EXPECTED CONTRIBUTIONS OF TECHNICAL, VOCATIONAL EDUCATION AND TRAINING IN REVOLUTIONIZING THE NIGERIAN WORKFORCE

BY

PROF. T.I. EZE & A.S. ARUKU
DEPARTMENT OF VOCATIONAL EDUCATION
NNAMDI AZIKIWE UNIVERSITY, AWKA.

Abstract

As the world and everything therein are rapidly and constantly changing, rapid changes in curricula and practices of technical, vocational education and training (TVET)overtime are predicted. These changes will throw up new jobs requiring new skills and new knowledge for the workforce. Unfortunately, the Nigerian workforce lacks the basic technical skills, knowledge, attitudes and aptitudes for productive work in industries and for social services. However, scattered efforts are being made by organised private sector to remedy this but this is not enough to provide the required technical manpower. There is therefore the need for well coordinated and deliberate efforts through properly organised and focused TVET programmes that should provide the technical manpower required for the current technological development initiatives. Some recommendations are made.

Introduction

The world and everything therein are constantly changing and thus becoming different in some aspects. The struggle of all reasonable beings in the world is how to benefit from these constant changes. Thus, we must make serious effort so that persons and everything around us will be better in the new difference. This is the whole duty of every individual and since these changes are constant, every individual'sduty is continuous. This continuous effort to benefit from nature's constant changes is responsible for what is known today as education (of which the technical, vocational education and training (TVET) are essential aspects of) which is paramount for work.

In this document, technical, vocational education and training will refer to those aspects of the educational processes involving in addition to general education, the study of technologies and related sciences as well as the acquisition of practical skills, attitudes,

understanding and knowledge relating to occupation in various sectors of economic and social life (Federal Republic of Nigeria (FRN), 2004; UNESCO, 2003). Whatever is contained in the educational system is handed over from generation to generation after each generation must have modified the contents with the development and culture of its own era. What is to be examined here is the technical, vocational education and training inherited by the current generation, the modifications done and being done to it by the current generation and the probable condition of technical, vocational education and training that are likely to be handed over to future generations in Nigeria and how they are expected to contribute to revolutionize the future workforce Before now, some of the ordinary university graduates in the Nigerian workforce are known to lack the requisite skills, appropriate knowledge, desirable work-attitudes and aptitudes required to make them productive at the workplace (Dike, 2009). Some of the graduates of educational institutions are rated as unemployable as produced (Ekpenyong, 2008). Thus post – employment training and retraining are found essential. Hence, well organised technical, vocational education and training (TVET) programmes, with clear focus on the current technological development needs will make the necessary contributions to revolutionise the future workforce in Nigeria.

How Vocational and Technical Education Began

What can be referred to as technical, vocational education and training began from the origins of the humans. Man had to provide shelter, food, clothes; move around and had to interact with others in the quest to provide for these essential needs. This accounted for the various aspects of technical, vocational education and training (TVET). People began to devise means of doing these things and others had to learn from them and continued to improve on the methods. This has been and is the long and short of technical, vocational education and training, being transferred from generation to generation through the apprenticeship practices (Ekpenyong, 2008; Evans and Herr, 1978)..

In the olden days, people learnt from

others what they knew how to do and this was referred to as apprenticeship system. In this informal education system one could, for example, learn how to weave a basket from another person. The colonial masters brought the formal school education system which was mainly made up of liberal arts. The companies brought by the colonial masters and missionaries established training centres where, usually their new workers, who were recruited from those who had educational qualifications in certain levels of liberal arts education were trained on how to work for the companies. Some of these training centres were later changed into technical training centres. This type of technical training was despised and second-rated and had a dead end (Okoro, 1993). Attempts to grant further training for products of technical training centres for the enhancement of technical education met with lots of difficulties (Ekpenyong, 2008). For example, the establishment of Higher College at Yaba and later, the establishment of the Nigerian College of Arts, Science and Technology (NCAST) in Enugu, Ibadan and Zaria met with noticeable failure

(Ekpenyong, 2008; Osuala, 1996). The general apathy towards technical education, or practical – based training, and the poor management system led to the collapse of these institutions and their remnants were absorbed into the first generation universities that subsequently emerged.

The poor attitude to technical, vocational education and training (TVET) was such that, apart from the few privately owned training centres only comprehensive schools partly offered technical subjects. Even the training of technical teachers was poorly treated before an United Nations Educational, Scientific and Cultural Organization (UNESCO)financial grant was used to establish National Technical Teachers' College(NTTC) Akoka, Lagos which awarded Nigeria Certificate in Education (NCE) (Technical) and Technical Teachers' Certificate (TTC). Even when universities were built, only the University of Nigeria, Nsukka(UNN) started the training of technical teachers. Vocational and technical education in the polytechnics and colleges of education were and are still placed in 'sub-professional' and 'middle' manpower levels. Thus the general attitude of second-rated and inferior nature has followed technical,

vocational education and training in Nigeria (Okoro, 1993; Ekpenyong, 2008).

