

# THE STATE OF POLYTECHNIC EDUCATION IN NIGERIA

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## **Abstract**

This paper examines the state of Polytechnic Education in Nigeria in line with the current problem of lack of interest in Polytechnic education by the youth, discrimination against polytechnic graduates in the labour market and the lip-service paid to polytechnic education by the Federal Government. The paper goes further, to look at the examples of some selected foreign countries that had similar problems in polytechnic and university education in the past and how they were able to solve them. In this regard, the example of the United Kingdom falls in line with the current reforms and consolidation in education in this country. Therefore, it is the view of this paper that the infrastructure, and manpower of the four polytechnics recommended by the Presidential Technical Committee on Consolidation of Tertiary Institutions, as Technical Universities, be inspected by the National Universities Commission with a view to granting them university status, if they are successful,

## **Introduction**

Education is a process of training and instruction which is designed to give knowledge, skills and develop the character of the learner. Urevbu (1990), sees education as the total process of human learning by which knowledge is imparted, faculties trained and skills developed. According to the National Policy on Education (2004) the Federal Government of Nigeria adopted a national policy on education as a way of realizing that part of the national goals which can be achieved using education as a tool.

Section 8 of the National Policy on Education (2004), deals with Tertiary Education of which the Polytechnic is one. Sub-section 59 of the same document states the goals of tertiary education as follows:

- Contribute to national development through high level relevant manpower training;
- Develop and inculcate proper values for the survival of the individual and society;
- Develop the intellectual capability of individuals to understand and appreciate their local and external environments;
- Acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society;
- Promote and encourage scholarship and community service;
- Forge and cement national unity and
- Promote national and international understanding and interaction.

Although the above aims of technical educational of which the Polytechnic education falls into are laudable, there is societal bias against Polytechnic Education in Nigeria. With this bias, there is increasing lack of interest in polytechnic education in Nigeria coupled with the dehumanizing discrimination against polytechnic graduates by public and private sector employers.

## **Historical Perspective of Higher Education**

Higher education covers the post-secondary section of the national education system which is given in Universities, POLYTECHNICS, Colleges of Technology, Colleges of Education, Advanced Teachers' Training, Correspondence Colleges and such institutions as may be allied to them.

Nigeria's first institution of higher learning according to Odeyemi (2002), was the Higher College Yaba which was opened in 1930, but it began operation in 1934 to provide instructions in medicine, engineering, agricultural and teachers' training at sub-degree levels. Later in 1952, the Nigerian College of

Arts, Science and Technology was established with branches in Ibadan, Zaria and Enugu to provide Diploma courses in Accountancy, Surveying, Architecture, Estate Management, Pharmacy, Secretaryship and Teachers' Training. Technical Institutes at Enugu and Kaduna (1958), Ibadan (1960), Auchi (1964), were later established and upgraded to Colleges of Technology in the mid -1960 following the demand for intermediate and higher technical personnel needed for post civil-war reconstruction and rehabilitation work, as well as to respond to the wealth arising from the oil boom. Odeyemi (2002) asserts that the number of these institutions rose from nine in 1973 to twenty-seven in 1985. The colleges metamorphosed into polytechnics in 1987, as a result of government's decision to streamline the nomenclature of technical institutions. Furthermore, Odeyemi (2002), has these to say:

Today there are about 48 polytechnics in Nigeria. Polytechnic Education was conceived by the French and perfected by the English and the Russians to be a system based on work and training and aimed at discouraging elitism and geared towards the practical preparation of its recipients to fulfill prescribed norms of-the economy which the traditional academic institutions do not address.

However, in spite of this seemingly and relatively high numbers of Polytechnics plus colleges and universities of technology in Nigeria, the nation still faces the stark realities of a pathetically poor technology base. The effects of poor technology manifest in all fronts ranging from poor economy to inability to properly maintain facilities inherited from colonial masters.

### **Historical Role of Polytechnic Education**

The historical role of the polytechnic is to provide intermediate technical education programme. However, the free encyclopedia (2007), has these to say:

Polytechnic type of institutions of tertiary education survived in many countries and there is often not the same distinction between polytechnics and universities that was seen in Finland, Malaysia, Portugal, Singapore or the United Kingdom among other places. All over the world, after many legal and curricular reforms, some polytechnics are often seen today as being quite similar to universities in terms of standards and quality.

