be an innovative business venture.
- **Educational Training and services:** Training is an organised activity aimed at imparting information or instructions to improve the recipient's performance or to help them attain a required level of knowledge and skills. There is surging demand for trainers who can "teach" teachers how to integrate technology in to the residential classrooms.
- **Educational artist:** Artists conceive and create visual representations to communicate a concept or idea if linked to classroom can result in the development of artistic instructional materials. An artist may be concerned with the production of two-dimensional or three-dimensional forms, employing a number of methods such as painting, drawing, printmaking, photography, sculpture and ceramics to realise their

ideas. Tools like oil, watercolour, pencil, pastel, acrylic or ink and paint are used onto prepared surfaces such as canvas, paper or board.

- **Development of educational games:** Game developers design, create and produce computer or video games. They work in game development teams with artist, programmers, producers and marketers and usually specialise in a particular game flat form (play station, Xbox or Nintendo for example) and a particular aspect of game development, such as programming artificial intelligence or game play. Children and even adult like playing games, however, with this development, educational technology graduates can pick up career in game development focusing more on transforming educational content into games. Market demand for educational games is high, kindergarten, play classes, nursery and primary schools, hospitals; television stations are open to such creative products.
- **Classroom interior design and decoration:** This may take a form of decorating classrooms, and learning environment by preparing aesthetically appropriate working drawings and specifications for interior pleasing designs. Materials, finishes, space planning, lighting, furnishing and equipment estimate cost of materials, labour and time can be given to clients for approval. Internal decorations may fade, wear and tear; renewal may be requested especially on school resumptions, ceremonies and internal programmes.
- **Audio and video equipment technician:** This involve setting up and operating audio and video equipment including microphones, sound speakers, video screens, close circuit television (CCTV), projectors, video monitors, recording equipment, connecting wires and cables, sounds and mixing boards and related electronic equipment for concerts, meetings, conventions, presentations and conferences. It also includes: compressing, digitising, duplicating and storing audio and video data; perform minor repairs and routine cleaning of audio and video equipment; conduct training session on selection, use, and design of audio-visual materials and operation of presentation equipment. Schools, business premises, banks, religious domains are all in need of such services.

All these among others are opportunities available for graduates of educational technology for self employment and to be employers of labour.

Strategies for developing entrepreneurial skills through functional educational technology

Entrepreneurial skills require an application of energy and passion towards the creation and implementation of new ideas and creative solutions. According to Kiosaki, (2000) essential ingredients of entrepreneurship include the willingness to take calculated risks-in terms of time, equity, or career; the ability to formulate an effective venture team; the creative skill to marshal needed resources; and fundamental skill of building solid business plan; and finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion. Kehinde, (2008) asserted that entrepreneurial skills consist of organizing all the factors of production i.e. land, labour and capital to transform a business idea into profitable reality. Continuing, Kehinde, (2008) pointed out that the skills also involved careful observation of the environment, identifying opportunities to improve the environment, gather resources and implement action to maximize those opportunities. Thus, the Strategies for developing entrepreneurial skills can only be achieved through functional educational technology. These strategies include:

- Exposing students to available career opportunities in educational technology
- Promoting an open and virtual learning
- "Learning by doing" for self motivation and reinforcement;
- Promoting students' value reorientation, curiosity, and professional passion
- Shifting from all cognitive components to affective and psychomotor domain.
- Promoting high level skill development in the use of modern communication technologies such as; video and audio teaching aids, TV, video conferencing, internet, use of LCD projectors, digital video camera etc, and adopting new teaching methodologies- seminar, group discussion, peer group tutoring etc.

Through these strategies, the youth are made to be entrepreneurial minded, self employed and consequently self reliant.

Conclusion

The importance of creativity and innovation through entrepreneurship and educational technology has been recognized as panacea for unemployment among youth. Nigeria's innovative capacity and the development of a creative and knowledge-intensive economy and society can be achieved through reinforcing the role and training of educational technology graduates in the knowledge triangle and focusing course curricula on creativity, innovation and entrepreneurship. Thus the following recommendations are proffered.

Recommendations

- It is hereby recommended that emphasis should be laid on entrepreneurial skills and functional educational technology such as design, production and modernization of indigenous resources among students through practices and innovations for achieving self reliant generation.
- The federal government should establish a sustainable national exhibition for educational technology student to stimulate the production of high quality audio-visual materials.
- The government both at federal and state level should encourage and support multi-disciplinary research in educational technology, promote regional and international cooperation and collaboration in form of conferences, seminars and symposium specifically targeted towards achieving the goals of building self reliant generation.
- Curriculum developers should integrate entrepreneurial aspect at all levels of educational technology curriculum and training by promoting learning by discovery method, experiential learning, participatory approach and through interactive environments, promoting attitudes receptive to self reliance among all education technology students.
- Educational technology instructors should introduce an intensive mentoring program by building alliances and relationships with other entrepreneurs, business professionals, alumni, and investors, so that students can build professional passion, gain personal insights, develop concepts, and formulate new ideas with this form of training.

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