



## STRATEGIES FOR DEVELOPING ENTREPRENEURIAL SKILLS AMONG UNDERGRADUATES OF TECHNOLOGY VOCATIONAL EDUCATION FOR POVERTY ALLEVIATION IN NIGERIA

Okoli Anthony Ifeanyichukwu<sup>1i</sup>,  
Ogwa Christopher Eze<sup>2</sup>,  
Okoli, Constance I.<sup>3</sup>

<sup>1,2</sup>PhD, Department of Technology & Vocational Education  
Ebonyi State University, Abakaliki, Nigeria

<sup>3</sup>Department of Technology & Vocational Education  
Nnamdi Azikiwe University, Awka, Nigeria

### Abstract:

Technology Vocational Education (TVE) is one of the greatest facilitator of change in any developing nation due to its impact on skill acquisition and a panacea for poverty alleviation. This paper focused on strategies that could be used to impart entrepreneurial skills among TVE undergraduates for poverty alleviation in Nigeria. Such approaches as the combination of the use of modern teaching methods like role play, project method, field trips, and demonstration among others in a tactical manner necessary for entrepreneurial skill development of TVE undergraduates were x-rayed. It was recommended among others that collaboration between schools and industries should be strengthened in the area of students practical work experience. This will help the students to develop skills in the manipulation of machines and other equipment which they are expected to use after graduation for self-employment.

**Keywords:** strategies, developing, entrepreneurial skills, undergraduates, vocational technology education and poverty alleviation

### 1. Introduction

Poverty has been described as a condition of material and non-material deprivation, characterized by such poor economic and social conditions as inadequate food, poor accommodation, poor health services, poor education, unemployment, low income, poor technology and dependence among individuals and nations (Okoli & Igwegbe, 2015). Although poverty is a global problem, its menace is more pronounced in the

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<sup>i</sup> Correspondence: email [okoliconstance@yahoo.com](mailto:okoliconstance@yahoo.com)

developing nations. Fighting poverty in these countries has been a difficult task with Nigeria inclusive.

Federal Government of Nigeria at different periods has instituted poverty alleviation programmes to improve the standard of living of its citizenry. Such programmes instituted to fight poverty include National Poverty Eradication Programme (NAPEP), National Economic Empowerment Development Strategies (NEEDS) 1 & 2, and Entrepreneurship development programmes among others. In spite of these efforts poverty has remained pervasive and endemic in the country, recording an insignificant change in HDI after a period of five years. Nigeria in 2010 had a Human Development Index (HDI) of 0.500 and 0.527 in 2015 (UNDP Human Development Report, 2016). This statistics indicated improvement but insignificant when compared to government efforts in this direction. This is not encouraging and calls for greater measures. The fact remains that a greater proportion of Nigerians still live below poverty line, having poor access to safe water, primary health care and poor diets due to the prevalent low productivity and purchasing power. At present, poverty in Nigeria manifests itself in various ways which include hunger, high maternal and child labour and death, prostitution, underemployment, armed robbery, kidnapping and general low quality of life.

Poverty in Nigeria could be attributed to so many factors such as poor economic policies, poor value orientation, and poor provision of infrastructural and social amenities especially in rural areas, low productivity in agricultural and industrial sectors resulting from low skill possession among workers. Others are inadequate school curricula and high level of unemployment resulting from lack of saleable skills among graduates from the various educational institutions (Okoli & Ezenwafor, 2015). Ibrahim and Dandago (2013) observed that the changing trend in the labour market profiles have increased the complexity of skills required by today's workforce and threatened the position of graduates that are ill-equipped with knowledge of modern technology. It is these same skills that are needed for a graduate to start and effectively run and manage his own business.