Furthermore, the free encyclopedia (2007), asserts that:

In some places, a number of polytechnics providing higher education are simply a result of upgrading from its original and historical role as intermediate technical education schools. In some situations, former polytechnic or other non-university institutions have emerged through administrative change of status which often included a name change • with the introduction of new designations like -Institute of Technology, University of Applied Science or University of Technology

### **Structure of Polytechnic Education in Nigeria**

The term polytechnic comes from the Greek word 'poly' meaning "many" and 'tekhnikos' meaning "arts". The polytechnic in Nigeria is structured in four years duration of two years National Diploma (ND) and two years Higher National Diploma (HND) with a mandatory one year industrial attachment between National Diploma and Higher National Diploma level.

In Nigeria and elsewhere, the polytechnic education is fashioned to be of lower status to the university. Therefore, the society sees polytechnic education as inferior despite government palliative declaration that first degree holders and HND holders are equal.

Ezenwa, Obaja and Ojugbile<sub>v</sub> (2002), have these to say:

No matter what anyone may feel about it, it is an already accepted norm that polytechnic education is inferior. Even parents, guardians

and students themselves acknowledge this. They vow not to have anything to do with polytechnic education. Some go to the polytechnics as a matter of last option - when their efforts to get university admission fails to materialize.

Ezenwa, Obaja and Olugbile (2002), reflected on the fact that the syllabi of polytechnics as compared to those of the universities seem to be the same. According to them, in technical and technological areas like engineering or business courses like accounting, the polytechnics appear to be more detailed and relevant. The question is - why should there be dichotomy? Writing in a similar manner, Chibueze (2005), asserts thus:

The polytechnic system in Nigeria by the way it is structured has no room for the ambitious and definitely not for the present day adventurous youth. That obviously explains the apathy the youth have shown towards polytechnic education in the last few years. From 215,000 (JAMB) applications by candidates for admission into polytechnics in the 2004/2005 session, the number of JAMB candidates dropped to 15,000 in the 2005/2006 session and the number is still decreasing.

Chibueze (2005), asked a question, why maintain a system that is becoming steadily unpopular? He concluded by saying that government should close polytechnics if they feel their products are no longer useful to the nation in line with the aims of the National Policy on Education stated above.

### **The Structure of Polytechnic Education in Some Selected Foreign Countries**

In line with the current reforms and consolidation in Education in Nigeria, it is necessary at this stage to look at the relationship between polytechnic education and university education in some selected countries of the world as compared to Nigeria.

The free encyclopedia (2007), has these to say:

The emergence of so many upgraded polytechnics or former vocational education and technical schools converted into more university- like institutes of technology, polytechnic universities, universities of applied science or universities of technology has caused concern in many countries where the lack of specialized intermediate technical professionals lead to industrial skill shortage in some fields - being also associated to an increase of the graduate unemployment rate. However, this is mostly the case in some countries where the education system is not controlled by the State and everybody can award degrees.

Below is the structure of polytechnic education in some selected foreign countries as documented by the free encyclopedia (2007).

#### **Finland**

The focus of polytechnic education in Finland is on studies leading to bachelor degree, particularly in technology. After 1st January^ 2006, some Finnish institutes of technology changed the English term polytechnic to the term University of Applied Sciences in their official name - "Ammallikorkeakoulu."

#### **Hong Kong**

The polytechnics in Hong Kong award diplomas, higher diplomas, as well as academic degrees. Like the United Kingdom the two polytechnics in Hong Kong were granted university status in 1994 and 1995 respectively and renamed the Hong Kong Polytechnic University and City University of Hong Kong. The Hong Kong University of Science and Technology, a university with a focus in applied science, engineering and business was founded in 1995.

