

VOCATIONAL EDUCATION FOR SUSTAINABLE DEVELOPMENT IN NIGERIA: THE BOOBY TRAPS AND THE ROADMAPS

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Abstract

Vocational education which aims at empowering individuals for the future, provides the needed platforms for the achievement of sustainable development goals of quality education and economic growth. It provides an opportunity for job creation, poverty alleviation, increase productivity and economic development of any nation. This paper examined the booby traps and road maps of vocational education for sustainable development in Nigeria. Some of these booby traps include obsolete equipment, dilapidated laboratories with expired chemical, inadequate textbooks and instructional materials. Others are lack of knowledge on the part of teachers, outdated curricula, poor funding, B.Sc. / HND dichotomy and poor teaching and learning environment. The paper identified the following roadmaps for vocational education in Nigeria. These include; massive investment in infrastructure to improve teaching and learning environment, capacity building for teachers, technologists and laboratory technicians, effective information dissemination on vocational education, expansion of facilities to improve enrolment, regular curricula review, partnership and collaboration with the industries and the institutions among others. The study's recommendation include: upgrading the polytechnics to University of Technology or Applied Sciences and Colleges of Education to University of Education, integration between the industries and the vocational schools, increase funding for vocational education, regular curriculum review, capacity building for teachers among others

Key words: Vocational Education, Sustainable Development, Booby Traps and Road Maps

Introduction

Education is the brain behind the progress of many nations as no nation can achieve sustainable development without vocational education. It is the cornerstone of national development. Vocational Education provides the platform for the actualization of 2030 Agenda for sustainable development goals. It is a key for achieving both 4th (quality education) and the 8th (decent work and economic growth) sustainable development goals (United Nation Sustainable Development Goals, (2015). Many countries today that have emerged global leaders economically achieved this status through the dedication and commitment of their scientists, technologists and government policies that encouraged self-reliance (Federal Republic of Nigeria 2014).

Ozoemena (2013) opines that vocational education comprises of formal, non-formal and informal learning for the world of work. It offers an alternative education for young people, women and men who wish to grow professionally and at the same time provides the needed manpower for social and economic development of the nation. Unfortunately, little attention is given to vocational education in Nigeria may be due to lack of political will on the part of government as it is seen in poor budgetary allocation to the sector. Ikenna (2013) asserts that vocational skills centers in Nigeria are poorly funded which has resulted in poor quality training facilities and trainers (except in privately run vocational schools).

Nigeria as a nation today, is under the grip of failed economy, hunger and starvation, banditry, senseless killings, terrorism, kidnapping, poverty, corruption, and unemployment. The high rate of insecurity in Nigeria as exemplified in farmers-herdsmen conflict, 'Boko Haram' insurgency, militancy, kidnapping, armed robbery, cultism, senseless killing and willful destruction of other peoples' properties is as a result of high rate of unemployment. Therefore, most of the security challenges in Nigeria could have been avoided if the unemployed youths are engaged in vocational education. This is because there is a link between vocational education and unemployment, unemployment and poverty, and poverty breeds insecurity. It is against this background that this paper is looking at vocational education as instrument for sustainable development, the booby traps and the roadmaps in Nigeria.

Concept of Vocational Education

Vocational education refers to the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (National Policy on Education of the Federal Republic of Nigeria 2014). Ibanga (2017) defines vocational education as that training consists of the acquisition of knowledge, skills, competencies, structural activities, through formal, on-the-job and off-the-job training and which provides the trainee the opportunity of employment in different industries and the capability of being self-employed. Adegbulu (2014) defines vocational education as an education which provides training that prepare learners for careers that are based in manual or practical activities, traditional, non-academic and totally related to a specific trade, occupation or vocation. In other words, it is an education designed to develop occupational skills, give the individuals the skills to live, learn and work as a productive citizen in a global society. It provides learner with skills to become productive entrepreneur as it engenders creative and innovative ideas, enlarge the economic and increase personal freedom. Vocational education enables the learner to acquire practical (psycho-motive, cognitive and affective) skills in their choice of vocation and to face the reality of the changing world of works and new technology.

Concept of Sustainable Development

Sustainable development can be defined as development that meets the needs of the present without compromising the ability of the future generations to meet their own needs (World Commission on Environment and Development cited in Taylor and Crecch, 2012). The purpose of vocational education as education for sustainable development is to allow every learner acquires knowledge, skills, attitudes and values necessary to shape a sustainable future. UNESCO cited in Taylor and Crecch (2012) describes education for

sustainable development as participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. It promotes competencies like critical thinking, imagining future scenarios and making decision in a collaborative way. Viertel (2010) described sustainable development as development that satisfies the needs of the present without compromising the capacity of future generation, guaranteeing the balance between economic growth, care for the environment and social wellbeing.

