Repositioning Polytechnic Education for Self Reliance and Economic Development in Nigeria

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ABSTRACT

The purpose of this review is to highlight the importance of polytechnic education to the socio-economic development of Nigeria. Polytechnic education which is considered as one of the three major types of academic institutions distinguishable in the technical education sub-sector has as it primary role middle manpower for commerce, industry, agriculture, health care and teaching. But, "for obvious reasons, since independence, efforts at capacity building and National Capability in machine or electrical production to serve the needs of agriculture, industry, security and defense have been largely frustrated". Consequently, there is rise in unemployment and uncertain economic situation which polytechnic education was suppose to address. In view of this, the study recommends the need to reposition polytechnic education through proper funding, monitoring and implementation of its policy objectives for self-reliance and economic development of Nigeria.

Keywords: *Polytechnic education, economic development, skill and self reliance.*

INTRODUCTION

Development on a wider context is the main purpose of education. It is intended, through education, not only to develop the individual who seeks for learning, but also to develop society at large (Ibok, 1998). The need for societal development has been the yearnings of Nigeria and other developing nations of the world since the last century. It is as a result of this that governments of all nations are making various efforts at addressing under-development problems of their people (Dalhatu, 2008). This is done through various policies and programmes. However, such lofty programmes can hardly succeed without technology education. Elebe (2008) defines technology education as the education designed to prepare skilled workers for industries, agriculture, commerce and so on which is usually provided by Tertiary Institutions.

The fact that Polytechnic Education is conceived as a system of education aimed at imparting on beneficiaries various forms of skills for self-reliance and economic development of the nation through technology education can not be denied. Saghanen-Ntogo (2005) opines that the product trained in these institutions should be able to use their brains as adeptly as their hands thereby being knowledgeable and highly skilled. Polytechnic Education is designed to promote industrial, technology and technological

development and transformation. Before anything or system is transformed, the right know-how on the transformation is indispensable. In this context, the right know-how is gotten via the academic system. This is achieved through training of middle level technical manpower which serves as an alternative source, or complementary to University education. Unfortunately, our polytechnics which were all designed to produce multiple techniques for a diversified economy have been reduced to monotechnics, too ill equipped in terms of funding, accommodation, equipment, laboratories among other things that they were designed to accomplish. It is therefore necessary for our polytechnics to be repositioned so as to meet the challenges of a technologically driven economy. It is on this base that this work is undertaken so as to expose the need to reposition polytechnic education for self-reliance and economic development in Nigeria.

The Objectives of Polytechnic Education

According to the National Policy on Education (NPE) (2004), the objectives of the establishment of Polytechnic education are to:

(i) Provide full time or part-time courses of instruction and training in engineering, other technologies, applied sciences, business and management, leading to production of trained manpower.

(ii) Provide the technical knowledge and skill for agricultural, commercial and economic development of Nigeria.

(iii) Give training and impart the necessary skills for the production of technicians, technologist and other skilled personnel who shall be enterprising and self-reliant.

(iv) Train people who can apply scientific knowledge to solve environmental problems for the convenience of man.

(v) Provide exposure to professional studies in these technologies.

The policy also states that, in pursuance of these goals, government shall adopt measures to:

1. Develop and encourage the ideals of Polytechnic Education through students industrial work experience.
2. Improve immediate and long term prospects for Polytechnic graduates and other professionals with respect to their status and remuneration.

From the above, it is clear that polytechnic education was established to pioneer technological development in Nigeria. However, this is not the case because polytechnic education has not been given the pride of place on the educational landscape of the nation.

Polytechnic Education and Economic Development

Development is a multidimensional phenomenon directed towards man's physical, political, economic and social environment. Development therefore is the cardinal point of the vision of any government. As defined by Christopher (2008), development

is seen as a process of capital accumulation and allocation of resources over a long period to raise aggregate productivity, in the social, political and economic spheres. According to him, it is measured in terms of visible increase in the living standard of the people, the total involvement of the working population in the process, the increase design towards self-confidence. Economic development is the expansion of the production capacity and improving the overall welfare of the citizens. According to Akambi (2001) as cited in Christopher (2008), economic growth is characterized by increase in employment opportunities and wave of improvement in social services and general improvement in the general level of applied technology, and of human skills for increasing the production of goods and services. These definitions relate economic development to high productivity and services.

Therefore, polytechnic education is indispensable if the production of the workers should improve. The objectives of polytechnic education in the National Policy on Education (NPE, 2004) recognize this fact. One of the objectives for example, states that polytechnic education provides training and impart the necessary skills for the production of technicians, technologist and other skilled personnel who shall be enterprising and self-reliant. The implication of this fact is that if polytechnic education is made functional, it would contribute immensely to the economic development of the nation. The national development issues can be addressed by polytechnic education if polytechnic education programmes are properly funded and it objectives strictly implemented.

