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INTEGRATION OF APPRENTICESHIP SCHEME INTO THE NCE (TECHNICAL) CURRICULUM PROGRAMME TOWARDS SELF-RELIANCE IN THE 21ST CENTURY

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Abstract
The paper examined how to integrate apprenticeship scheme into the NCE (Technical) curriculum programme towards the positive realization of self-reliance by its graduates in the 21st Century. The paper exposed the failure of the current TVET programmes in creating employment and wealth creators against seekers of white collar jobs as well as mentioned the unemployment alarming rates amongst our youths. This paper also explains the efforts of the National Directorate on Employment with its seven folds of employment plans which in no doubt failed woefully. This paper is therefore of the view that apprenticeship scheme be integrated into the NCE (Technical) Programme through its curriculum reform drawing from the experiences of priority placed on apprenticeship scheme by developed countries who saw this as a bedrock for industrial and economic revolution some centuries ago. To this end, the paper recommended seven points that can lead to curriculum reforms providing for one full year practical Apprenticeship Scheme training in industries in the second year of the NCE programme while the first and third year be devoted to academic, teaching practice, project work and essential certifications.

Introduction

Currently, Nigeria is passing through a difficult time in her history clouded with political struggles, survival to sustain, economic instability, recession challenges just to mention a few. One of the issues that have being driving our economy to state of constant turbulence is the rising unemployment. An economy with constant increasing unemployment is certainly moving towards a suicidal end. Loss of jobs due to closure of businesses and factories is on the high side. Our economy is so bad that even various government agencies and parastatals are considering mass retrenchment and down-sizing of its work force as an alternate route to sustain governance but for the resistance of labour unionist and perhaps the adverse effect on the political fortune of the politicians who coincidentally are the managers of our economy, the case would have been a different story. Lately, slashing of salaries and paying in percentages is what most organizations do and this is a cardinal threat to the economy and the Nigerian nation as the increase in rate of unemployment is skyrocketing. The rising unemployment saga especially amongst the youth is alarming and needs speedy solution.

Nigeria population as at now stands at 203,452,505 (about 203.5) million people and its ranked 7th in the world (Central Intelligence Agency (CIA), World Fact Book, 2019). Of this, it is

alarming to state that 90.47 million constitutes her labour force nationwide (National Bureau of Statistics (NBS), 2019). Trading Economics (2018) revealed that youth unemployment rate is 36.50% in the third quarter of 2018 from the total labour force. Unemployment as stated by the International Labour Organization, cited by NBS (2019), is the proportion of those in labour forces actively looking for what to do for work to sustain themselves but could not find. Youth unemployment rate in the country rose to 25% from 17.5% in 2014 (Omoh, 2014). Statistics shows a quarterly rise in unemployment between 2015 and 2016. In 2015, between January – July, it rose from 11.7% to 14.9% while between January – December 2016, it increased drastically to 19.0% (Akinboade, 2016). It is obvious that epidemic problems like this are addressed via veritable education and educational policies. Atsumbe (2017) in his well-researched inaugural lecture echoed the fact that TVET delivery system needs to be well planned to train the skilled and entrepreneurial workforce that Africa needs to create wealth and emerge out of the poverty challenges it is in currently. It is a fact that National Policy on Education (2013) tried to refocus more emphasis on Science, Technology and Vocational Technical Education as a medium for rescuing Nigeria from Socio-Economic nightmare. While the necessary steps and distinctively clear road map for Science and Technology is understood with right attitude and emphasis placed on it since then, the same cannot be said of Vocational and Technical Education. Okonkwo & Okoh (2014) opines that it is either the Federal Government have not come to terms with the economic contribution of Vocational Technical Education to economic transformation or it is that they lack the political will to agree that it is a veritable tool to combat unemployment and poverty in our country – Nigeria. Robert (2017) narrated that when unemployment was seriously noticed among the graduates of tertiary institutions in Nigeria then, the government decided to include entrepreneurship education into the curricular of tertiary institutions so that students acquire entrepreneurship knowledge and skills, and become self-reliant after graduation instead of perpetually waiting for government jobs. But has this inclusion solved the rate of unemployment in our country?

Identified unemployed youths are graduates of one discipline or the other. If the unskilled is unemployed, that is even understood but the skilled graduates by virtue of their certification becomes unemployed; a lot of questions needs to be asked. Is it that the jobs are not there? Is their certification devoid of skills? Are the graduates not interested in using their skills? Does the graduates need further trainings to enhance their skills for usage? Shockingly, graduates of TVET are not left out in the army of the unemployed when they are actually supposed to take the major lead in self-employment and even creating employment for others. Nigeria has reached its peak of determining which academic programme is justifiable and most suitable to contribute and impact on employment, self-employment and self-reliance hence TVET was envisioned to be a key to unlock into industrial revolution and wealth creation.

Apprenticeship System: An Overview.