Education as a human development strategy has been regarded as the greatest facilitator of change that transforms individuals and nations from a poor state of involuntary deprivation to a comfortable level of need satisfaction. This is made possible by its capacity to transmit knowledge, skills, abilities, values and attitudes necessary for an individual's development and utilization of resources for his own benefit and the society at large. Presently in Nigeria and world over, much emphasis is placed on entrepreneurship education among youths to fortify them with necessary entrepreneurial skills, for effective performance in business and technology world to become self-reliant. Junaid (2009) defined entrepreneurship education as aspect of the general vocational education that enables a person to develop the willingness and ability to explore and exploit opportunity, and for establishing and managing business enterprises successfully. The essence of entrepreneurship education like other aspects of education is to turn out graduates who will become entrepreneurs tomorrow. Entrepreneurs own businesses, they are innovators, organizers and coordinators of

other factors of production. Steinhoff and Burgess in Ile and Okereke (2014) noted that entrepreneurs need special characteristics and skills to succeed in business. Such characteristics include; entrepreneurship knowledge, attitudes and skills which are regarded as occupational survival skills. An entrepreneur must be willing to take risks, plan, organize and implement them. Entrepreneurship education provided to undergraduates enables them to acquire skills that make them successful owners of enterprises after graduation, to improve their income and that of the nation through further generation of jobs. This is expected to reduce the high unemployment level among youths who are seen parading the streets looking for white collar jobs that are not available. Acquisition of entrepreneurial skills among these undergraduates therefore becomes crucial for poverty alleviation in Nigeria.

Undergraduates are students found in our universities and account for over 60 percent of youths in Nigeria (Guardian Mobile, 2013). The ability of the Nigerian educational system to provide these undergraduates with knowledge, skills and competencies for entrepreneurship therefore serves as the key to improvement in the nation's standard of living. Countries with provision for entrepreneurial education have few youths that are unemployed and with low poverty rate. These youths are equally found as undergraduates in Technology Vocational Education (TVE).

This paper focused on strategies that could be applied by educators in TVE to develop entrepreneurial skills among its undergraduates for successful entrepreneurship as graduates and to reduce poverty in Nigeria.

## **2. Technology Vocational Education in Nigerian Universities**

Technology Vocational Education is designed to acquaint technical oriented personnel with applied skills and basic scientific knowledge required for technological development and sustainability of a country. In Nigeria, TVE had evolved through the non-formal apprenticeship training in the pre-colonial days, when parents in a bid to ensure continuity of their trades, transmit the required skills to their younger ones. This pride was later lost following the colonization of Nigeria by the British government, who merely introduced literal education into the country, aimed at producing clerks and preachers for evangelization. Although skeletal efforts were made by the missionaries at the time to introduce technical/vocational training into the school curriculum but this was not taken serious because of its huge costs. This was not also regarded by our people at the time as part of western education (Coleman in Esomonu, 2002).

The awareness for the essentials of TVE in national development started gathering momentum in Nigeria after the Phelps Stroke Report of 1920 that recommended its introduction as a necessary skill subject for work preparation. The Educational Policy in British Tropical Africa in 1925 also recommended the adoption of vocational/technical skills to the mentality, aptitude, occupations and traditions of the various people. Technology vocational subjects as brick laying, farming, etc were therefore included in the curriculum by some mission schools. However, this was

relegated to the background by parents who discouraged their children with the notion that it is for drop outs (Ekpenyong, 2008).

TVE took another dimension in the 70's following the glaring consequences of its neglect in national development. There was an over reliance on other country's manpower for local productions, excessive importations and wastes of the country's meager foreign exchange among others. Measures were taken to promote skill acquisition among Nigerians, Industrial Training Fund (ITF) was legalized and Decree No 41 promulgated in 1971. By this decree, institutions were empowered to promote and encourage skill acquisition among its undergraduates in industrial and commercial fields (Oyedele, 2004)

TVE was finally incorporated into the National Policy on Education (NPE), which is the working document for the realization of Nigerian educational philosophy at all educational levels, and as a key to achieving the national objectives. Federal Republic of Nigeria (2013) defined technology vocational education as that aspect of education that leads to the acquisition of practical and applied skills as well as basic scientific knowledge. This was ensured into the National Policy on Education with the following aims:

1. To provide trained manpower in applied science, technology, and commerce, particularly at sub professional grades.
2. To provide the technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development
3. To provide an individual who can apply scientific knowledge in the improvement of environmental problems for the use and convenience of man.
4. To give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant and
5. To enable our young men and women to have an intelligent understanding of the increasing complexity of technology (FRN, 2013).

The above aims were noted as the general goals of vocational technical education wherever it is taught; whether as basic technology, vocational / technical education at senior secondary level or core technology education at tertiary institutions.