#### **United Kingdom**

The aim of polytechnic education in United Kingdom was to teach both academic and practical subjects. Their focus was applied education for work and their roots concentrated

on applied science, though some after being founded, also created departments concerned with the humanities. Under the Further and Higher Education Act, 1992 they became fully fledged universities. The United Kingdom government recognized that the difference between polytechnics and university had become irrelevant and confusing. The division between universities and polytechnic was known as the *binary divide*. Academic degrees in polytechnics were validated by the *Council of National Academic Awards (CNAA)* from 1965 to 1992. The CNAA was chartered by the British Government to validate, and award degrees and maintain national quality assurance standards. A CNAA degree was recognized as equivalent to a university degree and the courses were under strict scrutiny by assessors external to the Polytechnics. After 1992, the Polytechnics (new universities) awarded their own degrees. Sub-degree courses at these institutions were validated by the Business and Technology Education Council (BTEC). Many of them continue to offer BTEC qualifications. The polytechnics changed their name when they gained university status. Some simply dropped "Polytechnic" and added "university" to their titles except where there was another university with a similar name in the same locality; hence the most popular choice of title may be "Metropolitan" or "City". For example, City University of Auchi or Metropolitan University of Lagos or Yaba,

### United States

A handful of American universities include the phrases "Institute of Technology", "Polytechnic Institute" "Polytechnic University", or similar phrasing in their names. These are generally research intensive universities with a focus on science and technology. We have elite schools such as the California Institute of Technology and Massachusetts Institute of Technology.

### Institute using the Terms "Institute of Technology" or Polytechnic" (University Level)

There are many Institutes of Technology or Polytechnics that award academic degrees, highest academic degrees (including doctorate). They use the terms "Institute of Technology" or "Polytechnic" for historical reasons. They are as follows:

- Arkansas Tech University, Russellville, Arkansas, USA.
- British Columbia Institute of Technology, British Columbia, Canada.
- California Polytechnic State University, (Cal Poly or Cal Poly SLO), San Luis Obispo, California, USA.
- California State Polytechnic University, Pomona (Cal Poly Pomona), Pomona, California, USA.
- California Institute of Technology (Caltech), Pasadena, California, USA. -
- Dublin Institute of Technology, Dublin, Ireland.
- Florida Institute of Technology (Florida Tech), Melbourne, Florida USA.
- Georgia Institute of Technology (Georgia Tech), Atlanta, Georgia, USA.
- Hong Kong Polytechnic University.
- Illinois Institute of Technology (IIT or Illinois Tech), Chicago, Illinois, USA.
- Indian Institutes of Technology (IIT) - (7 institutes across India).
- IIT Bombay, Bombay, India.
- IIT Delhi, Delhi, India.
- IIT Guwahati, Guwahati, India.
- IIT Kanpur, Kanpur, India.
- IIT Kharagapur, Kharagapur, India.
- IIT Madras, Chennai, India.
- IIT Roorkee, Roorkee, India
  
- Indiana Institute of Technology-(Indiana Tech), Fort Wayne, Indiana, USA.
- Iowa State University of Science and Technology (Iowa State), Ames, Iowa, USA.

- Institute National Polytechnique de Grenoble, France.
- Lawrence Technological University (Lawrence Tech+),~ Southfield, Michigan, USA.
- Louisiana Technological University, Ruston, Louisiana, USA.
- Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts, USA
- Michigan Technological University (MTU or Michigan Tech), Houghton, Michigan, USA.
- Montana Tech of The University of Montana, Butte, Montana, USA.
- New Jersey Institute of Technology (NUT), Newark, New Jersey, USA.
- New Mexico Institute of Mining and Technology (New Mexico Tech), Socorro, New Mexico, USA.
- New York Institute of Technology (NYIT), Old Westbury, NY, USA.
- Politecnico di Milano, Italy.
- Politecnico di Torino, Italy.
- Polytechnic University of New York (Poly), Brooklyn, New York, USA.
- Polytechnic University of Puerto Rico.
- Rensselaer Polytechnic Institute (RPI), Troy, New York, USA.
- Rochester Institute of Technology (RIT), Rochester, New York, USA.
- Rose-Hulman Institute of Technology (RHIT), Terre Haute, Indiana.
- Saint Petersburg Polytechnic University, Saint Petersburg, Russia.
- South Dakota School of Mines and Technology (Mines), Rapid City, South Dakota, USA.
- State University of New York Institute of Technology (SUNYIT), Utica, New York, USA.
- Stevens Institute of Technology (Stevens Tech), Hoboken, New Jersey, USA.
- Swiss Federal Institute of Technology, Switzerland.
- Technion Israel Institute of Technology, Haifa, Israel.
- Tennessee Technological University (Tennessee Tech), Cookeville, Tennessee, USA.
- Texas Tech University, Lubbock, Texas, USA.
- Tunisia Polytechnic School (EPT), Tunisia.
- Universitatea Politecnica Bucuresti, Romania.
- Universidad Politecnica de Madrid, Spain.
- Universitat Politecnica de Catalunya, Spain.
- University of Minnesota, Institute of Technology, Minneapolis-St. Paul, Minnesota, USA.
- University of Wisconsin-Stout, Menomonie, Wisconsin, USA.
- Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, Virginia, USA.
- Waterford Institute of Technology (WIT), Waterford, Ireland.
- West Virginia University of Technology (WVU Tech or West Virginia Tech), Montgomery, West Virginia, USA.
- Worcester Polytechnic Institute (WPI), Worcester, Massachusetts, USA.