The Booby Traps

The commitment to produce a market-ready graduate of international standard that is sound in terms of knowledge and skills from institution of learning in Nigeria seem to be lacking. Dada (2019) quoted the president of Nigeria, Muhammadu Buhari who said that “today, Nigerian graduates lack the requisite knowledge, competence, attitudes and skills to be active role players in the country’s quest for socio-economic and technological development”. A situation where a child would spend six years in secondary school, four years in the university and after graduation lack occupational skills for self-reliance is worrisome. It may be true for example that the so called computer engineers in Nigeria take their damaged computers to roadside technicians for repairs. Many mechanical engineers in Nigeria today hardly detect faults in their vehicles.

Federal Ministry of Education (2018) observed that vocational education faces multiple challenges in Nigeria which are compounded by low public perception of the sub-sector and dwindling enrolment in Technical Colleges. Some of these booby traps are; poor teaching and learning environment characterized by dilapidated laboratories, technical workshops, obsolete equipment, inadequate text books and other instructional materials. Lack of knowledge on the part of teachers, poor funding of vocational education, absence of integration between the schools and industries and societal estimation of Higher National Diploma (HND) as an inferior form of education (B.Sc./HND dichotomy).

The booby traps here refer to barriers, obstacles and challenges of vocational education in Nigeria. Some of these booby traps are as follows:

- a. Inadequate infrastructure and instructional materials:** This is one of the booby trap for vocational education in Nigeria. Most schools lack efficient and stable electricity and water supply. Nearly all known vocations required for national development rely on stable electricity (Onyemah, Ikenga, Isibor and Ojogbane, 2010). They further observed that many schools are not supported with solar power generators and other energy-efficient program equipment. These infrastructural challenges include obsolete equipment, dilapidated laboratories with expired chemicals, damaged computers, inadequate text book and other instructional materials. This resulted in overcrowded practical sessions, poor access to Information, communication technology (ICT) resources and generally poor teaching and learning environment.
- b. Poor funding of vocational education:** Inadequate funding of vocational education has caused the turning out of half-baked graduates because there is no fund to build and maintain workshops, laboratories or even purchase modern equipment (Odu cited Okoye & Arimonu, 2016). They further observed that lack of commitment and inadequate funding on the part of the government has weaken the vocational schools as the number of vocational and technical schools are dwindling and that of general education are growing. Vocational education is capital intensive because skills, relevant

facilities and equipment must be available. Similarly, Aikhonbare (2016) opines that the regulatory agencies such as National Board for Technical Education (NBTE) have gone to town on several occasions to complain about poor funding from the federal government. They have argued that insufficient funds are primarily responsible for their inability to carry out their statutory responsibility.

- c. **Derogatory attitude towards artisans and craftsmen:** Social exclusion and equity is one of the challenges of vocational education in Nigeria. Alkhionbare (2016) observes that Nigerians have since imbibed the culture of showing respect only to those with white collar-jobs in the society. Most craftsmen and artisans who practice vocation are usually seen as school drop outs or 'never do well'. This attitude has discouraged a lot of young people from venturing into vocations. Nwolu-Elech cited in Okoye and Arimonu (2016) in his discussion on Nigeria value system stated that too much emphasis is placed on university qualifications not minding whether the holder possesses the required knowledge and skills. In the public service, graduates of vocational and technical education are often discriminated against and their career prospects limited and for this reason, secondary school learners and their parents prefer university education to vocational and technical education. Babalola (2019) laments that the B.Sc. and HND dichotomy is a major booby trap to vocational education development in Nigeria as many qualified students prefer university to polytechnic when seeking admission into higher institutions in Nigeria. Onyemah, Ikenga, Isibor and Ojogbane (2010) asserted that the societal perception of vocational education is disheartening. The Nigerian society views this noble programme as a programme for the physically challenged, indigent members of the society, school drop-outs and for 'no-do-well' students. This has led to a decline in enrollment in technical and vocational colleges, polytechnics and vocational education departments of tertiary institutions. As a result, the Nigerian society lacks skilled manpower in the productive sector.
- d. **Inadequate training facilities:** Most vocational schools lack the needed experience, skilled manpower and equipment to impart knowledge to students. This makes it impossible for students to gain the needed skill and knowledge in some basic practical applications of their course of study. Okoye and Arimonu (2016) observed that most vocational education departments in Nigeria lack laboratories, equipment and workshop space and this has made teaching and research in science and technology difficult.
- e. **Lack of integration between the industries and the vocational schools:** There is a weak linkage between educational institutions and the industries. The Federal Ministry of Education (2018) lamented that there is no forum to bring together the industries, the institutions of learning and other relevant stakeholders to exchange views and insights on issues such as the skills gap in the Nigerian educational system, difficulties students experience when seeking placement for industrial attachment, research and infrastructural issues. Recruitment strategies in most industries target experienced professionals as they hardly recruit fresh graduates. Most of these industries are using advanced technologies and production techniques which require a workforce with a high level of knowledge and skills.
- f. **Lack of functional policies and strategies:** Inadequate awareness of the importance of vocational education as a pivotal element in the education industry is one of the booby traps of vocational education in Nigeria (Alkhionbare, 2016). Guidance and counselling