In Nigeria, five types of technical education institutions exist outside the universities. Such include prevocational, vocational schools, technical colleges, polytechnics and colleges of education (technical). At lower levels, the nomenclature 'technical education' was noted as more appropriate and 'technology education' at higher levels (Ogwo, 2006).

At university level, TVE programmes include technology education, business education, Home economics education and Agricultural education. Technology education has three option areas as; wood/building technology, mechanical/auto mechanics, electrical and electronics technology. Business education harbors programmes as Secretarial education/Office Technology Management, accounting education, cooperative economics and management education. Other programmes of TVE include home economics and agriculture that offer special options areas necessary

in producing individuals that are self-reliant. By this TVE create jobs for Nigerian teaming population. (Nigerian Universities Commission, NUC, 2008).

Students in TVE programmes in universities are admitted through University Matriculation Examination (UME) and Direct Entry. The programme is for four or five year's duration. Students offering four years are required to pass courses totaling a minimum of 120 credits and 150 credits for students in five year programme (BMAS, handbook 2004). The technological developments in the recent times have altered the nature of workplace, thus exerting great demand on occupational preparation of the TVE graduates. The TVE undergraduates need to be exposed to broader areas in technological application and entrepreneurship to enable them cope with new procedure and the emerging technologies of the 21st century. Ogwo (2006) noted that the educational system need to develop the knowledge and skills that will help the workforce become more flexible and responsible to the needs of the local market, provide the recipients the ability to establish and run their own enterprises while competing within the global economy.

The role of TVE in poverty alleviation in close relationship with entrepreneurial education and other social sectors is crucial. Entrepreneurial education is integrated in TVE programmes to ensure production of self – reliant graduates who are job creators than job seekers. This is important in reducing poverty and also increasing the wealth creation of the nation.

### **3. Developing Entrepreneurship Skills in Technology Vocational Education**

Aina and Salako (2008) described entrepreneurship 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, and assuming the accompanying financial social risks at the end receives the resulting reward. Entrepreneurship is the ability to create, innovate and bring changes in materials and values through exploitation of opportunities for profit. An entrepreneur makes other factors of production productive through proper planning; leadership, control and co-ordination to build a successful enterprise. He always looks for opportunity to bring changes in an environment and ready to bear risks involved. Successful entrepreneurs manifest some practical-oriented behaviours that are desirable and which could be learnt. Entrepreneurs are agent of social and economic change, so Nigerian education curricula at all levels should concentrate on developing entrepreneurial skills among her undergraduates during training to equip them for constant improvement and development of the economy.

Developing skills as used in this paper means advancing in the ability to perform better and quality works through training The entrepreneurship development programme is such that is designed to help an individual in strengthening his entrepreneurial interest and in acquisition of skills necessary to play his role effectively as an entrepreneur. These to be achieved means that the teachers of entrepreneurship

courses should strategize their teaching methods to accommodate skills that will help the undergraduates acquire the practical knowledge by doing.

Skills are abilities, capabilities, aptitude and expertise acquired through deliberate, systematic and sustained training necessary to adaptively perform job functions effectively. Entrepreneurial skills are competency - based resourceful skills that are capable of making an individual self-reliant, independent and productive in meeting life's challenges. Izuagha (2002) noted entrepreneurial skills as life-survival skills which an individual needs to function effectively and face the challenges of life. Possession of entrepreneurial skills makes an individual to exploit a business opportunity, establish an enterprise and run it successfully.

The entrepreneurial skills required by undergraduates of VTE include technical skills, managerial skills, accounting skills, communication skills, professional skills, and information processing skills, creativity skills, cooperative skills, credit sourcing skills, home management skills, decision-making skills, civic awareness skills, marketing skills, and several other occupational skills. Bino (2008) noted that the acquisition of these skills has the capacity to augment, inspire productivity and further generate income for life among people. They are also employability skills which transient occupational to include generic skills that are readily transferable across different work settings for effective performance. By teaching entrepreneurial skills, TVE programmes enable an individual to learn, explore and prepare for a trade. Without teaching entrepreneurial skills, TVE programmes would fail in the role of empowering students to cope with the daily needs of life. Some of them are expatiated as follows:

#### **A. Technological Skills**

An individual achieve this through development in science and technology. For instance, contents like Information and Communications Technology (ICT), farming, education, health, fishing, mining, manufacturing and tourism have various entrepreneurial skills embedded in them. Students here appreciates the need and acquires the skills for packaging of products, fabrication of goods, preservation of the environment (waste recycling), food preservation and processing, making apparels and designing textiles, weaving cloths, producing chemicals for home keeping, making of juices from fruits or using machines to crack nuts, shell seeds or extract seed oil in various ways.

