

**REALIZATION OF NATIONAL TRANSFORMATION THROUGH EFFECTIVE TECHNOLOGY
AND VOCATIONAL EDUCATION TEACHER TRAINING**

BY

OGWA Christopher Eze, Ph.D
Department of Technology and Vocational Education
Faculty of Education
Ebonyi State University
Abakaliki

Abstract

This paper wishes to determine the relevance of educational enterprise in relation to National Transformation. Teachers are the focal points in making educational system meaningful for national transformation. No education enterprise will be better than the teachers. This paper is of the view that, to reposition technology and vocational education, teacher Training leading to national economic transformation; the curriculum of the teachers should be re-vitalized and the practical content expanded, so that more and reliable knowledge and skills will be acquired by teachers who will subsequently teach the youth. Government policies should encourage more provision of technology and vocational education equipment. Students' Industrial Work Experience Scheme should be made more functional in raising the interest of technical teachers. Remuneration in approving technology and vocational education teachers to participate in workshop, and conferences will also enhance the quality of the teachers and improve further skill and knowledge acquisition for effective teaching of technology and Vocational Education students at various institutions for national transformation. All these will cause a paradigm shift in Technology and Vocational Education, and reposition it better, especially in this 21st century, where graduates are expected to demonstrate saleable skills in the world of work as dynamic process for national transformation in Nigeria.

Introduction

Technology teacher training is a very vital enterprise that needs effective attention of concerned stake holders. It takes an effective teacher to impart a saleable skill to learners. No educational system can be better than the quality of teachers. Inadequate teacher training could hamper National Economic transformation. This paper discussed some impediments facing Technology and Vocational Education and suggested some measures to ameliorate these problems to enable students being served to acquire saleable skills to usher in national economic transformation. Some of the problems that constitute a set back to Technology and Vocational Education teacher preparation were also discussed.

The FRN (2004) in the new National Policy of education, described Vocational and Technical education as those aspects of the educational process involving, tradition 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. Some of the objectives of this type of education include to:

- Produce semi-skilled and technical manpower necessary to restore, revitalize, energize, operate and sustain the National economy and substantially, reduce unemployment.

- Serve as a means of national defence against poverty brought about by lack of job skills.
- Reform the content of technical and Vocational education to make it more responsive to the socio-economic needs of the country;
- Harmonize and inter-relate with industry and the labour market in terms of resources for training as well as production standards;
- Raise and sustain a generation of job creators rather than job seekers,
- Enhance access to technical and Vocational Education system;
- Ensure equity of access, participation and completion rates.

These laudable objectives cannot be achieved without effective teacher preparation. Abdullahi (2009) pointed out the problems of this sector to include:

- Poor infrastructural facilities in schools at all levels;
- Poor number and quality of teachers, particularly at primary and post-primary levels;
- Poor quality products from schools at all levels;
- Inconsistent education policy and poor implementation of policies; and
- Loss of confidence by the general public in the sector. All these factors negate National Economic Transformation.

Adequately trained teachers can deliver quality skill in learners. Okwelle (2006) pointed

out that skill training provided by Technology and Vocational Education enhances employment and productivity as well as sustains competitiveness in the global economy leading to economic transformation.

Training in Technology and Vocational Education in Nigeria

Effective training of students to acquire requisite skills in technology and vocational education for national economic transformation is profound and basic. Sahau (1999) pointed out that technology and vocational education played a major function for the ultimate supply of technology and vocational consumer education in the civilized world. It is an education for business; for the improvement of the societal economy. Technology and vocational education is therefore that part of educational programme that provides the knowledge, skills, understanding and attitudes needed to perform in the business world as a producer of goods and services required in the society.

The present Federal Government has emphasized her readiness to invest in technology and vocational education. This cannot yield the desired results if aggressive training programme is not pursued to equip the teachers in this sector. The present situation where the technical and vocational education is taught to students at Nigerian certificate of education level and general study levels at different institutions cannot provide the needed skills that would enable youths perform in self-employment or contributing meaningful skill in the society. A deliberate effort should therefore be made to expand the training institutions and equip such institution for better skill acquisition and motivation of technical and vocational teacher for national transformation.

