

TRANSFORMING NIGERIA THROUGH TECHNICAL AND
VOCATIONAL EDUCATION RESEARCH FOR NATIONAL
GROWTH AND HIGHER PRODUCTIVITY

BY

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Abstract

The paper examines the urgent need for technical and vocational education teachers to conduct credible research for national growth and higher productivity for sustainable development in Nigeria. The paper also identifies and analyzes the position of research in technical and vocational education in Nigeria that research must be placed at the centre of the agenda of Nigeria if the goals of this great country (Nigeria) having poverty, high level of unemployment, hunger being eliminated and the actualisation of vision 20; 2020 and other laudable transformation programmes are to be actualised. The paper revealed the problems hampering technical and vocational education research in Nigeria to meet global challenges as poor linkages of research institutions to end users in the productive sectors, dilapidated infrastructures, obsolete machines, and equipment and learning resources. The paper draws conclusion, with suggestions/recommendations on the need for government to review in line with global standard and implement the 21century master plan on technical and vocational education to the later. Finally, the National University Commission (NUC) National Board for Technical Education (NBTE) and National Commission for Colleges of Education (NCCE) should ensure adequate funding to ensure high level of quality research until Nigeria is sure of that poverty and unemployment rate are eradicated.

Keywords; Technical and Vocational education, Research, National Growth, Higher productivity

Introduction

The challenges facing all governments of developing countries including Nigeria, is that of reducing poverty and minimizing the income disparities between the rich and poor that exist in their respective societies. Although, successive Government in Nigeria might have demonstrated their commitment at improving the socio-economic well-being of the Nigerian citizens through various efforts perhaps, the most pragmatic approach ever taken by any administration at transforming the socio-economic status of Nigerians is the conducting of research in technical and vocational education for better performance and higher productivity of the Nigerian economy.

Olaitan (2005) explain that technical and vocational education research is a strategy for planning and national development as it involves the ways and means of making use of available human and material resources intelligently and skilfully to arrive at the vision of the Nation within a stipulated period of time without the people of the Nation having the feeling of negligence, deprivation of rights and intellectual prosperity, feeling of extreme poverty, insecurity and other hardship, because of government implementation strategies towards her vision and the involvement of every body to participate in it. Ukuma (2009) attested to the above when he states that, serious research in technical and vocational education can determine the future goals or vision which Nigeria is aspiring towards for the comfort and benefit of her citizens to help Nigerian citizens compete competitively in any field of human endeavour with people or citizens of other developed countries of the world without a feeling of inferiority, ignorance, low technology, corruption and understanding. Ukuma explain further that, must developed and developing countries at the global level have started vital reforms such as sponsoring technical and vocational education teachers to conduct research for restructuring technical and vocational education curriculum and equipping their research institutes with necessary facilities and equipment for effective research for their scientific and technological development. Nworgu (1991) confirmed this when he stated that, nations that were early in realising the indispensability of scientific research to overall National Development and accorded it the necessary priority it deserves are today reaping bountiful fruits of their foresight. The Nations, now regarded as scientifically and technologically advanced, virtually

rule the world and are steadily marching on to control the outer space. On the other hand, nations that were late in realising the indispensability of scientific research to overall National Development and/or failed to accord it the necessary priority it deserves are the ones classified as either “underdeveloped or developing” these Nations are still battling with the most elementary human problems of food, water, shelter, poverty, political, social and economic instability. This illustrates the potency of scientific and technological research in the context of overall National Development.

Research in technical and vocational education in Nigeria must be placed at the centre of the agenda of Nigeria if the goals of this great country (Nigeria) having poverty, high level of unemployment, hunger being eliminated and the actualisation of vision 20:2020 and other laudable transformation programmes are to be actualised. Technical and vocational education is defined by the National Policy on Education (2004) as a comprehensive term refers to as those aspects of 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. Technical and vocational education is further understood to be;

- (a) An integral part of general education
- (b) A means of preparing for occupational fields and for effective participation in the world of work.
- (c) An aspect of life long learning and a preparation for responsible citizenship.
- (d) An instrument for promoting environmentally sound sustainable development.
- (e) A method of alleviating poverty.

