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Human Resources in Successful Implementation of Vocational and Technology Education Benchmark in University

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Abstract— *The major thrust of this paper, was to critically examine the importance of human resources in strengthening the technological literary development programme in National Educational Policy especially in our universities. The objectives of vocational and technology education were looked into in line with the educational benchmark in university education, among other is to develop human capacity through training and retraining of technology education lecturers to meet the present technological reality. The challenges of vocational and technology education were analyzed one was mediocrity. It looked at concepts of human resources as the engine that helps drive the talent agenda and shape the culture to achieve the organization's vision and mission and important of human resources in vocational and technology education. Human resources development in vocational and technology education was found to be a driven force for technology development and economy sustainability of any nation. In conclusion, a comprehensive reform toward human resources in vocational and technology education in university education and act to uplift the programme is pertinent to a technological endeavour in the nation. While Government should set aside financial assistance for the technology lecturer's, training and retraining programme was also recommended.*

Keywords— *Human Resources, Technology and Vocational Education, Economy Sustainable, National Development.*

I. INTRODUCTION

In Nigeria, in recent time's emphases has been on improving vocational and technology education in university education, basically for self-reliance and reduce unemployment and poverty, as well as improve the economics sustainability. One of this programme is the introduction of Entrepreneurship Center virtually in all national universities to enables student acquired a skill before living the four-wall of the university. This promote vocational and technology education awareness. According to National Boards for Professional Teaching Standards (NBPTS) (2001) technology education is the use of knowledge, tools and skills to solve practical problems while Wikipedia, defined technology education as the study of technology in which students "learn about the process and knowledge related to technology". As a field of study, it covers the human ability to shape and to change the physical world to meets needs by manipulating materials and tools with techniques.

Therefore, technology education deals with training of technology personnel for the purpose of initiating, facilitating and implementing the technological development of a nation and to create the basic awareness of technological literacy to our youths. Vocational and technology education programme in Nigerian universities would have been improved, but due to some challenges, it has not attained desires compared to other countries of the world. Vocational and technology education as a skilled-based course; skill cannot be acquired in the absence of human resources. This is indispensable ingredient for self-reliance in knowledge.

Undoubtedly the importance of a skilled graduate cannot be over- emphasized in the life of a nation trying to meet the development standards of the world. Federal, state and local governments are making policies that will assist to actualize these, but it is one thing to make sound policies, and another thing to implement these policies effectively and efficiently without the right quality and quantity of human resources especially in a university education. According to Akinfolarin (2015) resources are vital tools all over the universe both human and non-human, the resources are dependent on each other for survival, and the most important of the resources are the human resources which cannot be underestimated. She further stressed, other resources are supportive factors, (money, machines and materials) that facilitates the functions of human resources. However, it is unfortunate and evident that this important ingredient that pertinent eluded in the business of teaching-learning process in vocational technology education in today's universities.

Nations economy demands a better educated and well oriented workforce than ever before due to the facts of jobs in this new economy which requires more complex knowledge and skills than the jobs of the past. In other to succeed in any business, common sense tells us that we need three things: people, process and products. We need people with the right skills and thinking to do their jobs properly, we need processes in place in other to realize and demonstrate our capabilities and we need the right products, or tools, to allow us to do our jobs properly.

Therefore, the principal theme of this paper is that investment in human resources in vocational and technology education to meet the educational benchmarks is the main key or stream to progress from one level of economic and technological development to another in any nation.

II. OBJECTIVE OF VOCATIONAL AND TECHNOLOGY EDUCATION IN NIGERIA AND CHALLENGES

The philosophy of education is to provide a united, strong and self-reliance nation and land of bright and full

opportunities for all citizen. In view of this, Nigeria has undergone series of educational reforms since 1960s till date for the purpose of human development and capacity building; this led to introduction of 6-3-3-4 system of education in 1981. The objective is to develop human capacity through technology education. According to National Policy on Education (2014) asserted that the objective of technology education is to provide train people who can apply scientific knowledge to solve environmental problem for convenience of man; and give exposure on professional studies in the technologies. Above assertion made National Universities Commission (2007) to opine that the programme is expected to make significant contribution to the Nigerian Education Industry; therefore the graduates are expected to; develop high level skill in the design, production, and improvisation of various instructional technology resources and acquire teaching skills and appropriate methods needed in imparting knowledge in their field of specializations. These were efforts made by government to sustain human resources with fast growing technological advancement and to eradicate or reduce unemployment and poverty. The effort was to assist the transition of young people from school to the world of work.