Inadequate Curriculum

Curriculum adequacy in technology and vocational education is imperative to impact necessary knowledge and skills for national transformation. The inability of the present Technology and Vocational Education to meet the curriculum needs of students is one of the major handicaps to the effective skill acquisition.

Aghenta (2010) after analysis of the wide range of courses offered in our technical colleges, concluded that some courses provided skills that were not in line with current labour market demands? This accounts for the low level of production skills and poor jobs performance by technical college graduates leading to mass self-unemployment today. This scenario negates national transformation. Unless the Technology and Vocational teachers are adequately trained, skill teaching will be a mirage.

The FRN (2004) in the New National Policy on Education specified that all teachers in Educational Institutions shall be professionally

trained and that teacher education programme shall be structured to equip teachers for effective performance of their duties. It further stated that teacher education shall continue to take cognizance of changes in methodology and in the curriculum and that teachers shall be regularly exposed to innovations in their profession. The goals of effective teacher Education shall be to:

- Produce highly motivated conscientious and efficient classroom teachers for all levels of our educational system.
- Encourage further, the spirit of enquiry and creativity in teachers.
- Help teachers to fit into social life of the community and the society at large and enhance their commitment to national goals.
- Provide teachers with the intellectual and professional background adequate enough for their assignment and make them adaptable to changing situation.
- Enhance teachers' commitment to the teaching profession.

These provisions are expected to be reached by all teachers to enable them perform optimally, both in the classroom and in the workshop to raise killed youth for national transformation. Okoro (2006) basing his argument on Prosser stated that the instructors of any work-based educational enterprise shall be a master of the content he undertakes to teach. Nneji (2008) pointed out that teacher education should run for five years, where four years will be devoted to technical content, and one year devoted to pedagogical content. This option is relevant, because the present curriculum arrangement where the technological and pedagogical contents, run concurrently, do not foster students' mastery of relevant skills.

Ogoro (2000) examined the content of the technology teacher education curriculum and concluded that educational system should be restructured to produce teachers who are competent in their trade of specialization and well versed in principles of education and methodology. It is imperative that if the curriculum content of Technology and Vocational education is re-modeled to incorporate more practical content, the teachers will be more proficient after their training to further train students for economic transformation.

Government Neglect - Lack of Specific Philosophy

The FGN (2004) in the National Policy on education pointed out the following goals of Technical and Vocational Education to include:

- To provide trained man power in applied science and Technology and business, particularly at craft and advanced and Technical levels.

- To provide the technical knowledge and vocational skills necessary for agriculture, commercial, technological and economic development.
- To give training and impart the necessary skills to individuals who shall be self-reliant economically.

However, the Government failed to specifically state any philosophy guiding the curriculum of Technology and Vocational Education. Odenun (1994) observed that, there is no specific philosophy guiding the curriculum of Technology and Vocational Education in Nigeria. The Philosophy for the entire educational system is global and does not provide unique directional guide line for Technology and Vocational Education.

Adeogun (2008) pointed out that the governments of Nigeria at various levels and at various times has made frantic efforts to meet the above stated goals through policies, legislations, workshops, reviews, and seminar aggressive findings. These efforts are yet to achieve the desired goals of Technology and vocational education teacher preparation in Nigeria. Government need to channel more funds to Technology and Vocational Education. Odenun (1994) posited that sufficient fund has not been channeled to Vocational Technical Education, which is the major problem plaguing the system. This phenomenon is not in line with one of the basic philosophies of vocational education, which suggested that a minimum standard of funding must be attained before Vocational education should be attempted. The funding of Technology and vocational education in Nigeria is almost, essentially on the shoulders of Government. Adequate machines and materials should be provided to enable institutions effectively prepare teachers in Technology and Vocational Education to enable them effectively train our youth for national transformation.