Similarly, Ogwo and Oranu (2006) stated that, contemporaneously, the terms technical and vocational education are used jointly or synonymously to mean education geared towards skills acquisition for gainful employment. Okoro (1999) in his opinion define technical education as a post-secondary vocational training programme whose major purpose is the production of technicians. Okoro explain further that, technical education can be distinguished from other vocational education programmes because more mathematics and science are required in the training programme. Graduates of technical education programmes usually bridge the gap between the professional engineer and the craftsman. While vocational education is any form of education whose primary purpose is to prepare persons for employment in recognised occupations. Vocational education is usually viewed as consisting of six major areas trade and industrial education, business and office education, agricultural education home economics education, distributive education, and health occupations education. Technical and vocational education could be define as that type of education which is design to equips citizens with the right or with current and globally accepted skills, knowledge and techniques to be able to work effectively, diligently and be able to live and contribute to the transformation and sustainability of a society.

National Growth

According to Jhingan (2006) National growth is a gradual and steady change in the long run which comes about by a gradual increase in the rate of savings and population. Growth may well involve not only more output derived from greater amount of inputs but also greater efficiency i.e. an increase in output per unit of input. Similarly, Perkins, Radelet, Snodgrass, Gillis and Rocmer (2001) defined national growth as a key element that the people of the country must be major participants in the process that brought about these changes in structure foreigners can be and inevitably are involved as will but they cannot be the whole story. Participation in the enjoyment of

the benefits of development as well as the production of these benefits, if national growth benefits only a tiny, wealthy minority, whether domestic or foreign, it is not national growth.

National growth could therefore, be defined as the rise in national or per capital income and product. If the production of goods and services in a country rises by whatever means one can speak of that rises as national growth. Furthermore, national growth of Nigeria hinges on non-corruption, eradication of violence, crime rate, maintenance of law and order protection of the people or citizens and properties.

Higher Productivity

According to Onyike (1982) stated that the developing countries suffer from an acute shortage of scientist and engineers suitably trained for solving the problems of the industrial sector. Experienced staff are difficult to recruit and hard to retain. Onyike explain further that, universities programmes are seldom directed towards preparation of graduates qualified for and interested in the application of technology to industry's problems and to the creation of new commercial processes. There is no collaboration between the universities and colleges of technology and research institutes mutually attractive because of shared facilities staff and the productive of graduates at turned to the national need and who are also potential employed for the institutes. Productivity therefore, could be define as the rate at which technical and vocational education teachers and students and other Nigerian citizens acquire globally accepted employable skills and techniques and effectively used the skills and techniques for improvement of teaching and learning, and rendering of other laudable needed service for rapid socio-economic development.

Urgent need for Vocational and Technical Education Teachers to Conduct Credible Research for National growth and Higher Productivity

It is very important for Nigeria Vocational and Technical Education Teachers to have an understanding of the elements or the rudiments of conducting research to be able to read and interpret intelligently data, and the write-ups in Vocational and Technical Education journals, textbooks, etc. Vocational and Technical Education Teachers are charged with the responsibility to implement the research findings being conducted in the field. Furthermore, Vocational and Technical Education Teachers are in a good position to study the effect of new materials, methodology and similar innovations upon the learning process. Yet no matter how research minded he/she might be he/she is apt to miss an opportunity for worthwhile base investigation if he/she is not aware of the research potential of the situation. Even when national and international research conferences or seminars are organised, most Vocational and Technical Education Teachers in Nigeria institutions of learning do not attend such conferences, so they do not take into account some of the crucial issues that are fundamental for the development of Vocational and Technical Education to meet global challenges.