However, human resources have been one of the challenges of the reform project of educational benchmarks in technology education in Nigeria. There has not been a technology lecturers and training facility in Nigeria since the late 1970s and till now. No coordinated or systematic in-service upgrading of human resources competency has taken place for more than 30 years. According to National Universities Commission (NUC) (2007) the faculties of education in most universities, colleges of technology and colleges of education where industrial technology education is expected to be taught have very few qualified and committed lecturers to teach all the identified courses. This paucity of personnel in terms the need for adequately trained industrial technology lecturers for such position. Ministry of education who are policy maker on educational system, who even formulate educational benchmarks does not see it as its problem. The qualities of human resources of practically oriented vocational technology education were widely known.

In light of these revelations, there is need for the development of human resources in vocational technology education in other to revitalize and sustain the sector to meet the educational benchmarks, this agreed with Aneke (2010) who said this could be done through manpower training to reactivate the dormant human resources. This indicates investment on training is the main key to progress from one level of development to another. The twenty first century presents a radically different economy and society, which is likely to have profound implication on Vocational Technology Education (VTE). Shyamal (2013) opines that the technology and vocational education system must adapt to these key features which include Globalization and Sustainability, ICT Revolution, Emergence of Knowledge Society and Rapid Knowledge Obsolesces. This indicates with the introduction of Information Communication Technology (ICT) in the automotive, manufacturing, teaching and learning sector requires skills. Lecturers and learners need to adapt to the use of ICT, through systematic training and retraining process.

Without an adequately skilled and well-motivated workforce operate within sound human resources no meaningful education. No doubt vocational technology education system at every level depends solely on the human resources for execution of the programme. It is the lecturers who ultimately interpret and implements policy as represented in the school curriculum, which is designed to actualize educational goals (Omojunwa, 2007). Nwaka and Ofojebe (2010) asserted that lecturers are the critical resources for effective implementation and realization of educational policies and objectives at the practical level of classroom.

III. The Concept of Human Resources Development in Educational Benchmarks

Human resources development is the process of increasing the knowledge, the skills and the capacity of all the people in a society (Fredrick, 1964 in Sriyen 1997). Human Resources development (HRD) is a wide range of subjects, for the purpose of this paper, the term human resources development is used to cover only vocational and technology education lecturers and training required, as they are more directly related to the mandate of training individuals in the technological society of today.

A country which does not gear from now to learning will find it difficult to progress technologically beyond their present level of both economic, social and technology development. Hence, human resource is central to achieving institutional people goals and objective. According to AON Hewitt (2012) human resource is the engine that helps drive the talent agenda and shape the culture to achieve the organization's vision and mission. This could be said that to vocational and technology education without qualified manpower to train or impart the requisite knowledge or skill needed according to the educational benchmarks, it will surely affect the sustainable national development. Osuala (2004) argued that the manpower developments of people who are healthy and with sufficient knowledge and skills to perform various functions are needed in the society. In the same vein, Osuala, Onah (2008) expressed that human resources are the key to rapid socio-economic development and efficient service delivery. Mba (2008) noted that human resources mean people in a country, organization or individual sector who can be used to increase and accrue wealth to develop the economy of the country. The above assertion also agreed with National Board for professional Teaching Standards (NBTS) (2001) who notes that technology education lecturer's direct student learning to broad thinking about system rather than to the development of work skills specific to a single industry. This can be concluded that the wealth, sustainable economic development and technological development of any nation can directly measures by its human resources not the educational benchmarks.

Today, many countries are described as developed, due to human resources and technological feats. Human resources are production of people with sufficient skills and knowledge that can perform various functions needed in the society. For a

nation to develop individual, the society must be empowered to enable them sustain and live better life through a resources personnel.

IV. Human Resources in Educational Benchmarks for Vocational and Technology Education

Vocational Technology Education is a process of getting people ready and keeping them ready for the types of services needed by the society (Abubakar, Abdullahi, Ossai, Owolabi and Leonard, 2014). In other to produce these ones, human resources personnel should be on ground to train and impart the useful knowledge to enable them meet the yearning of the society. Employability skill cannot come without the requirements set of personal attributes. With the increasing demand from the industrial sector, and a similar desire for skills and experiences graduates wish to offer more professional practice skills, the high need of human resources become imperative.

In today's technological advancement, professional skills are considered extremely important by both employees as well as the graduates of vocational technology education. The technological advancement in the world all over, draw the world more together, technological preparedness become increasingly important. The Nigerian nation considered technology education programme as the one meant for low level brilliant and less privileged. But attention has been shifted towards skill acquisitions courses in Nigerian universities which are capable of making the adults and youths self-reliant due to technological innovative. Still government and universities administration has not come to appreciate the contributions of technology education programme which provides avenues for discovering individual potential for work in terms of human resources. In South-West Nigeria that comprises six states and about forty universities both public and private, as at 2016 only four (4) universities offered vocational and technical education compare with the numbers of universities both public and private in those states.

