

Repositioning Vocational and Technical Education for Effective Manpower Production in Nigeria

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Abstracts: To meet the challenges of technological change that can support economic growth and to guarantee equal access to opportunities and employment, vocational and technical education must be available to a substantially greater proportion of young people and adult alike. In this paper vocational and technical has been identified as the most reliable, veritable vehicle that can be used in preparing skilled manpower for the nation. Major constraints to vocational and technical education such as historical legacy from Colonia rule, societal attitudes, government lip service to vocational education, lack of adequate teaching man power, problems of management and organization of VTE, relevance of curriculum, poor state of infrastructures and training equipment amongst others. The paper also made a number repositioning strategies for quality manpower production. These include a general re-orientation of the concept of vocation; re-organization and management of vocational education; new capacity building strategy for vocational teachers, new funding approach, collaboration with employers, accreditation and automatic streaming of students etc.

Key Words: Repositioning, Vocational and Technical Education, Manpower Production

I. Introduction

The relationship between good quality education and the level of training received by an individual member of the society and the level of a nation's industrialization has become a focus of considerable interest in recent times. It has been observed that a nation's economic growth and the living standard of its people can be positively influenced by the quality and quantity of its human resources. It is in the light of the above that Enemali (2006) categorically said "Manpower is the basic resource; it is the indispensable means of converting other resources to mankind's use and benefit. How well we improve the quality of our vocational education programmes, develop and employ human skills is fundamental in deciding how much we will accomplish as a nation. The wealth of nation is as much dependent on the accumulation of "human capital" as against the accumulation of material capital. Investment in quality education is the acquisition and increase in the stock of people with skills, education and experience which are critical to national development.

Nigeria has made considerable progress in the development of skilled manpower since 1960. But due to rapidly growing demand for various categories of manpower, national development is still constrained by marked inadequacy of skilled personnel.

The problem of quality manpower became so pronounced when the number of unemployed youths increased and the persistent out - cry about the declining quality of products and services offered by government officials and industries. It was also noted that strategic positions in several industries were occupied by foreigners.

In a swift reaction to these great abnormalities the Federal government set up various commissions. For example, Dike commission 1959, Banjo and Ashby commission 1960. These commissions were mandated to review aspects of the existing educational system. The report of these commissions stressed the fact that to meet the challenge of technological change, to support economic growth and to guarantee equal access to opportunities, vocational and technical education must be available to a substantially greater proportion of young people and adults alike. The commission's report further emphasized that industrial and technological development is hinged on the quality of vocational and technical institutions and training received by trainees.

The works of this committee ushered in what is term new National Policy on Education which gave a greater emphasis to vocational and technical. This policy gave birth to the establishment of several Federal Universities of Technology, Federal Polytechnics, Federal Colleges of Education, Technical and Vocational Schools and Colleges.

Olaitan (2006) further noted that in addition to the establishment of these various vocational and technical institutions, many of the old existing technical and vocational schools were renovated and equipment refurbished. Despite this concerted effort by the government, Ozoro (2007) observed that Vocational and Technical Education in Nigeria has remained inadequate, unplanned, uncoordinated and to a considerable extent irrelevant to the societal needs. In support of Ozoro's claim is Atsumbe (2009) who discovered that employers of labor or industrialist generally consider the products of technical institutions useable without further training.

Against this back drop and the fact that several of these graduates roam the streets without employment as a result of lack of skills, this research is set to identify strategies that could reposition these schools for effective manpower production.

II. Brief Concept and Significance of Vocational and Technical Education

In a broad sense, vocational education is that part of the total experience of the individual whereby he learns successfully to carry on a gainful occupation. This is a broad definition because it covers both vocational education (also known as Organized or Conscious Vocational Education and Vocational Training). According to Olaitan (1990) organized Vocational education with the development of skills, knowledge and attitudes is required for success in any useful occupation. Vocational Education is any form of education whose primary purpose is to prepare persons for employment in recognized occupations. Okoro (1993) said vocational education provides the skills, knowledge and attitudes necessary for effective employment in specific occupations. While on the other hand technical education is a comparatively new phase of vocational education, it is designed to meet the complex technological needs of modern industry. This type of education is considered to be of a post-high school level and is intended to produce a classification of workers referred to as technicians and technologist.

It is in the light of the above definition that the Federal government of Nigeria in the National policy on Education (1998) expected that vocational and technical education institutions should provide trained manpower in applied science, technology and commerce and provide technical knowledge and vocation skills necessary for agriculture, industrial and economic development. The policy further expected that these schools and colleges will provide trainings leading to the production of skilled manpower. According to Mbata (1990), since the formulation of the National Policy on Education, effective training and development of the right caliber of manpower in technical education has never been problem free.

