

UTILIZATION OF ELECTRONIC ENGINEERING KNOWLEDGE AND SKILLS IN YOUTH EMPOWERMENT FOR NATIONAL DEVELOPMENT

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Abstract

Youths are needed for national development. So, they need to be empowered for the wellbeing of the nation. Electronic engineering can be employed in empowering the youths to equip them for entrepreneurship/job-creation, and also promote productivity in jobs. The paper discussed on relevance of electronic engineering in national development, and utilization of electronic engineering knowledge and skills in empowering Nigerian youths for entrepreneurship. It is pointed out that knowledge and skills in electronic engineering is applied in creation of various jobs and production of electronic devices/systems for fostering effective and efficient entrepreneurship. Certain recommendations are made for application of knowledge and skills in electronic engineering to encourage entrepreneurship for youth empowerment. The paper ended with a conclusion that utilization of electronic engineering knowledge and skills for the empowerment of youths through entrepreneurship demands effective education in electronic engineering and supports from stakeholders in electronic engineering.

Key Words: Electronic Engineering, National Development, Youths, Empowerment, Entrepreneurship, Job-Creation.

As leaders of tomorrow, youths are very vital in the promotion of national development. Maduewesi (2005) acknowledged that the youths occupy strategic position in political, social and economic processes and reforms. Patzhiko and Abdulsalam (2012) believe that the youths are the trustees of posterity in a nation. Based on the foregoing position on youths, Nigerian youths need to be empowered for the wellbeing of the nation especially in this period of unemployment. Young (1993) view empowerment as the ability of people to take control of their life activities, having the capability to do things their own way, set their agenda, and aim at achieving such set goals.

Creating opportunities for engaging in jobs and increasing job productivity for income generation empowers the youths for self-enhancement and national

development. It is true that a lot of youths in Nigeria are suffering due to unemployment. Nigerian youths need not to be ‘job seekers,’ but ‘job creators’ by engaging in entrepreneurship. Encouraging entrepreneurship is a means of youth empowerment because entrepreneurship brings about self-reliance, which is essential for the sustainable development of any nation.

The paper discussed how knowledge and skills in electronic engineering can be applied in empowering youths for entrepreneurship (job-creation). Issues discussed in the paper are: relevance of electronic engineering in national development; utilization of electronic engineering knowledge and skills in empowering Nigerian youths for entrepreneurship. Certain recommendations are made in the paper and the paper ended with a conclusion.

Relevance of Electronic Engineering in National Development

Engineering is a discipline or activity which is in between science and technology because it deals with the use of scientific principles in the designing and production of materials and devices that make man feel more comfortable in his environment (Nwosu, 2010). Idowu (1992) viewed engineering as a profession in which the knowledge of mathematics and natural science gained by study, experience and practice is applied with judgment to develop ways of economically utilizing the materials and forces of nature for the benefit of mankind.

Electronic engineering is the engineering that deals with the conduction of electricity (electrical charges) through conductor and semi-conductor materials or valves (vacuum and gas-filled devices). Modern electronics is principally concerned with semi-conductor materials and devices. It can be said that electronic engineering is using the science of electronics to make technological designs for the wellbeing and comfort in human environment. Generally, engineering is required for the promotion of a nation’s economy because it gears towards the socio-economic wellbeing of the human society. In other words, engineering has influenced human life and activities towards development. In this modern era, a revolution in human activities has occurred through electronic engineering because it deals with the use of scientific knowledge of electronics to solve human and environmental problems to achieve a progressive economy and society. Examples of electronic devices commonly used are radio, television, computer, telephone, video machine, calculator, audio amplifier, etc. Electronic engineering is greatly used in the field of communications. In modern communications, electronic devices such as radio, television, computer, transmitter, satellite, telephone, etc are used. As rightly noted by Inyiama (2004), electronic technology has brought about changes in communications and the important development in electronic communications has a great impact on the way business,

administration, education and government are conducted in the emerging world of the third millennium. Unfortunately, Nigeria has not effectively utilized the gains which electronic engineering and technology offers. Actually, electronic engineering and technology can play a vital role in national development by positively influencing the lives and actions of the youths. One of the ways in which the actions of the youths can positively impact on national development is to get involved in entrepreneurship.

Utilization of Electronic Engineering Knowledge and Skills in Empowering Nigerian Youths for Entrepreneurship

Entrepreneurship deals with the ability to set up a business enterprise as different from being employed (Osowa, 2005). Entrepreneurship creates employment opportunities in that an entrepreneur can establish a business and employ people for jobs in the business and pay them. There is the need to emphasize entrepreneurship (job-creation) in Nigeria because one situation that threatens national development in Nigeria is unemployment.