Apprenticeship dated back to when each society specialized in arts and crafts. Such include the popular Oyo carving, the Benin bronze smelting, the Kaduna Nok sculpturing are good examples of the traditional societies (Pelemo, 2007). Fafunwa (2004) stated that the various skills taught as part of educating the Nigerian child include weaving, sculpturing, blacksmithing, carving, farming, fishing, cattle-rearing, hair-plaiting, dress-making, catering, dyeing, tinkering, etc. Each child is apprenticed to a master craftsman who is skilled in a particular vocation and are found to be peculiar to certain families and consequently transferred to their offspring or apprentice to continue such trades even after the death of the master craftsman.

In the western world, apprenticeship system dated back as far as middle age. A master craftsman will engage the services of young people who normally begin at age ten to fifteen and will live with the master's craftsman household. Most apprentices aspires to become a master craftsman themselves after the successful completion of their engagement (Wikipedia, 2019). Most European countries took advantage of starting the apprenticeship system early hence gave way to their rapid industrialization and technological advancement. Most of the European governments even came up with favorable policies and regulations on the operation of the scheme. In the Nigeria case, it failed to do so hence our stunted socio-economic growth leading to alarming rate of unemployment. Let us take a glance at the approaches of apprenticeship schemes in selected countries of Europe and beyond –

In Germany: Germany practiced a dual system of education making it possible to learn work and equally attend formal education. Factually, it is impossible to secure gainful employment without completing the apprenticeship scheme. In 2004, the government signed a strong pledge with industrial unions that all companies except the smaller once must take on apprentices. All school leavers of 15 years are made to start an apprenticeship in their chosen profession until about 19 years old of age. They will spend 70% of their time in companies and 30% in school.

In Turkey: They practice apprenticeship scheme with a very high level of commitment and in three levels which are – Proper Stage (QRAK), Pre-Master Stage (KAIFA) and Master Stage (USTA). The government trains the QRAK.

In Pakistan: Apprenticeship training by law is regulated by both industries and TVET institutions for theoretical instructions. It is compulsory for organizations with up to fifty workers to take apprentices at its own cost. Recently, the Pakistan governments in its reform has brought apprenticeship into National Vocational Qualification framework certification after assessment are done jointly by Industry, Chamber of Commerce and Industry and Government through Apprenticeship Management Committee.

In Australia: Apprenticeship covers all industrial areas. They combine working hours and formal education which can either be part time or full time school-based. In fact, Group Training Organizations (GTO), equivalent of Industrial Training Fund (ITF) in Nigeria undertake regular visits and supervision of the programme.

In Britain: Apprenticeship system is the heart of the training in industries. Such training includes combination of academics and practice to correct skill shortages in traditionally skilled occupations and higher technician and engineering professions. Recently, government funded apprenticeship that is off-the-job training. They structured the programme into Intermediate, Advanced, Higher and Degree Apprenticeships.

In United States of America: New policy on Apprenticeship allows apprentice to work between 32 – 40 hours per week at a trade under a journeyman and spend additional 8 hours every other week in classroom academic training.

In Czech Republic: The apprenticeship scheme is highly interesting and looks promising. Apprentices spend about 30 – 60% of their time in companies and the rest in formal school system. They may work for two or three days a week in the company and spend two or three days at a vocational school per week.

From the foregoing, it is clear that apprenticeship system has a global phenomenon which served as a bedrock to present day technology and technological transformation globally. It is therefore imperative that government should encourage the TVET system including apprenticeship scheme which would no longer be a thinking thing theoretically but a doing thing practically as this will give Nigeria a place in the globally inclined technology seat especially in this 21st Century.

NDE Statistics on Apprenticeship

In an attempt to promote apprenticeship as a veritable way towards self-employment came into setting up in 1986 the National Directorate of Employment (NDE). To this end according to Okoye 2014, NDE went deeper into TVET with the following training models/strategies. To promote -

(a) Cognitive apprenticeship and skills acquisition training models.

(b) On the job training model for the under-employed graduates.

(c) Off the job training model for distance training course programmes.

NDE in an effort to justify their set objectives threw all its efforts on National Open Apprenticeship Training Scheme, School on Wheels Training Scheme, Rural Handicraft Training Scheme, Rural Agriculture Development Training Scheme, Advanced National Open Apprenticeship Scheme, Professional Pupilage Scheme, and Graduate Attachment Programme. The successful achievements of this NDE seven core mandate is open to guess because the high rate of unemployment is on the increase despite the successful executed and implementation of these NDE programmes. For instance, unemployment steadily rose from 7.9 million in 2007 to 18.2 million in 2013 (National Bureau of Statistics) and the then Minister of Finance and Chairman of the Economic Team in Nigeria – Kemi Adeosun puts employment figure at 37% (NBS, 2017). It is therefore an open secret that NDE programmes are not visible in convulsing the economy of our great country – Nigeria.

Technical Vocational Educaton and Training Curriculum: Philosophy and Objectives.

Eruanga (2000)describes Technical Vocational Education and Training as the education that provides students with knowledge and skills alongside with adequate practical experience in the field of professional technology for national development. It is a field that uses principles of Mathematics, Physics, Chemistry, Technical Drawing, etc. to improve production and job creation. It also draws skills from core subject areas through education programmes, workshops, seminars and conferences. Therefore, aims of TVET can be understood that the skills, knowledge, and attitudes acquired are expected to be transferred to the student's lives and others for the development of the nation.