High human resources are the most important factor in student's education. Vocational and Technology Education is skilled-based programme which largely depends on the quality and competences of teachers to impart knowledge and skills in these areas of professional career. Osarenren and Irabor (2012) opined that no educational system rises above the quality of her lecturers anywhere in the world. This implies that lecturer quality continue to rank as the most predictor of students achievement. The bedrock of adequate foundation and training of needed manpower in a country irrespective of area of specialization is a function of the sound products from the lecturers' education in that country (Osarenren and Irabor, 2012). The training of vocational technology lecturers at Nigerian universities has not received any impressive support by the university administration when compared with the number of universities offered these courses. Those universities that offered the courses have no human resources to enhance the programme. Ohakwe (1999) lamented that qualitative education requires quality resources. This undermined inadequacy of human resources in Vocational and Technology Education in our university institutions. Igborgbor (2000) who observed that in a three-day workshop organized by Education Tax Fund (ETF) to deliberate on Nigerian education future, virtually all observation made were related to the future of human and material resources available to cope with the demands of the educational process. Ahmed (2010) stated that the world is advancing in technology and globalization and as such, there is need to invest in human resources to meet up with the new development. The changing role of lecturers therefore must be parallel with the changing contents, knowledge structure and skills components envisaged from the above scenario. (UNESCO, IICBA, 2011). Technological development globally generates new ideas and demands new structure and system require new skills and knowledge. Human resources in vocational technology education are those that training, educating and producing people who are useful in the society. Such ones when empowered with the necessary skills will be healthy, skillful, knowledgeable and full of initiative.

American Institute of Research (AIR) (2013) argued that today's economy demands a better educated workforce than ever before, and jobs in this new economy regime more complex knowledge and skills than the jobs of the past. The above ascertain that knowledge happens quickly in technology, as such lecturer need to expand their horizon of knowledge and processes along with improved technology in other to build their ever expanding and revised knowledge on processes.

Indeed, many nations live in abject poverty not because of lack of natural resources, but inability to develop enough human resources to tap and manage their technological potentials. A Ghanaian diplomat has once said that "When the human being is well trained, he will be in a better position to exploit the natural resources for the growth and development of the nation" (Kwesi Ado, 2001 in Wodi, 2002). Aneke (2010) said education is the answer to servitude. The world is digitalized, students used the internet, social networking outside the school, they also need such parallel level of technology opportunity in their academic lives. Most machines and equipment used now in technology workshop are computerized based operational system which required skill. In Nigeria, we cannot produce, neither repair since most of our university do not have the human resources that will equip the graduates with desirable skills and knowledge.

According to Gidado (1995) the major problems of teacher education in Nigeria is that the teachers that are being trained are not sufficiently prepared to meet the complex demand of the teaching profession in Nigerian schools. This implies you cannot give what you don't have; teachers can only teach what they know.

The challenges posed by the contemporary technology need the attention of curriculum planner to identify the possible ways of curing the ailment. Tanner and Tanner (2002) argued that the success of a curriculum largely depends on lecturers handling it. In as much as vocational technology education is skilled-based; lecturer's preparation is more important and critical. Ulinfu (1990) said in skill-based courses, lecturer's preparation is more compounded because of the practical skills and competencies that must be imparted.

This assertion agreed with Uwaifo and Uwaifo (2009) that technology lecturers must be highly trained and acquires enough skills in other to make them capable of communicating their skills to others effectively.

For technology education to meet the innovation trends of the time, quality technology professional/lecturers should be recruited. Manifred and Jennifer (2004) argued that professionals have all the necessary skills, abilities and capabilities to carry out the programme. The use of professionals, help in keeping pace with the rapid changes in the field of technology. But sorry to say, that the administration of vocational technology education has been taking over by mediocre.

V. CONCLUSION

This paper has tried to discuss the need for human resources in vocational and technology education to meet the educational benchmarks in our universities for sustainable national development. It is a fact that many countries are described as developed, not because of their natural resources but due to their human resources/capacity and technological feats. Production of graduates with sufficient skills and knowledge that can perform various functions needed in the society is not negotiable. Manpower input could only be made when graduates are well trained through various positive means either non-formal education or formal education; and vocational and technology education which were considered necessary for the national technological development. A comprehensive reform toward human resources in vocational and technology education in university education and act to uplift the programme is pertinent to a technological endeavour and economy sustainability in the country.

VI. RECOMMENDATIONS

- ✓ Government should set aside financial assistance for the vocational technology lecturer's training and retraining programme.
- ✓ More universities should introduce vocational and technology education courses.
- ✓ Government should give legislative backing to compulsory vocational technology and education programme in universities.
- ✓ The government of Nigeria should provide computerized digital libraries for our vocational and technology education lecturers to ensure that they are computer literate.
- ✓ The government should train more technology education lecturers.
- ✓ Administration of vocational technology education should be left on the hands of professional

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