#### **B. Resource Utilization and Management Skills**

Human and material resources utilization skill plays a vital role in success of enterprises. Resources utilization and management is concerned with the process of planning, organizing, directing, controlling and co-ordination of available resources for success of enterprises.

#### **C. Marketing Skills**

Marketing skills are broad range of knowledge, abilities, attitudes and observable patterns that directs the flow of products from producers to final users. These together accounts for the ability to buy, develop and package quality product, sell and deliver several services and products for profitability of enterprises. Marketing skills involves seeking out marketing opportunities and the ability to penetrate market in the midst of

competition, timely and effective delivery of product, maintenance of customer loyalty and patronage to satisfy the needs of customers and to make profit. For instance, the curriculum may illustrate the use of advertisements and cooperative societies to market products, how to identify product seasons and how to distribute goods to those that need them.

#### **D. Strategic Planning Skills**

Strategic planning skills involve abilities in effective planning of investment opportunities considering the risks involved. It covers issues in problem identification, risk assessment, investment opportunities identification, decision-making and savings (Biao, 2008). It also includes environment analysis skills and skills in effective application of technology. Such include skills in stock and financial planning, critical thinking, preparation and presentation of data in various forms, reading and interpreting maps, graphs, charts as a guide to investment opportunities and forecasts.

#### **E. Capability Skills**

Capability skills to be developed for entrepreneurship success include the ability to locate customers, identify product seasons, negotiate for prices of goods, identify market functioning, keep records of sales, dressing etiquette and comportment, thrift savings and investment abilities, literacy and decision-making abilities.

### **4. Strategies for Developing Entrepreneurial Skills in Technology Vocational Education**

Various strategies could be applied to develop reliable skills among undergraduates in TVE programmes. Such strategies are practical oriented and taught to students together using pragmatic teaching techniques as demonstration, problem solving, lecture, discussion, field trips (excursion), role play and internships.

**A. Demonstration** is any planned performance by a teacher on an occupational skill or information aimed at explaining the steps or facts of an operation. This is a basic strategy for introducing new skills to the learner aimed at showing how a process, procedure or experiment is to be carried out. This is teaching by doing as evidence or proof of a claim. In entrepreneurship training, the teacher demonstrates as students do same under supervision.

**B. Explanation Strategy;** this entails imparting skill in conjunction with almost all other methods of teaching method. Concepts in entrepreneurship are first explained and followed by practicals. For instance, in impartation of skills on how to start an automobile engine, the concept of automobile engines and how they function is first brought to the knowledge of the undergraduates. The use of explanation as a strategy to impart skills among students start with what the student is familiar with, and then proceed towards the desired goal. This is done by explanations, moving from simple to complex concepts. This is further followed by demonstration by driving the engine as practical example. The material to be presented should be properly understood. The instructor should also ensure that explanation giving arouses the interest of students and does not dampen that which already exists. To make the strategy more effective,

explanation should be as simple as possible with words that are relevant and simple to understand. Unfamiliar trade or technical jargons should be well explained.

**C. Lecture Using Buzz Group.** Lecturing is the most commonly used method of teaching especially when the facilitator has a wide area of knowledge to cover to a large number of people within a short period. Imparting skills with lecturing as a strategy in entrepreneurship education is very effective if the undergraduates are divided into smaller groups and organized to talk, lecture and present shared topics in turns to the entire class. The course content is shared and assigned to member groups with leaders for control. To ensure achievement of objectives the facilitator directs the activities of each group in terms of objectives and procedure to achieve the desired outcome. The use of buzz groups engage undergraduates in discussion to bring in their own life experiences and to make them active participants in the teaching/ learning process. The undergraduates are adult learners and have previous knowledge on some issues which they need to bring to the present.