The National Commission for Colleges of Education (NCCE) minimum standard for NCE – Technical Education (2012) stipulated the Philosophy of Technical Education on improving lives of the youth and society in general. It insist on the acquisition of knowledge, skills and competence which the society members determines the relevant strategies in achieving them. The NCE Technical programmes is divided into five major areas which are Automobile, Building, Electrical/Electronics, Metal and Wood Work Technology. The core objectives of TechnicalEducation includes, to –

1. 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.

2. provide trained manpower in the applied science, technology and commerce particularly at sub-professional level.

3. enable young men and women to have intelligent understanding of the increasing complexity of technology.

As individual acquires in-depth knowledge, skills and attitudes relevant to Technical Education, he or she is exposed to various courses of specialization that can help create jobs and become self-reliant. It is therefore noticeable that there are abundant opportunities embedded in the NCE (Technical) field. Therefore, various occupational choices available in Technical Education are as follows –

(a) Teaching:Teaching is an avenue to display and extend educational experiences to equip and develop citizenry. The primary objectives of producing professional trained technology teachers is to impart knowledge at primary and various technical vocational institutes across the country.

(b) Self-Employment: Technology graduates at NCE level may not necessarily engage in sourcing for white collar but can establish technical related businesses and also partner with others. Businesses that can be established in technical fields are numerous.

(c) Consultancy Services: Vast experiences of technical graduatesin the fields of Automobile, Building, Electrical/Electronics, Metalwork and Woodwork Technology allows them become consultant in the field of specialization. Such consultancy services attract reasonable fee that can earn income for a living.

(d) Organizing Workshops/Seminars: NDE are directed to train some selected technicians from each local government on technical servicing and repairs. Such workshops and seminars could be organized by graduates of technology either single handedly or collectively and such can yield income and also educate people and be of benefit to the entire nation at large.

(e) Vocational Training Centres: With the current economy hardship telling on Nigerians now, NCE Technical graduates can take advantage of this by recruiting people and training them on various occupational trades and skills embedded in technical fields. This will in turn create opportunity for many youths after requisite training from vocational centres to be self-reliant and become not only useful to themselves but to the country at large.

Integrating Apprenticeship Scheme into NCE (Technical) Curriculum

Any attempt to make students useful to themselves and the society must start from curriculum reform, this is because the 21st century graduates must occupy 21st century occupation. NCE Technical can be made to have full apprenticeship in industries and workshops for one year to enable them acquire and imbibe the art and culture of practical technology realistically. First year can be for full time academic studies, year two should be for apprenticeship while year three should be for teaching practice, project work and certification.

Courses not related to Technical Education should be removed from the curriculum to give room for purely technical related courses, and practically-oriented apprenticeship schemes which the students will need to grow to become authorities and successful in the field of

technology should be encouraged. Too many courses (theoretical) has induced TVET students to study vocational arts like liberal arts subjects basically for passing examinations that may channel them towards University Education (Tibi, 2012). Fundamental practically-oriented technical courses should be taken strictly while the apprenticeship scheme be inculcated within the NCE curriculum programme in line with that of the European countries explained above.

Conclusion

The rising unemployment cases in our country needs to be looked into.Atsumbe (2012) reported that it is clear that there is a spread and severe poverty among Nigerians, the World Bank classified Nigeria as one of the countries in sub-Saharan Africa where 65.6% of the population are described as poor, lacking access to basic amenities and unable to meet basic daily needs. Time is now over-ripped to take a closer look into the NCE Technical programme with a view for a drastic reform hence a suggested shift from cognitive theoretical courses overload to practically-oriented apprenticeship scheme and training that will create room for acquisition of21st century skills.

Recommendations

1. Government should promote awareness for emphasis on practical apprenticeship scheme in NCE Technicalprogrammes as this will help in removing lapses in TVET Curriculum.

2. Relevant agencies should create enabling environment for apprenticeship and accredit various technical institutions and vocational centres as obtainable in Germany, Austria, Switzerland and Pakistan.

3. The Apprenticeship Scheme should be prioritized because it has high tendency for self-employment. When there are various technical related businesses established; our economy will be better off than it is now as people will be gainfully employed.

4. Our NCE Technical curriculum should be urgently reviewed to provide for mandatory apprenticeship scheme clouded with in-depth practical trainings skills in industries relevant to Automobile, Building, Electrical/Electronics, Metalwork and Woodwork fields.

5. Governments, Banks, NGO's and technology related agencies should periodically provide soft loans for graduates of NCE Technical Education to set up own businesses and workshops after graduation.

6. A crystal clear certificate should be issued by each industry where students successfully undergo apprenticeship trainings and this certificate should be placed with high value such as being a collateral to access loans for the purpose of funding renovations and setting up of technical related workshop facilities.

7. Secondary School Education in Nigeria should be vocationalised such that every secondary school leavers is made to take relevant training in form of apprenticeship in a particular vocation. With this, aspiring NCE (Technical) students will have a foundational base making it easier for them to progress in knowledge and skills without fear or pressure.

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