system which will help students in proper career path is lacking due to absence of functional policies and strategies. Students may have little or no information about career paths and opportunities in the industrial sector of the economy due to absence of functional policies and strategies. Accurate data on skills requirement may not be readily available to students. Furthermore, there is no functional policy that regulates the traditional apprenticeship that equip youths with vocational skills. This give room for the exploitation of young people by their masters.

- g. Lack of qualified trainers:** The Federal Ministry of Education (2018) observed that there is dearth of academic staff with cognate industry and academic experience relevant for the training of students. Laboratory technologists and technicians at all level of education are inadequate, hindering information and communication technology (ICT) applications in teaching and learning. The Ministry further lamented that capacity building for teachers and other technical staff are inadequate. Institutional staff are unable to effectively use modern science equipment and other digital resources. Okoye and Arimonu (2016) clearly stated that about 580 lecturers from Nigeria tertiary institution have continue to migrate each year, particularly to Europe, America and other African countries and this has affected the quality of trainers of vocational education. They further stated that the salary and service benefits paid to technical educational teachers in Nigeria is about the lowest in the world and this has resulted in the acute shortage of suitably trained and qualified teachers or instructors.
- h. Curricula:** The Federal Ministry of Education (2018) observes that the curricula are outdated and not tailor to meet labour market requirements and national needs. This resulted in acute shortage of skill manpower and high rate of graduate unemployment. Ojimba cited in Okoye and Arimonu (2016) identified six problems associated with the current curricula in Nigeria. These are:
- i. The curricula are based on foreign model which has evolved under ideal conditions (staff, equipment, infrastructure and training opportunity) that are not easily duplicated in developing countries.
 - ii. Inadequate textbooks in trade subjects and most of the available textbook have foreign background and often illustrated with examples from outside the local environment.
 - iii. There is usually a shortage of highly competent indigenous teaching and support staff with sufficient practical experience of technology.
 - iv. Inadequate provision of humanities, social science, business management concepts and entrepreneurial skills development.
 - v. The teaching method follows the conventional method of transferring knowledge across through the lecture reading out to the students, who would take down notes.
 - vi. Some of the textbooks published locally lacked adequate modern and sufficient analysis on the subject matters.

The Roadmaps

The roadmaps here represent the ways forward, prospects and strategies of achieving sustainable development through vocational education in Nigeria. Some of these roadmaps are as follows:

- a. Constitution of forum to bring together industries, institutions of learning and other relevant stakeholders:** Federal Ministry of Education (2018) stated that one of

the roadmap of achieving sustainable development through vocational education is the constitution of forum to bring together industries, institutions of learning and other relevant stakeholders annually to exchange views and insights on issues such as the skills gap, industrial attachment, allowance, curricula, training, research, infrastructure, proper career placement and non-recruitment of young graduates by the industries. Involving the private sector, the employers of labour, training schools and other stakeholders can be the most effective way to develop the skills of the work force for industrial development.

- b. Implementation of policies and strategies aimed at repositioning vocational and technical education:** Ojimba cited in Okoye and Arimonu (2016) stated Nigeria should now begin to implement policies aimed at repositioning vocational and technical education for effective competition in the emerging global market. This is one of the roadmap for achieving sustainable development goals of quality education and decent work. The next level agenda of the government must include vocational education and training in their laudable programme for economic growth and sustainable development strategies that aimed at job creation, poverty reduction and youth empowerment. The traditional apprenticeship that equips youths with vocational skills needs to be strengthened with appropriate legislations. Government at all levels must formulate policies and develop strategies to give legal recognition to this traditional apprenticeship relationship between the young ones and their masters.
- c. Heavy investment in vocational education and training:** Federal Ministry of Education (2018) observes that strong political will on the part of government at all levels is needed for massive infrastructure to improve teaching and learning environment. On the part of the federal government, 16 new Federal Science and Technical Colleges (FSTCs) were established and equipped in addition to the existing 21 FSTCs to improve access and quality. Six (6) federal university of science and technology were established, one in each of the geo-political zone. The National Institute of Technology as a centre of excellence was established and facilities at the existing technical workshops in the 104 Federal Government Colleges and Federal Science Equipment Centre, Ijanikin, Lagos were upgraded. Okoye and Arimonu (2016) opined that Nigeria as a nation must invest heavily in education with particular attention given to vocational and technical education in order to achieve sustainable development.
- d. Regular capacity building for vocational education and training teachers, laboratory technicians and technologists:** One of the roadmap of achieving sustainable development is compulsory induction and mentoring programmes for newly recruited teachers, training and retraining of teaching staff, laboratory technicians and technologists on the safety, handling, usage and maintenance of modern equipment (Federal Ministry of Education 2018). Ikenna (2013) reported that the minister for education, Prof. Rukayat Rufaireiterated the Federal Government commitment to providing vocational education through skills acquisition and skills development programmes by licensed 86 Innovation Enterprising and Vocational Enterprising Institutions to award National Vocational Diploma (NVD).
- e. Sensitization of students and parents on the important of vocational education:** The Federal Ministry of Education (2018) developed a ministerial strategic plan to popularized vocational education through organization of regular career seminars to sensitize staff and students on job prospects and labour market issues, conducting