Current Activities in Vocational and Technical Education in Nigeria

Consistent and unrelenting efforts have been on the Nigeria government to place emphasis on technical, vocational education and training. The lack of proper attention to produce skilled technicians in the various areas of technology has been the cause of the high unemployment rate and the high level of underdevelopment. The recent emphasis on entrepreneurship education and vocational skill development centres are few isolated cases of later palliative measures. Dike (2009) noted that there were no sufficient skilled bricklayers, carpenters, painters, automobile mechanics, laboratory and pharmacy technicians, electrical and electronics technicians, nurses, and similar specialised technical personnel. Inadequacies of these caused bad roads, and the poorly trained mechanics and drivers caused many accidents; hospitals became places where people go to die, security was poor due to poor training.

Furthermore, Nigeria does not for now have proper finger-prints experts. Dike (2009) stressed that not all people needed university education, and that the few existing universities were not yet providing the needed solutions to the technical problems. The mind, is not a vessel to be filled but a fire to be kindled, Dike therefore recommended that the Nigerian Labour Congress (NLC) should set up skill acquisition centres to augment skilled labour development.

Currently, something is being done by some people to enhance vocational and technical education. Hence, Fashola (2010), Governor of Lagos State, noted that technical and vocational education are the future of the state; technical and vocational education are the future of the country; technical and vocational education are the future of the planet. The Governor further emphasised that Nigeria must move from a trading economy to a producing and manufacturing economy, and that the trains and the rails have to be installed and

maintained, and similarly motor vehicles have to be repaired.

The assertions of Fashola (2010) indicate that Nigeria is in dire need of a brand new workforce who must be equipped with the requisite skills, the relevant new knowledge, desirable work attitudes and aptitudes which well administered TVET programme must provide. Thus, the curricula and training process in TVET require new approaches that will reflect the new needs of the workforce.

Furthermore, Fashola (2010) noted that the Chinese handling the light rail project of the Lagos State had stated that for them to move to their site, they needed about 800 workers of which about 510 would be technical and skilled workers. The Governor warned that Nigeria should avoid a situation like what happened in Dubai where all skilled and technical workers were imported from Malaysia, Singapore and Philippines, resulting in all their money leaving Dubai's economy. Recently, the Lagos State Government is reported to be in partnership with an institution in England with funding from the World Bank for an exchange programme in technical, vocational education and training. The five technical colleges in the State have received much attention with the workshop equipment revamped. Fashola strictly warned that technical and vocational education, unlike what was believed in the past, was not for the less intelligent people or drop-outs. Concluding, Governor Fashola then wished to know whether the one who drove the car was more intelligent than the one who built it. Thus it can be seen that technical, vocational education and training are no more dead ends for second rated people.

In the same vein, the Nigerian Bottling Company (NBC), the franchise bottler of Coca-Cola, recently graduated 23 workers from the company's training centre and offered them full-time employment. The Managing Director of the company, Ogunsanya (2012) stated that the programme was started as a result of dearth of competent technicians and as a response to the rapidly changing technology. Candidates admitted for the 2-year training programme had either National Technical Certificate or the National Diploma in mechanical or electrical engineering and were not

more than 25years of age. So far, the company admitted 473 candidates and graduated 418, while 90% of them were employed by the company. Thus, since no country would like to export the versatile technicians for now, Nigeria must, of necessity, through effective TVET programmes train its own pool of technical manpower, to drive the industries and maintain the essential services on the roads, rails, electricity and water.

Further, the Industrial Training Fund (ITF,2012), established in 1973 to bridge the gap between theory and practice among students of engineering and technology in institutions of higher learning in Nigeria, started the Students' Industrial Work Experience Scheme (SIWES) in 1974 with 784 students from 11 institutions and in 104 courses. By 2008, 210390 students from 219 institutions had participated in the scheme in over 112 courses. Unfortunately, today most industries, in Nigeria, are still operating at below capacity or have shutdown because there are still shortage of appropriately trained technical personnel. Therefore, the ITF with the cooperation of experts from Singapore is recruiting candidates to be trained in five different areas of (i) facility maintenance technology (mechanical and electrical) services. (ii) information and communication technology. (iii) culinary skills (Western and African dishes. (iv) mechatronics (automation and autotronics). and (v) electronics (computer and networking). The aim is to equip youths with advanced employable skills in the five areas listed above and hence assist the relevant industries to have the required technical personnel to beef up operations.