Vocational and Technical Education instruction/teaching and learning cannot be effectively and efficiently unless the Vocational and Technical Education Lecturers/Teachers do the improving. Undergraduates, graduates and universities dons should organised research in Vocational and Technical Education, because the field of Vocational and Technical Education is becoming more complex, more efficient methods of teaching/learning must be discovered. It will not be out of place if e-learning is applied in the field of Vocational and Technical Education.

Lathrop (2001), attested that;

Research must have a qualitative as well as quantitative dimension, however, and here much remains to be done. By quality research we mean research, which is planned and carried out under conditions, which are educationally

and experimentally sound. The matter of quality is primarily a question of research design. It logically follows, then that the reporting of the findings and conclusions of a study is really incomplete unless accompanied by an explicit and perhaps even elaborate discussion of the method and frame of reference which governed the study. Many times in journal reports, we see findings and claims concerning a variety of students outcomes attributed to certain variables (content or teacher). These frequently fail to indicate the strategies of attach and technique of investigation utilised in arriving at such findings. It is practically impossible to assess the end product of research when there is no statement about his methodological approach used.

If Nigeria is to achieve vision 20:2020 a lot still needs to be done in the area of research in Vocational and Technical Education. Universities, polytechnics, colleges of educations and other tertiary institutions must assume the responsibility for providing Vocational and Technical Education lecturers/Teachers with the necessary background, understanding and tools essentially for carrying out quality research. It is imperative that, basic technology, Information and Communication Technology (ICT), creative thinking, entrepreneurial skills, and positive social and cultural values all these are urgently needed if we are to advance and to meet global standard in the fast growing technological world in which we live. This could be confirmed by Obioma (2007) when he stated that;

The Nigerian Education Research and Development Council (NERDC) has developed a school curriculum that will not only facilitate the attainment of the core elements of National Economic Empowerment and Development Strategy (NEEDS) but also the goals of Education For All (EFA) and Millennium Development Goals (MDGS).

Vocational and Technical Education Teachers should be eager for new ideas, skills, techniques, teaching and learning methods such as mentoring and other new innovations which should be provided by Nigerian tertiary institutions. It is also pertinent to note that, Vocational and Technical Education Teachers should not forget their responsibility of teaching students the employability skills and techniques needed to be self-reliant. Non-periodic or inadequate research in Vocational and Technical Education do not help teachers to evaluate specific facets of their discipline in order to identify the rate and degree of progress. Borhn, (2002), confirmed the non-periodic or inadequate research when he stated that;

The situation with regard to Vocational and Technical Education research work as a continuing activity by Vocational and Technical Education Teachers is a shocking one. It represents one of the darkest blots on the reputation of the Vocational and Technical Education profession.

If Nigeria starts to give serious attention to Vocational and Technical Education research like developed countries, for instance Britain, Germany, Canada and United states of America. Vocational and Technical Education will stop to wallow in one form or status or crisis which had led to Nigeria backwardness in science and technology education after 55 years of independence. Rupert, (2003) asserted that;

Any field quickly can become moribund if it lacks adequate research. Vocational and Technical Education is no exception. The speed with which danger becomes imminent is particularly great if allied or competitive fields are developing rapidly.

There is a stratospheric changes rapidly occurring in science, technology, economy, politics, number of courses in the universities and the numbers of new universities, students enrolment, etc.

We need to research and designed so as to cope with these numerous changes for instance, manpower development, acquisition of law materials, for manufacturing development or designed to effect global curriculum. All of these good changes and programmes plus many more have an impact upon Vocational and Technical Education in Nigeria today.

Nigeria Vocational and Technical Education will not develop unless, an even stronger research programmes are mounted or put in place. Vocational and Technical Education will remain static, less related to reality, and less effective in comparison to competitive programmes which are designed to meet needs of the global society which could and perhaps should be met by Vocational and Technical Education. Researching in Vocational and Technical Education will benefits the country and serves as a catalyst for economic, political and technological development and provides a strong based for the future to meet the challenges of globalisation. This is the best way to prepare Nigerian youths for leadership positions in the future which will enhance our national development and sustainability.