Infact Tilak (2002) stressed that quality vocational education if well planned coordinated will guarantee:

Graduates with varied skills, because of changes in production processes resulting from technological advances, the nature of the demand for skills, both in terms of quantity and quality changes. Modern technology requires fewer highly qualified middle and lower level skilled personnel. Vocational education can produce exactly this kind of manpower.

- Vocational education would contribute to such progress, both by reducing unemployment, through creating employment in the fields of pre – vocational specialization and self – employment. It can improve productivity and corresponding resulting in higher graduate earnings. Vocational education can establish a closer relationship between school and work.
- Vocational education is also seen as an equity measure. As an antidote to urban – biased elite education, vocational education will promote equity with a rural bias and serve the needs of relatively poor people. More specifically, it is believed to be an effective answer to rural problems, “to alleviate unemployment; to reorient students’ attitude towards rural society”, to halt urban migration; to transmit skills and attitudes useful in employment; and as an important measure of development for disadvantaged youths in rural and urban areas.
- Vocational education is considered helpful in developing what can be termed as ‘skilled-culture’ and attitude towards manual work, in contrast to pure academic culture and preference for white collar jobs; and to serve simultaneously the “hand and the mind”, the practical and the abstract (Grubb, 1985)

III. Fundamental Problems of Vocational and Technical Education in Nigeria

1. Definition, Meaning and Societal Attitude towards Vocational and Technical Education.

According to Olaitan (1990) it is established that formal western education in Nigeria started with vocational education when the first Europeans that came to this country recruited our ancestors as gardeners, laundry men, carpenters cooks, stewards, tailors and even house builders etc. Although these new trades or occupation were not called vocational, they form a major part of what we know today as vocational education.

Then these forms of skill training were given to handicapped, physically or mentally retarded people. The missionaries provided them with training in handicraft, shoe-repair, broom-making, etc. this was a critical land mark in the development of vocational education because those that were handicapped were trained in skills and gainful occupations, since then any such trainings given were associated with the handicapped; and hence vocational education was since then understood or recognized to be the education for the handicapped or mentally retarded individuals. As a result of this misconception, the meaning and definition of what vocational education is all about have not been clearly understood by majority of people.

The assertion here, therefore, is that the confusion and problems encountered in vocational education in Nigeria today be it organizational, administrative, educational or otherwise; seem to emanate from the lack of understanding of the concept of vocational education and its purposes.

2. Problems of Management and Organization of Vocational and Technical Education

The success of vocational education is largely dependent on the quality of its leadership. Based on the system of education in Nigeria it has not been easy to produce very good leadership for vocational and technical education. The circumstance where those in either general education or pure sciences are posted to manage vocational and technical education leaves much to be desired. These administrators do not understand the peculiarities of vocational education, therefore most of the time they almost grand the system to a halt.

Organization is one of the inherent problems of vocational and technical education in Nigeria. Eze (2002) while lamenting the haphazard manner in which ignorant administrators handle the organization of the programme said, their ignorance is displayed in the areas of curriculum planning, laboratory arrangement, time allotment to courses etc. One would not expect a better organization of a process that is little understood by the society, government and those posted to manage it. Most of the times educational technology (teaching aid) is confused with technology education. So educational technologists who are not necessarily vocational educators are posted to manage vocational and technical education programmes, this is a great aberration and a paradox that has never worked in favour of vocational education.

3. Relevance of the Curricula.

The pertinent question on the nation's technical and vocational education curricula is how appropriate, relevant and up to date are these curricular? Do they meet needs of employers, industry and society at large in the age of convergence of information and communication technology? How well have the curricula been able to impart skills on the trainees? It is regrettable that the curricula of several vocational and technical programmes are out dated having been in use for over fifteen years now. The questions on the mind of employers of labour are genuine, because the world of work as we have it today is a world of technology. Various production tasks which were manually performed before this time, have become mechanized, digital and in some cases automated. In the face of all these changes, review and updating of the present curricula is inevitable.

4. Funding of Vocational and Technical Education.

Funding has always been the major constraint to the development of effective of vocational education in Nigeria . Although official statements continue to attach importance to vocational and technical education evidence points to the fact that commitments have not been matched with action yet. Nuru and Mumah (2009) observed that investment in vocational and technical education in the First, Second and Third Development plans are 0.10%, 0.36% and 0.84% respectively. At every level of vocational education in this country enough funds are never allocated to vocational education for acquiring the right environment. According to Olaitan (1999), in a regular school system the administrator is often forced to accept working school conditions which he himself knows are not suitable for effective operations of his vocational objectives for students that need them and can profit by them. He most frequently, if not always, compromise between efficiency and cost. Thus in Nigeria vocational education faces the dilemma "to be or not be".