Remuneration of Technology and Vocational Education Teachers

Adequate remuneration of Technology and vocational education teachers would undoubtedly raise their interest. Hitherto, interest of the youth in technical education is low. Mandojemu (2001). Pointed that lack of interest in technical Education by Youth in Nigeria through continued and considerable low enrollment and acute scarcity of candidates for most of the available courses in technical colleges leaves much to be desired and requires urgent attention to redress. When technical teachers are motivated through adequate remuneration, they will consequently motivate students to achieve higher in technology and Vocational Education. Okeke (2009) pointed out that curiosity and interest promote teaching and learning efficiency, and make for the realization of the aims and objectives

of an educational system, especially technology and vocational education.

It is thus clear that the need to sustain the interest of technology N and vocational teacher preparation cannot be overemphasized. Uzoagulu (1995) stated that interest leads to high productivity which in turn leads one to job satisfaction, and a satisfied worker stays long on the job. When the teacher is satisfied and stays long in the service, he gains relevant experiences and imparts more saleable skills to his students. Technology and Vocational Education teachers can also be motivated by granting them the opportunity and sponsorship to attend workshops, seminars and conferences, to update their skills. This is because Technology is dynamic. Toby (1995) agreed to the above assertion when he stated that technology itself is dynamic, which means that skills acquired could be obsolete in between two to three years. So when technology and vocational teachers are not retained, enhancement of knowledge and skill would not be possible.

Teachers' Industrial work Experience need for Improvement

For effective skill delivery, teachers industrial work experience should be effective. Nneji (2008) stated that the essence of industrial work experience is to bring closer, the world of work and the world of school, and that it affords the pre-service teacher, the opportunity to be exposed to innovation in the profession. Emah (2008) detailed that roles of industrial work experience programme include:

- Identifying themselves as workers in occupational structure.
- Agreement with the industry, or establishment to work for full period of the attachment to complement their course work in the school.
- To abide by the rules and regulations of the employers of labour.
- To learn the basic habits of the industry.
- Paying attention to the civic responsibilities attached to their job.
- Learning to be practical and productive as much as possible.
- Keep a progress log book of their day today activities.
- Submitting report of work experience to the college coordinator after the completion of the programme. Laudable as those roles are; certain handicaps still face the programme. Ogbobe (2009) identified that:
- Many students who participate in the scheme in some institutions were not paid their allowances because they did not submit their placement forms; their names were omitted in the master list or they misplaced their forms attachment, they cannot be paid.

- Delay of payment due to late submission of master and placement lists by some SIWES coordinators.
- Lack of supervision by institution supervisor
- Some stakeholders feel that the chief Executives of participating institutions misuse the funds meant for the student's allowances, and other purposes aimed at promoting the scheme.

These obstacles need to be tackled to enable the scheme achieve its objectives of National Economic Transformation. When the trainees do not acquire the necessary skills through the SIWES programme as a result of these difficulties, the subsequent students to be trained in the institutions will adversely be effected, and the cycle continues.

Technology and Vocational Education as a key to National Transformation

Technology Education is a programme designed for students to explore career alternatives, support basic academic and life skills, and to enable them achieve high academic standards, leadership, preparation for industrial work, and advanced continuing Education; while vocational education prepares learners for jobs that are based on manual, or practical activities, and totally related to a specific trade, occupation, or vocation. Dike (2006) stated that vocational and Technology Education give individuals the skills to live, learn and work as a productive citizen in a global society. If the youths imbibe the culture of Technology and Vocational education and surrender themselves to be trained in various occupations, national economic transformation would be a reality.

It is obvious that the Nation's youth unemployment rate has been in geometrical progression. The Federal Government recently acknowledged that about 80% percent of the Nigerian youths are unemployed. Sequel to this unemployment saga, poverty is endemic in the society. Dike (2006) posited that more than 80 percent of Nigerians live on less than one Dollar per day, and that there should be some form of school work based learning incorporated in schools in Nigeria as integral part of national development strategy. This will undoubtedly lead to National Economic transformation. It is thus clear that empowering the youths with technological skills would enhance their productivity and national transformation. Okeke (2010) pointed out that Nigeria's poverty alleviation programme has not been effective because of lack of skills' training facilities and social services. It is the emphasis on skill training that would eventually bring National Transformation.