Problems of Polytechnic Education

There are so many problems facing polytechnic education in Nigeria. As observed by Ukachukwu, J. and Ukachukwu, C. (2006), since 1932 when the first polytechnic, Yaba College of Technology was established, with a mandate to provide training for professionals with great attention devoted to practical and manipulative skills in Engineering, Mechanic, Agriculture etc., polytechnic education has had to struggle for identity, recognition and relevance. Therefore, some of the major problems facing polytechnic education are as follows:

Funding: Since the New National Policy on Education was adopted for use, as observed by Fajemirokun (1999), more, polytechnics and allied institutions have been established, yet, the level of government commitment to making these institutions function very well has been very low. According to Adegbenjo (2007), in Nigeria, the government carries the primary responsibility of funding education. These are in form of allocation or in form of taxes like the Education Trust Fund (ETF). Despite this, the government has not provided adequate funds from its annual budgetary allocation to run schools efficiently.

Inadequate Facilities: Tied to fund inadequacy as said earlier is inadequate facility such as workshops, laboratories and equipment in Nigeria polytechnics. In spite of the

regular accreditation exercise, as noted by Fajemirokun (1999), by the various controlling bodies, our technological institutions are still lagging behind either in up-to-date machines or adequate number of any kind of machines. In some cases the machine may be so old that they are either out-medaled or crowded in a small, old workshop. The fact that our polytechnics are able to scale through the eagle-eye of the National Board for Technical Education (NBTE) accreditation exercise in spite of the dearth of workshop facilities is a food for thought.

Students Industrial Work Experience Scheme (SIWES): The National Policy on Science and Technology (1986) as cited in Sunday (2006) recommends for appropriate and adequate industrial attachment programmes for all science-based technical and professional courses at the tertiary level. This recommended policy is to enable industry to complement the efforts of the Schools in imparting the required technical skills. The student Industrial Work Experience Scheme was initiated with an avenue for students to acquire practical industrial exposure in their respective disciplines during the course of their studies. SIWES is therefore a bridge between theory acquired in the school and practical experience acquired in the industry or place of attachment (Agbato, 2006 cited in Adegbenjo, 2007).

But, as observe by Sunday (2006), technology education (which polytechnic stands for) has not been properly encouraged by industries due to non-chalant attitude of most of the industries in accepting this category of student for industrial attachment. Sometimes, the problem is compounded by increase in student's enrolment, absence of coordinating units and lack of supervision of students by some participating polytechnics.

Progression Ceiling on Polytechnic Education

While University graduates could aspire to any height, the same can not be said of polytechnic graduates. The situation has generated disharmony among polytechnic and University graduates because as noted by Ojewale (2008), there is disparity on the salary grade and position of responsibility between the Bachelor's Degree holder and Higher National Diploma (HND) graduates in government ministries and parastatals. The author is of the view that such discrimination is not healthy for a country like Nigeria that is still in search of technological advancement. The author has also observed that the low societal value placed on polytechnic education has made qualified students for science and technology programmes to rush to university for more "honourable programmes and certificates".

THE AKWA IBOM STATE POLYTECHNIC IN PERSPECTIVE

The year 1991 saw the birth of Akwa Ibom State Polytechnic perhaps as a child of circumstance following the creation of the State in 1986 to absorb staff and students from Akwa Ibom State who suddenly lost relevance in the polytechnic, Calabar Ibok

(1998). One of the major aims and objectives of the polytechnic is to provide courses of instruction, training and research in applied science, technology, commerce, business management and such other fields of learning as the polytechnic may from time to time determine having regard at all times to, the manpower need of the state in particular and of the Federation in general. Although some progress have been made over the years, like the accreditation of programmes in school of Business and Management studies and some Engineering programmes, there are still many other programmes yet to be visited by National Board for Technical Education (NBTE).

However, unfolding events suggest that progress in its development has been anything, but abyssal. As it is the case with some polytechnics, the institution has been plagued with lack of adequate research funding and enabling environment, lack of research facilities, deteriorating infrastructure, inadequate staff and staff welfare programmes among others. All these problems may not be unconnected with inadequate and irregular funding. As put forward by Ayua (2006), funding has been a major factor against the development of technology education.

Without adequate funding, equipment cannot be supplied, laboratories/studios cannot be equipped and maintenance or replacement of damaged equipment or components cannot be done when necessary. The implication here is that a student who trains under this condition loses the orientation of the use of machinery and the skill that would have been acquired and transmitted for industrial functioning. According to Etim (2006), explaining the funding pattern of Akwa Ibom State polytechnic between (1999-2006), it was observed that there had been unfavourable release of funds to the institution over the years (Table 1).