national outreach campaigns to make citizens aware of vocational education courses and training programmes and effective information dissemination on vocational education. The introduction of up-skilling programmes for all unemployed graduates during the National Youth Service Corps may be a right step in a right direction. This helps in instilling knowledge, skills and values that prepare graduates for future challenges. On the part of the learners, they must remember that entrepreneurship is a mindset and for dreams to be realized, conscious step must be taken.

- f. **Abolition of stigmatization and unfavourable employment policies against vocational education graduates.** Bablola (2019) observed that the dichotomy between HND and B.Sc. graduates is traceable to the period after the independence when the first Cookie Commission of Enquiry set up a salary differential between university graduates and their polytechnic counterparts. For instance, HND graduates are usually placed on entry Grade level 07 and do not proceed beyond GL 14 within the civil service while their university counterparts commence on Grade level 08 and proceed beyond GL 14. This dichotomy need to be revisited to address the missing link in Nigeria development policy as this will attract students and instructors to vocational education.

Conclusion

Vocational education which aims at empowering individuals for the future and providing the needed platform for the achievement of sustainable development goals of quality education and economic growth. Vocational education in Nigeria is characterized by obsolete equipment, dilapidated laboratories with expired chemical, inadequate textbooks and other instructional materials. Others are lack of knowledge on part of teachers, outdated curricula, poor funding, B.Sc. / HND dichotomy and poor teaching and learning environment. The roadmaps for vocational education include; government at all levels must have the political will to invest in massive infrastructure to improve teaching and learning environment. Capacity building for teachers, technologists and laboratory technicians must be sustained. Effective information dissemination on vocational education and expansion of facilities to improve enrolment must be encouraged. Regular curricula review and partnership and collaboration with the industries and the institution is required. Furthermore, government must take urgent steps to remove the dichotomy that exists between the university and technical institution graduates to attract more students to vocational education.

Recommendations

1. The Government of the Federal Republic of Nigeria should as a matter of urgency initiate policies that will convert all higher institutions to universities. The Polytechnics to be upgraded to University of Technology or Applied Sciences and Colleges of Education to be upgraded to University of Education. This will reduce pressure in the admission process into higher institutions and will also abolish the B.Sc./HND dichotomy and thereby produce the needed manpower for the industrial sector.
2. The traditional apprenticeship that equip youths with vocational skills in small and medium scale industries should be strength by the government through appropriate legislation. The government should be concerned about the wellbeing of the young people in this apprenticeship relationship between the young people and their masters.

3. There should be an integration between the industries and the vocational schools so that the transition from learning to work becomes easier. The ministry of education should work with the industry sector to identify emerging demand for sustainable related skills that will meet the demands of the economy. This can be done through internship and practicum and other partnership with the private sectors.
4. The government should allocate enough funds for vocational education. This will help in the purchase of new equipment that will enable the students acquire skills to become useful members of the society. The funds will also help in providing infrastructure, small grant for school project, in-service and pre-service professional development for teachers and school administrators.
5. Regular curriculum review to meet labour market requirements and national needs. Sustainable development issues such as application of Information and Communication Technology (ICT) in teaching and learning should be included in teachers' training and retraining programs to effectively enhance their skills and capacity.
6. Adequate enlightenments campaign on the part of the government and other stakeholders on the important of vocational education should be sustained to change the social perception of people on vocational education. The believed that vocational education is less successful careers than general secondary education or academic tertiary education should be discouraged.
7. The government must prioritize inclusive and sustainable growth for human capital development in its policies in line with the 2030 Agenda for sustainable development. This can be done through massive investment in vocational education instead of the present piecemeal or fragmented intervention by the government.
8. Parents should allow their children to have a free choice of their career, unnecessary pressure from parents on career choice should be avoided. However, these students must be guided by guidance counsellors in their schools.

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