Nwosu (2005) pointed out that employment helps to generate income for a happy and healthy live as well as for the prevention of idleness that is associated with social vices, which inhibit socio-economic development. It is unfortunate that a lot of youths in Nigeria are unemployed and so are prone to get involved in immoral activities associated with national insecurity such as stealing, murder, duping, kidnapping, etc that negatively affect national development. Therefore, the involvement of the youths in various self-employed activities further promotes self-reliance and the generation of income.

There are job opportunities which the knowledge of electronic engineering can provide for the youths. Electronic engineering makes it possible for the youths to become intellectually equipped in the area of electronic instrumentation and control, computer technology, telecommunications, robotics, and engineering management. With the knowledge and skills in electronic engineering, the youths can be empowered to be entrepreneurs working as operators of electronic-based systems, computer programmers, electronic engineers, electronic engineering lecturers, consultants in electronic-based activities, vendors of electronic products, or managers in electronic-based organizations. It should be recalled that engaging in jobs provides income for comfortable living and prevention of idleness that can lead to social vices which jeopardize socio-economic and sustainable development.

Electronic engineering knowledge and skills are employed in the production of computers. Computers make our daily work easier and faster. So, computers can serve as a vital electronic machine for the enhancement of the operations of the youths who

are entrepreneurs. Computer systems have important features that make it serve as a useful electronic device in entrepreneurship: it operates at a fast speed and gives accurate results; it is reliable because it can operate for many hours; because computers can be reprogrammed they are flexible and adaptable to various operations; and computers turnout neat products. There is no doubt that computers enhance productivity. Ekemezie (2003) asserted that the purpose of computer systems is to speed up problem solving and increase productivity.

Knowledge and skills obtained from electronic engineering has made the existence of Information Technology (associated with communications) possible. It is known that the major purpose of communication is to transmit information. Information enables meaningful interactions in any human activity; and so information is needed to achieve effective and efficient entrepreneurship. The use of electronic systems and devices like phone (hand-set), computer, memory card, CD-ROM, etc can empower the youths for storage and communication of information that can boost entrepreneurship.

In this modern era, the Internet has made the world a global village. The knowledge and skills of electronic engineering would bring about innovative ways to which the Internet can be used. With the Internet, the youths can communicate with people from any part of the world to enhance productivity, using facility like electronic mail (e-mail). E-mail provides a fast and economic convenient means of sending and receiving messages around the world. Also, the Internet makes it possible to have electronic business activities such as E-commerce, E-banking, E-conferencing, etc which the youths can use to enhance their entrepreneurship.

Youths involved in entrepreneurship can get empowered through electronic education (intellectual enhancement). Fortunately, electronic engineering provides avenues for intellectual enhancement through the exposure on the use of computer and software applications. Youths can slot in educative software into the computer and then obtain certain information on entrepreneurship. If youths engaged in entrepreneurship are computer-literate, they will be more equipped for the acquisition of knowledge and skills necessary for entrepreneurship.

Knowledge and skills in electronic engineering has helped in the production of electronic devices/systems such as radio, television, phone, and video machine. Such electronic products can be used to empower the youths for entrepreneurship. For example, entrepreneurial knowledge and products can be broadcast on radio and television to expose the youths to real-life scenarios in job-creation and job-management. Also practical entrepreneurial activity can be videotaped and watched on a video machine for a clearer and deeper understanding of entrepreneurship practices.

Conclusion

The youths as one of the stakeholders in ensuring national development need to engage in jobs for income generation needed for a happy and healthy live. It is unfortunate that a lot of youths in Nigeria are unemployed. Unemployment leads to emotional/psychological discomfort. It also results in the involvement in social vices which can inhibit or slow down the socio-economic development of the nation. Nwosu and Nnabuenyi (2005) acknowledged that employment provides socio-economic and psychological satisfaction to people and so helps in minimizing social vices, associated with unemployment, which can retard or hinder development in the society.

Acquisition of knowledge and skills in electronic engineering can inculcate entrepreneurial (job-creation) consciousness in youths for national development. Generally, engineering is vital in the promotion of national economy. With focus on utilization of electronic engineering knowledge and skills for self-reliance, the youths can get empowered for self-employed jobs in various organizations and businesses. Actually, equipping the youths for entrepreneurship through the knowledge and skills in electronic engineering requires promoting effective education in electronic engineering, and offering adequate supports by various stakeholders in electronic engineering education.

Recommendations

To encourage the utilization of electronic engineering knowledge and skills in entrepreneurship for youth empowerment necessary for national development it is recommended that:

- Youths studying electronic engineering should be diligent in their academic pursuit and always reflect on how to get empowered through entrepreneurship with the knowledge and skills obtained.
- Youths should develop positive attitude towards the use of electronic systems in entrepreneurship.
- Government should help in provision of the necessary facilities and resources that will enable the youths obtain effective knowledge and skills in electronic engineering.
- The media should broadcast programmes pertaining to the use of electronic systems in entrepreneurship for youth empowerment.
- Families, organizations and the general public should give financial and moral support to the youths in the use of electronic devices in fostering job-creation.

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