**D. Questioning** is a strategy that exposes undergraduates to the unknown as a stimulus - respond technique for confirmation of ideas. This is adopted when learners are reluctant to contribute to discussion or are bored during talk to make them participate effectively. The educator could equally raise issues or fact finding tasks in entrepreneurship and instruct learners to form groups for discussion. These groups later come together again after trashing the issues out, at the expiration of allotted time to give reports. This strategy makes the students active participants in the learning process especially in acquisition of practical knowledge and skills. Questioning is a strong skill development strategy as it stimulates thinking in students and elicits responses that will lead to the proper solution of entrepreneurship problems.

**E. Project Method as a Strategy.** This method facilitates acquisition of entrepreneurial skills among TVE undergraduates through application of knowledge in solving problems with little direction of the educators. Students are allowed to explore their environment and based on their areas of interest embark on projects that aims at showcasing their ingenuity and skill acquired in entrepreneurship. The projects may be suggested by the teacher, but they are planned and executed by the undergraduates themselves, individually or in groups within the period directed by the educator. Project method as a strategy improves student involvement and motivation in order to foster independent thinking, self-confidence, and social responsibility.

**F. Role Play Strategy.** This is when members of a group, either individually or in smaller groups act a role in given situations to demonstrate ideas. It is very effective for skill acquisition in entrepreneurship as it appreciates and demonstrates actions necessary for success or failure of given projects. Role play stimulates active participation of learners and gets them involved in activities required for successful entrepreneurship as they will meet in their established enterprise after graduation. The facilitator should effectively direct learners earlier before the role play by explaining the objectives of the lesson. This makes learners more interested in the educative aspect of the play than the entertainment. A discussion session is also held at the end of the role play to highlight the major experiences and knowledge required to be acquired.



**G. Field Trip Strategy** in the development of entrepreneurship skills among undergraduates entails organizing educative visits to successful establishments, entrepreneurs or institutions for first-hand information. Field trips are made effective when well organized and combined with teachings that are in line with the concrete and direct learning experiences provided. At the end of the trip, students are engaged in group discussion to make sure that the aim of the trip was achieved.

#### **H. Internship Training Strategy**

Internship Training in the provision of entrepreneurial skills to undergraduates of TVE entails collaborations between schools and industries for real life work experience. This form of collaboration is necessary after exposing students to theories and concepts in TVE programmes and attached to industries where they are expected to practicalize the knowledge acquired. Effectiveness of internship as a strategy for developing TVE undergraduates entails proper planning, timely posting, organization, proper implementation, monitoring and effective supervision. To enable students practicalise the skills taught, they must be fitted in establishments that provides services in their areas of study and with adequate facilities, equipment and machines to work with. This will help them establish such small scale enterprises to become self-reliant after graduation.

### **5. Conclusion**

Acquisition of entrepreneurial skills in Technology Vocational Education is indispensable towards empowering undergraduates and producing self-reliant youths who can establish their own enterprises to alleviate poverty in Nigeria. This paper discussed the strategies for developing entrepreneurial skills among undergraduates vis-à-vis, integration of entrepreneurship education in TVE curricula. Such strategies as demonstration, lecture using buzz groups, questioning, role play, project method and internship training were discussed. These strategies are expected to develop entrepreneurial skills among the undergraduates to increase job generation and wealth creation to improve standard of living of Nigerian citizens.

### **6. Recommendations**

The following recommendations are made:

1. The Technology Vocational educators should be provided with constant training and retraining on modern instruction techniques for developing entrepreneurial skills among their students
2. Method of teaching entrepreneurship education for TVE undergraduates should be student centered and not teacher-centered.
3. There should be constant curriculum review for entrepreneurship education as integrated into TVE programmes of Nigerian universities. Learning experiences provided should be in line with current needs of the society and the labour market.

4. TVE programmes in universities in Nigeria should be properly funded to provide enough facilities for effective teaching necessary for impartation of entrepreneurial skills among TVE undergraduates.
5. Collaboration between schools and industries should be strengthened in the area of students practical work experience. This will help the undergraduates develop skills in manipulation of machines and other equipment which they are expected to use after graduation either for self or paid employment.
6. Assessment in entrepreneurship education to determine outcome of instruction should be performance based. This is to ensure acquisition of skills among undergraduates and to motivate them for higher performance.

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