Table 1: Funding Pattern of Akwpoly (1999 - 2005)

Year	Capital Allocation	Capital Release	% of Release Over Allocation
	₦	₦	
1999	10,000,000	7,8441400	78.44
2000	35,000,000	12,000.00	34.29
2001	110,000,000	12,758,696	11.60
2002	60,000,000		
2003	50,000,000	23,2000.000	46.40
2004	95,000,000	95,000.000	100
2005	70,000,000		
2006	100,000,000		

Source: Etim (2006)

Apart from 1999 and 2004 when the Institution had 78.44% and 100% release of allocation respectively, which were commendable, all other years were very poor some years no allocation was released. However, from observation a lot of things have changed in the current dispensation, especially in terms of infrastructural development. Over the last four years, from 2010, the campus landscape has taken a new shape through the inter-ministerial direct labour programme of the government;

classroom blocks have been massively renovated and rehabilitated, road networks have been constructed in the polytechnic, many offices have been furnished and laboratories equipped. This has contributed to the re-accreditations by National Board for Technical Education of some courses in the school of environmental studies, engineering, applied sciences and communication arts. The presence of Tetfund assisted classroom blocks construction which is on going in the school is also commendable. Despite these achievements, much still need to be done in view of the increase in students seeking admission into the polytechnics. There is need for more classroom blocks, laboratories, equipment and teacher training. There is no doubt that finance is a determining factor, without which it would be difficult to really fill the impact of technology education because it is capital intensive.

CONCLUSION AND RECOMMENDATIONS

From the foregoing, it has been made know n that polytechnic education holds the key for promoting science and technological development in Nigeria. Polytechnic education empowers youths by training them to make use of their brains and hands to acquire suitable knowledge and skills for self-reliance and economic development of the individual and Nigeria at large. Unfortunately, under-funding was identified as being the major obstacle to achieving the lofty aims and objectives of polytechnic education. Without functional polytechnic education the probability of realizing any serious technological advancement in Nigeria is a mirage.

It is a common opinion that government alone cannot fund education without the involvement of the private sector. The author shares this view. However, it should be noted that, Nigeria is a developing economy and the private sector is not as vibrant as their counter-part in the developed economy. Therefore, much should not be expected from the private sector. Government remains the greatest sponsor of education in Nigeria because it is capital intensive.

Since most polytechnics lack the much desired equipment, machineries in workshops, laboratories for comprehensive training to prepare their graduates for the labour market, there is need for school/industrial partnership to be properly exploited. One of the basic techniques of consolidating school/industry partnership is by laying emphasis on SIWES programmes (Ayua 2006). The institutions are expected to link up with the supervising agency on work experience which is industrial training fund for monitoring effectiveness of the programme. As part of their roles in the scheme employers of labour are required to accept students and assign them to relevant on the job training and secondly, attach experienced staff to students for effective training and supervision (Sunday 2006). With the ever increasing number of Polytechnic enrollment, government should also create the needed environment for industrial establishment so as to accommodate intending SIWES students. Through such partnership, students would be able to acquire appropriate technical skills required for the specific job and the students would be able to appreciate the world of work thereby enhancing labour dignity.

The Federal Government should lift career ceiling on polytechnic education and bridge the remuneration and position of responsibility gabs between polytechnic and University graduates, which has always been in favour of the latter. One way of doing this as suggested by Ukachuckwu, J. and Ukachukwu, C. (2006) is to establish a polytechnic post graduate school and appropriate qualification awarded so as to qualify such a graduate to become full-fledged Engineers and Technologist that will make impact in the nation's technological arena. Moreso, if polytechnics are allowed to run degree programmes much value would be attached to polytechnic education by both the students and society at large. In view of the above, if Nigeria must keep pace with the rest of the world in this era of global competition via technological development, these propositions as condensed should be taken into consideration.

i. Adequate funding of polytechnic education by both the Federal and State government should be a priority. Importantly, the 26 percent of annual budget recommended by UNESCO should not only be targeted but should be exceeded if education is to remain a social service.
ii. The government should ensure that the provision of adequate equipment, functional workshops, laboratories and infrastructural problems in the polytechnics are properly addressed while maintenance culture should be emphasized.
iii. Multinational Companies should also assist in providing infrastructure and equipment.
iv. Salaries, Wages, condition of service and incentives must be improved to attract and retain technologist, engineers and technicians.
v. Entrepreneurship in terms of SIWES should be made compulsory and should be effectively funded and monitored throughout a course of study at all levels.
vi. Career progression ceiling should be lifted through the upgrading of qualified polytechnics to degree awarding tertiary institutions of technology.
vii. Heads of polytechnics should always be carried along in all government intervention policies for proper accountability.
viii. Government should muster the political will to implement polytechnic education policies.

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