5. Poor state of Infrastructures and Training Equipment

Vocational and technical education in Nigeria faces the problem of inadequate and obsolete training equipment. Many of the equipment are so old that spare parts cannot be sourced. They also lack current levels of precision that are now standard. A lot of them are far below current industrial and training standards. Infrastructures like electricity, water, gas, communication and transportation are far from reach. Some of the buildings housing either the laboratories or workshop are completely dilapidated. As a result of this, most of the trainees are stuffed with theoretical knowledge at the expense of practical skill training which the hall mark of effective vocational education. In Nigeria today, training institution are hardly able to renew their training facilities to keep pace with technological progress. The trainees from these institutions enter into the world work only to discover that the equipment with which they were trained has been modified.

6. Academic Staff Recruitment / Development

The academic staff situation in the vocational and technical education institutions is very unsatisfactory. There are no enough qualified, trained and experienced teaching staff responsible for teaching the students. According to Mbata (1990), the recruitment of professionally and technically qualified teachers is one the gravest problems of vocational and technical education in Nigeria. As a result of this acute shortage, the few ones that agree to remain are hardly allowed to embark on any form of staff development. The reasons for acute shortage of technical teachers are not far fetched. While remunerations in the industries or private sector have remained partially satisfactory and are constantly improved on in the face of high inflationary rates, remunerations in education sector have remained static. Consequently the rate of migration of competent technical teachers to the industries is really very high.

7. Quality of Entrants

It is sad to note that most of the students admitted into vocational and technical education programmes are most of the times without requisite qualifications. The irrational practice of sending only drop-outs and mediocre students to technology base programmes has been condemned by experts in vocational education. Atsumbe (2010) observe that the vestiges of this obnoxious practice still persist up till date. The new methods of dumping mediocre students in vocational and technical education course are through the so call "remedial" programmes. A practice where failures and rejects from other departments are sent to vocational education departments.

8. Placement of Student for Industrial Attachment.

Atsumbe (2005) defined Students Industrial Work scheme (siwes) to mean a practical skill development programme designed to expose and prepare technology education students of Universities, polytechnics, colleges of Education technical and technical colleges to real life work situation that they are likely to meet after graduation. But it has been observed that this programme is fast degenerating into a mere formality. Mbata (1990) claimed that the programme has fallen short of expectations as a result of poor co-ordination between the ITF, Industries and the training institutions, for one reason or the other. For example, the responsibility for placement has since been shifted to students and for the programme has seriously suffered from inadequate supervision of the students while on attachment.

IV. Repositioning Strategies for Effective Manpower Production

The following suggestions should help to improve Vocational and Technical Education in Nigeria. These suggestions are not necessarily discussed in order in which the problems are presented.

1. Vocational and technical educators are aware of the fact that the public attitude to vocational education results from ignorance and confusion. Olaitan (1999) advocated that the few vocational educators who have the privilege of receiving the good tidings of vocational education should as its disciples, help to enlighten the nation through national magazines, newspapers, journals, radio, television, possibly holding career days in schools etc to correct the low profile impression about vocational and technical education. In other words, the society should be educated and oriented towards vocational education its meaning; scope and usefulness are carefully explained to them.
2. As much as possible vocational and technical education should be organized outside the directives of general education. They could be separated from general education schools, colleges and programmes, this is because the goals of vocational and technical education differ reasonably from goals of general education. A circumstance where those from general education (science, curriculum, social studies etc) are posted to head vocational and technical education is not a good development. Records abound in this country that such vocational and technical institutions die natural death or they are completely stunted in growth, loss focus and converted into general education programmes. This is always as a result of mal-administration and complete lack of understanding of how vocational programmes are managed.
3. Improvement in the organization of vocational and technical education will come with the establishment of a Board of vocational and technical education and not science and technical school board. This board should be established at the local, state and federal levels. Members of the board should be competent vocational and technical educators to the core with their own administrative inspectorate staff. This board will be responsible for among other duties ensuring that teachers with the right skills are posted to the correct schools. For example, a graduate in technical education will be posted to a vocational school or technical college where he could teach a technical skill rather than being posted to a grammar school as a physics or mathematics teacher. They are also to ensure that the needs of the programmes are well articulated. Monitoring, evaluation, supervision and accreditation of programmes are done regularly and by competent technical educators not those "looking for money" and could write any thing even when infrastructures, equipment are in terrible and deplorable state.
4. Teacher quality according to Ukeje (2000) is a strong predictor of student quality. It is widely acknowledged that "no educational system or programme can rise above the quality of its teachers. Technical teachers need to be encouraged and supported to keep up-to date by participation in regular workshops, seminars, in – service training programmes and conferences. A bold and courageous review of technical teachers' remuneration should be undertaken to forestall further drift of the best of technical man power resources to the industrial and business sectors. According to Olaitan (2006) such a review should be encouraging enough to such an extent that technical teachers would feel a little bit satisfied to stay on the job without migration or use teaching as a stepping stone for offers obtainable in industries. Until vocational teachers are induced through incentives the exodus of vocational teachers to industries will continue; the implication is that vocational education will persistently experience acute shortage of competent staff.