Source: [www.wikipedia.com](http://www.wikipedia.com), the free encyclopedia, (2007).

### **State of Polytechnic Education in Nigeria**

Polytechnic education in Nigeria is in a poor state. The sector like every other educational sector is bedeviled with lack of infrastructure, outdated equipment and tools, chairs and tables for learning. Others are low funding, lack of staff development, lack of research grants, lecturers' strike, examination malpractices, decline in students' enrolment through Joint Admissions and Matriculation Board (JAMB) examinations, discrimination faced by lecturers and students, discrimination in

the labour market for holders of the Higher National Diploma (HND), decline in the general quality of teaching, low standards, as well as graduates preparation for the workplace. There is the student angle of cultism and corruption on the part of students and lecturers at all levels of Education in Nigeria. Olufemi (2003), says that, this unfair discrimination against Polytechnics has extended to all categories of polytechnic graduates, in spite of the high grade scored in school. According to him, an HND holder with upper credit in Land Surveying and Geo-Information saw an advert in a National daily requesting application from suitably qualified graduates to fill the vacant positions in a multinational firm. Getting to the firm to submit his application, he was shocked beyond words when he saw a bold notice at the reception room with the inscription - "HND holders need not apply". The applicant left disappointed and dejected. Olufemi further says that:

This is the plight of polytechnic graduates in the competitive Nigeria labour market. They often have to put up with these under-estimations and most times, disdainful treatment from employers of labour.

### **Recommendations**

Polytechnic education students-" and graduates have suffered a lot of discrimination in Nigeria to the extent that polytechnic students and graduates cannot hold their heads high in public places. In order to put a stop to this discrimination, the following recommendations are made:

1. The Federal Government should copy the examples of Finland, Hong Kong and United Kingdom where polytechnics were granted university status to award degrees.
2. The infrastructure and manpower of the four polytechnics and six Colleges of Education recommended by the Presidential Technical Committee on Consolidation of Tertiary Institutions should be inspected by the National Universities Commission with a

view to granting them university status, if they are successful.

3. The Federal Government needs to go beyond the lip-service it pays to Polytechnic Education in this country. There should be a policy change through an Act of the National Assembly and Establishment Circulars to all Ministries and Government Parastatals to remove the dichotomy between polytechnics and universities instead of the present palliative approach to bias against polytechnic education and its stakeholders.
4. Decisions reached at Education Summit should be implemented by the Federal Government instead of wasting public funds to organize Education Summit just to pacify academic staff in tertiary institutions.

### **Conclusion**

The state of polytechnic education in" Nigeria leaves much to be desired. There "is a general lack of interest in polytechnic education in Nigeria resulting from the societal view of regarding any certificate outside the university as inferior. There is also the fact that the university is the highest level of educational institution where everybody including the youth aspires to go.

The experience in other countries, especially in the United Kingdom where Nigeria copied her type of education from is instructive<sup>1</sup>. Like the case of the United Kingdom, 'there is now the general awareness in Nigeria that the difference between polytechnics and universities had become irrelevant and confusing. In fact, the two institutions should complement each other. This is where the current reforms in education in Nigeria become necessary. It is the hope of the stakeholders in polytechnic education.(Lecturers, staff and students) that the Federal Government will approve the conversion of four Polytechnics and six Colleges of Education to full-fledge Technical Universities and Education Universities respectively as recommended by the Presidential Technical Committee on Consolidation of Tertiary Institutions.

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