In another development, a telecommunication company, the Toronto Transit Commission: TTC Mobile (2012), since 2003, was contributing to the development of manpower by coordinating the effort of some other information technology/telecommunications companies such as Waco System, Synovia, Telino and IpNX to organize a four-month training and subsequent employment of people. Recently, the National Board for Technical Education (NBTE, 2003) in conjunction with UNESCO embarked on a project directed to revitalize, reform and expand

technical, vocational education and training (TVET) to meet the present and future needs for the rapid socio-economic development of the nation. The NBTE reviewed the technical, vocational education and training curricula at both secondary and tertiary levels for new and existing courses: the thrust was to train TVET personnel and introduce ICT in all levels of technical, vocational education and training (TVET). Six polytechnics from the six geo-political zones of Nigeria were selected to run the programmes using even the experts from Chiba Institute of Technology in Japan.

These moves are commendable and should be encouraged and sustained. Perhaps, initiatives like these aimed at increasing and improving the pool of technical manpower are earnestly required so that Nigeria will be able to compete in the technological age and hence effectively drive the industries for increased productivity. Moreover, technology is taking over almost all activities in the world. A particular important area of work and employment consists of those occupations which centre on the application of technical and vocational skills in the world of work. It is generally estimated that 80% of all the occupations are technology driven..

The world is showing interest in this type of education which some persons perceived as second class education. As much is being done globally to improve technical, vocational education and training, many things are changing. One aspect of the change which, according to Maclean and Lai (2011), appears to be increasing, is the growing emphasis on lifelong learning and re-learning associated with technical and vocational education and training (TVET). Also, TVET curricula have moved from its industrial –age mix of 50% theory and 50% practical to the information-age mix of 80% theory and 20% practical, that is, from a manipulative focus to a cognitive focus (Maclean and Lai, 2011; UNESCO, 2003).

The implications of these global technological changes are that the nature of what is learnt and taught in TVET programmes in Nigeria must be revisited. Specifically, the curriculum and approaches to instruction need to be revisited. In other words there should be more use of information and communication technology (ICT) in TVET instruction to reflect the new

needs of moving away from the emphasis on manipulative skill to the cognitive skills.

Future of Vocational and Technical Education in Nigeria

For the future, because of the demand for specialised skills for jobs, the rate of unemployment will be on the increase unless training for the new jobs that require the new knowledge and new skills are accelerated. It should be understood that technical, vocational education and training (TVET), which prepare persons for gainful employment, are rapidly changing. People's knowledge, skill and belief systems are transmuting, hence even those on the job need to continue to learn. There is the need for changes in educational policies, facilities, curricula and even the quality of teachers. Teachers, for example, must change from those who impart knowledge to those who facilitate learning as they are also learning.

Most areas of technology are converging hence specialization is diminishing. Teachers have to cover wider areas and have to be specially remunerated. More knowledge of information and communication technology (ICT) (which is helping to provide education to anyone, anytime and anywhere) is required by all but particularly for anyone who has to function as a teacher (UNESCO, 2003). The computers and the regular availability of electrical energy to power them must be provided. Our challenges must focus on energy efficiency. We must join to focus on work-based learning. An educational approach that uses work places to structure learning experiences that contribute to the intellectual, social, academic and career development of students is strongly advocated. We must supplement these with school activities that apply, reinforce, refine or extend the learning that occurs at work site.

By so doing, students develop attitudes, knowledge, skills, insights, habits and associations from both work and school experiences and are able to connect learning with real life work activities (Lynch& Harnish in Lynch, 2000). What this means is that in Nigeria, the educational institutions, employers, including the offices and the industries must train the workers

jointly. It is commonly agreed, that to teach students the latest technology for the 21st century, old machines cannot used. Students must experience what is out there in the work place (Evans and Herr, 1978) and (Eze and Okoroafor, 2012). The current effort of the ITF and others, have to be integrated into the national curricula for technical, vocational education and training. The workforce for the industries will no longer be considered as second-rate, hence technical, vocational education and training should take the rightful place as the education of the active workforce in Nigeria.

Conclusion

In the final analysis, the structural changes in curricula and practices of technical, vocational education and training will create new jobs for the new workforce who must use new techniques and modern equipment to work in industries for increased labour productivity. This new workforce must imbibe better work ethics and attitudes that TVET should provide and this will in turn enhance labour productivity. This situation will give Nigeria rapid positive development that will usher in economic prosperity for the country.

Recommendations

Based on the findings of this study, the following recommendations are proffered;

1. All manpower development efforts in Nigeria must aim at equipping majority of those who want and need to work the requisite skills, appropriate knowledge and the desirable work-attitudes and aptitudes that should make them productive members of the workforce. This can be effectively done through the deliberate provision of well administered TVET programmes which have a clear focus on the current needs for technological development.
2. The Nigerian government must, of necessity, deliberately develop, support and coordinate the provision of TVET programmes whether through the promotion of entrepreneurship programmes or development of vocational training centres or even outright TVET

programmes in educational institutions so that youths must be properly prepared for work.

3. Finally, to drive Nigerian industries, and run the essential services, a pool of well trained, well articulated and motivated workforce is the answer.

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