Problems Hampering Vocational and Technical Education Research in Nigeria to Meet Global Challenges

Vocational and Technical Education did not play the expected critical roles in accelerating economic growth of Nigeria. Vocational and Technical Education have abysmally failed to create the software of creative ideas and research findings which should be transformed to practical value for economic development of Nigeria to meet global challenges. Rupert, (2004), confirms that;

It appears that even today many people in our field do not know what Vocational and Technical Education goals are, so it is difficult to plan research and implement programmes, which can be goal-oriented. Many critics of academic bemoan the flight from teaching and publish or perish as an indication of gross over-emphasis on research activities in Vocational and Technical Education. Our typical academic lock step is a career progression, based upon seniority, from wood shop teacher to drafting teacher, to teacher of professional subjects. Until at last, the senior professor becomes the department head and hence “custodian of the keys” there is no reward for research so research does not get done also shortage of trained personnel in Vocational and Technical Education.

Today, the problems hampering Vocational and Technical Education research in Nigeria to meet global challenges are, poor linkages of research institutions to end users in the productive sectors, failure to commercialise even the modest inventions by research institutes, obsolete and dilapidated Vocational and Technical Education infrastructures, learning resources, machines, equipment and lack of qualified vocational and technical education teachers which have reduced the quality of our graduates and failure to disseminate information on the services and the pretence of research and development institutions to potential users.

Nworgu (1999) confirmed the above negative attitude towards research in Nigeria when he enumerated some of the problems of research in developing countries as;

Inadequate funding of research projects, lack of necessary equipment, facilities and materials, poor communication network, unattractive working conditions for research workers, the publish or perish syndrome, lack of a record-keeping culture and attitude of the government and society towards research in Nigeria.

Similarly, Achebe (1998), asserted that;

The Nigerian problems are the unwillingness or inability of its leaders to rise to the responsibility to the challenge of personal example which is the hallmarks of true leadership.

Another problem, which is worth mentioning, is the failure to utilize personnel from related disciplines such as economic, business management, economic history etc. Vocational and Technical Education research should employ such personnel or experts as consultants to ensure that Vocational and Technical Education instructions are utilised and research is globally recognised as a vehicle for sustaining competitiveness in international market and an instrument for social, political, scientific, technological and economic reconstruction or reform in Nigeria.

Suggestions/Recommendations

The national master plan for Technical and Vocational Education (TVE) development in Nigeria in the 21st century with the blue print for the decade 2001-2010 which was not implemented as stated in the master plan should be reviewed in line with global standard and implemented to the later.

Research in technical and vocational education should remain the responsibility of the National Universities Commissions (NUC), National Commission for Colleges of Education (NCCE) and National Board for Technical Education (NBTE) the above regulatory bodies should be practically empowered to coordinate all programmes of technical and vocational education in all sectors of education. In this respect, NUC, NBTE and NCCE should formulate an acceptable research agenda in technical and vocational education and government should ensure adequate funding to ensure high level of quality research until Nigeria is sure that poverty and unemployment rate are eradicated.

Conclusion

There are serious and wide gaps that exist in Nigeria between technical and vocational institutions modern industries and the world of work places. The wide gap can only be closed through research and development in technical and vocational education institutions or sub-sector. This would enable technical and vocational education teachers/lecturers know what is happening in the industries and the world of work place. Conducting credible and reliable research in technical and vocational education would help teachers/lecturers on how to prepare or impart their students with the employable skills, knowledge and techniques required for direct access to the labour market. Employable skills and techniques, problems solving are the serious skills needed or lacking in technical and vocational education graduates in Nigeria today. Furthermore, technical and vocational education programmes would continuously to meet changing industrial requirements and the entire work place because of the new products and courses that are been introduced such as mechatronics and autotronics respectively.

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