The system of education in Nigeria did not initially pay attention to technical education. When technical education eventually started, the issue of

adequate teacher preparation was also lacking. The state of Technology and Vocational Education on the country should be raised to international standard where experienced teachers are allowed to teach in Technology and Vocational Education institutions, to bring about the needed transformation through adequate skill acquisition by the youth. Dike (2006) posited that no nation would make any meaningful socio-economic transformation without well equipped technical and vocational institutions. Therefore, revitalizing this important sector is among the ways to improve economic opportunities for the youths, for national transformation. Adequate teacher preparation in this sector is therefore profound and basic.

Ottai (2007) posited that the leading factors of economic production in the emerging global economy are Technology knowledge, skill, creativity and innovation. This is true, as no country that lacks skilled technical man power can be transformed into industrialized nation. National transformation can thus be achieved when proper attention is accorded education and Technological development, thus promoting creativity in materials and human resource productivity. All these could be achieved through adequate teacher preparation.

Strategies for Improving Technology and Vocational Education Teachers' Preparation

The importance of effective training of teachers in any education enterprise cannot be overemphasize. Okeke (2010) pointed out that vocational technical aspects of educational system has placed high premium on national development, considering its importance to the production of skilled and competent workmen. It is obvious that the needed Technological transformation will be a mirage without effective corresponding training of technical teachers. Adenipekun (2009) stated that the nation has realized the importance of Vocational Technical Education in economic development of the nation, and has proposed a priority for the realization of vision 2020. This can only be realized if Technology and Vocational Education is properly repositioned to make its products, especially the teachers better skilled and knowledgeable to impart on subsequent students.

To make technology and vocational education teacher preparation effective, more functional and relevant to the national growth in the 21 century, the following improvements are imperative:

- Revitalization of the Technology and vocational education curriculum content to reflect contemporary skill offerings to suit the labour market. The practical content of Technology and Vocational Education courses should be made more proficient in teacher preparation curriculum.
- The Federal Government should step up the level of fund made to Technology and Vocational Education institutions to make the

administration and provision of infrastructure more efficient.

- Remuneration of Technical Vocational Education teachers should be enhanced to improve their zeal in skill teaching. More opportunities for in-service training like workshops and conferences should be granted them to enable keep abreast with the increasing complexity of knowledge and skills in the contemporary society.
- Teachers who participate in SIWES should be paid their allowances as, and when due. Provision should be made by the Government for expert supervision and teachers' interest in SIWES.

Recommendations

Based on the discussion in this paper, I wish to recommend as follows:

1. The curriculum practical content of technology and vocational education should be re-vitalized to incorporate more practical content to enable teachers grasp more useful practical skills during their training.
2. Conferences and retraining programmes should be more frequently organized for technology and vocational teachers.
3. The government, both at state and at federal levels should provide more funds for the advancement of technology and vocational education.
4. Industrial training should be properly harnessed to arouse more interests of teacher

trainees in technology and vocational education.

Conclusion

Technology and vocational education teacher training is the panacea for effective skill and knowledge impartation to students for effective Transformation. This will usher students being prepared as teachers to brace up to the challenges of the 21st century in Technology and vocational education advancement for economic improvement of the youth. Certain targets have been suggested in the paper.

The curriculum of technology and vocational education should be re-vitalized to make trainees acquire better skills to fit into the world of paid employment. The practical aspects of Vocational Technical Education curriculum should be emphasized at various levels in concerned institutions. Re-training in form of workshops and conferences should be beefed up for teacher interns. Government Policy of Technology and Vocational Education should be more realistic and focused on National transformation. More funds should be made available to Technology and Vocational Education. This will aid more effective procurement of equipment of Vocational Technology Education for workshops. Remuneration and industrial work experience scheme of the teachers should be properly harnessed to strengthen teacher's interest and dedication to their duties in raising the level of skills and knowledge of our youth for national economic transformation.

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