5. The problem of financing education in Nigeria has been a perennial one. Financing TVET is more complex than general education. Inadequate funding of vocational and technical education appears to be on the increase. In Nigeria quite a number of options exist that can ensure that vocational and technical education institutions maximize their fund generation capacities in addition to any form of from government, donor agencies or other stake holders. Nuru and Mumah (2003) suggested the following options as alternative means of funding TVET.

- Strengthening cooperation between TVET and enterprise
- Accessing the abundant donor funds locally and internationally
- Access funds from government agencies such as the ETF, PTDF, ITF, etc.
- Embarking on policy reform opportunities such as
 - i. Centralized approval of staffing requirement
 - ii. Programme funding approach
- Incentive related funding where by funding is tied to achievements of specific targets linked to government's socio – economic or developmental objectives.

It is also possible for various TVET institutions to develop appropriate institutional framework to generate and sustain high level of internally generated revenue. Above all it is important to note that the constant merger of technical education with science has not done any good to TVET. Therefore it is strongly advocated that the administration of technical education should be severed from science or general education so that budgetary allocations and funds be meant for technical education would be judiciously appropriated.

V. General Strategies.

In the light of several problems so far enumerated, it is obvious that in planning to improve technical manpower production, attention must be given not only to the need to foster acceptability of the programme, but Various approaches can be used to foster improved manpower production.

1. Inducing enterprises to develop training programme in relation to their internal needs. In the United Kingdom, this approach has been adopted and implemented through Industrial Training Act (1994) and the Employment and Training Act (1973). What institutions should always aim at should be broad based skilled programmes that have the mandate and respect of employers of labour.
2. Another strategy is giving the employers the opportunity to participate in recommending training for job seekers and potential students. In the Canadian manpower service and in Sweden, this approach has been used successfully. By this way employers become committed towards enhancing the quality of the programme.
3. Automatic streaming of students into training institutions. The quality of graduates of technical education depends largely on the quality of entrants into the various programmes. Various vocational and technical education programme should through NBTE agree on what should be the entry requirement. Admission officers should be given free hand with less interference.
4. Accreditation is designed to ensure relevance of curriculum by assessing the context, input, process and products periodically. It is one of the quality control strategies that have been in used in developed countries. Accreditation exercises in Nigeria in most cases are done to fulfill all righteousness; it is not intended to achieve any purpose. Major stake holders in a specialization, including lecturers, professional/regulatory bodies, employers etc should be the ones to participate in this crucial exercise. The reports of accreditation exercises should be supported and institutions lagging behind in standard and relevance should be helped by government to meet set standards. I strongly recommend the establishment of Internal Quality Assurance (IQA) units, with clearly defined roles. This is to maintain quality after accreditation exercise since these qualities decline immediately after the exercise.
5. The problem of insufficient openings for placement of students industrial work experience scheme (SIWES) could be solved by encouraging institutions to set up technological incubators either in association with companies or grouping institutions together. This will provide avenue for the acquisition of practical skills outside the institutions for both staff and students. If the school workshops, laboratories are well equipped, the department could aggressively embarked on practical consultancy services which could serve as an outlet for acquiring practical skills for both staff and students.

VI. Conclusion

In order to improve the quality of manpower produced from our vocational and technical education programmes in Nigeria, there is need for the effective mobilization of resources for this purpose. This should include public mobilization involving the various levels of government, traditional institutions, community leaders, voluntary agencies (NGOs), students and staff. The collaborative efforts should aim at enlightening the public, what vocational and technical education is about (meaning).

It has been observed that close co-operation between vocational – technical education and employers appear to be the nation's best choice of enhancing the acceptability of products of technical training institutions.

Apart from the problem of dearth of qualified technical teachers, administration of vocational education, funding etc certain approaches for repositioning vocational and technical education for improved man power production have been discussed. Finally, both government and the public should pool resources together to lift vocational and technical education in Nigeria out of its present decay. Conscious efforts should be made at all level to deal with the present technological backwardness through mobilization of resources, human and material to solve the problem through the rejuvenation and reactivation of vocational and technical education.

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