MAINSTREAMING THE NIGERIAN POLYTECHNIC SYSTEM INTO NIGERIA'S GROWTH AND DEVELOPMENT PLAN

By

Professor (Mrs.) C.U. Njoku
Dean, School Of Postgraduate Studies
Gregory University, Uturu
Abia State.
Nigeria

INTRODUCTION

The debate over granting of equal opportunities to Polytechnics and Universities in Nigeria has been an on-going one. This debate is not anchored on any attempt to allow Polytechnics deviate from their original mandate of producing men and women who are equipped with enough technical skills to be able to contribute meaningfully to the national growth and development process. It is rather anchored on the need to accord equal status to both the Polytechnics and Universities in the award of degrees in purely technical areas, and in so doing, also accord equal status to the products of these tertiary institutions, staff career progression and other conditions of service as well as the job opportunities open to their graduates.

Government has made past efforts to streamline the dichotomies with a view to eliminating them. This, it has done, through several Committees and policy documents, (Ademokun 1982, Gray Longe 1990, Justice Kanu Anya 1992, Justice Kayode 1993, Etsu Nupe 1996 and Adamu Yabani 1999, the Ahmadu Rufai Mohammed and Nwaobiala, 2014. But they have remained largely unimplemented and the dichotomies continue to exist.

The concern in this paper is: *to examine the nature and extent of these dichotomies between the polytechnics and university;*

review governments past efforts at eliminating them and advocate speedy implementation in the overall interest of growth and development of Nigeria economy. Before undertaking all the above, it is important to clearly explain the concept of mainstreaming as applied to the Polytechnic and University systems in Nigeria. This is because this concept is often misunderstood even by experts.

The concept of Mainstreaming.

Mainstreaming in this context is placing every student on equal stand and giving each one the same opportunities as other students to access instruction, gain knowledge, grow as an individual and participate in the academic and socializing environment that an academic institution provides. It follows that students with additional support needs are placed into an environment with those without additional support needs. This gives the student a sense of belonging, fulfillment, acceptability and advancement into the future.

Hence, the word mainstreaming is duly appropriate to discuss the Polytechnic education as the topic suggests.

- **Existing Cases of Dichotomy Between Polytechnics and Universities**

According to the National Policy on Education (2019) as amended, the function of the polytechnics is "to provide full-time and part-time courses of instruction and training to produce middle and high-level manpower in technology, applied sciences, commerce and management". Emphasis is on the training of middle level manpower as technicians and management leading to the award of National Diploma as well as high level manpower leading to the award of Higher National Diploma as well as advanced professional diploma.

Currently, there are all together 152 Polytechnics in Nigeria. 38 of these are Federally owned, 49 are owned by State and 65 are privately owned (NBTE, News August - September, 2021). All these are under the supervision and regulation of the National Board for Technical Education (NBTE).

Initially, the requirements for admission of students into Polytechnics were slightly lower than those for Universities. So also were the requirements for employment, particularly for academic staff in these institutions.

As time progressed and entry requirements continued to change and came at par to those of Universities, agitations for equality of treatment began to emerge. This is even more when academic staff in the Polytechnics needed to and began to acquire higher degrees as requirements to qualify to teach. The dichotomies became more and more evident.

There were dichotomies in the award of degrees. While the Universities have the mandate to award degrees in their relevant fields, Polytechnics can only award National and Higher National Diploma Certificates. There are also dichotomies in: procedures for appointment of Chief Executives, employment process, funding, visitors to institutions, etc. Furthermore dichotomies exist in academic staff progressions. While universities have the powers to award Professorships, Polytechnics do not have, and can only advance academic staff up to the rank of Chief Lecturer.

The argument often made by some academic is that staff of Polytechnics who hold doctorate degrees often teach on part-time basis in Universities, are therefore part graduating degree students. Why can't they also graduate degree students from Polytechnics and even be promoted to the rank of Professor in their own institutions. The Ahmadu Bello University, Zaria, is currently running a Diploma programme at the Ordinary and High levels with NBTE regulating. Why can't NUC regulate Degree programmes in Polytechnics even when some NUC members visit

Polytechnics to accredit them for degree awarding status in some programmes but in affiliation to Universities?

The Universities of Technology established in 1980 have since turned to conventional Universities. This has left the coast clear for Polytechnics to step up and award degrees in Technical areas and programmes.

In view of the age long perception against Polytechnics, our nation should consider transforming our Polytechnics to Technical Universities, like in Ghana and the rest.

The point being made therefore, is that most Polytechnics in Nigeria have the qualified staff and facilities to function as universities and offer degree programmes. A striking revelation is that some Universities use the facilities of near-by Polytechnics for their students' research thereby building relationships in terms not only in the growth of the human person but also on national development.

When it comes to employments in the public services, graduates of Polytechnics are also given unequal treatment with their counterparts from the universities. For instance, in the administrative cadre, while degree holders are employed as Administrative Officers, holders of Higher National Diploma (HND) are employed as Executive Officers and made to work under the supervision of their peers who hold degrees.

This type of discrimination does not exist in private, non-governmental organization where merit and job performance are the primary determinant of job placements and assignment of responsibilities. Consequent upon this, came the problems of: identity, self imposed discriminatory practice, little attraction to candidates, inconsistent government policies, non implementation of reports of various Committees and non award of degree certificates as reported by Fabunmi (2003), Sanni and Akinpelu (2005), Oduwobi (2006) and Ezekwesili

(2006). All these are critical factors that can cause imbalance in a system that has an already established shaky foundation.

There is yet no empirical evidence that graduates of Universities out-perform those of Polytechnics. In fact feedback from many employers of labour, particularly in the private sector indicate a strong preference for Polytechnic graduates over their Universities equivalents.

Even with respect to funding, there are discriminating practices. Budgetary allocations, on an annual basis, are usually higher for Universities than for Polytechnics, even when facilities required by universities may not be larger and superior to those of Polytechnics.

These discriminatory practices are as a result of long-standing societal prejudices that create the wrong impression that Universities are in all ramifications superior to Polytechnics.

Besides, most operators of the system and educational establishments are graduates of Universities who have developed unjustified superiority complexes over the Polytechnics. This may account for the inability to faithfully implement various recommendations of the Committees set up by government over the years urging an end to the existing dichotomy between the Universities and the Polytechnics.

IMPACT OF THE PREVAILING DICHOTOMY

It is important to highlight here some of the prevailing impact on the individuals, families and on the nation as a whole.

- Low self esteem on the part of graduands
- Non registration of graduates of Polytechnics by some Professional Bodies.
- Non admission of Polytechnic graduates to Postgraduate Studies by some Universities.
- Manpower migration from Polytechnics to Universities.
- Low productivity and contribution to the nation's economy by Polytechnic graduates.

- Endless search for admission into the University leading to frustration, rejection and abandonment.

- **Efforts at Eliminating Dichotomy**

Government, at the federal level and some relevant stakeholders have, in the past taken a number of initiatives in a bid to address the currently existing dichotomy between the products of Universities and Polytechnics.

In 2014, for instance, a Technical Committee on the Removal of Ceilings on Career Progression of HND and Dichotomy between the HND and Degree Holders, set up by the Federal Ministry of Education (FME), had recommended the institution of a bridging programme for holders of Higher National Diploma (HND) that brings them at par with first degree holders from universities in terms of career progression. Similarly, in 2016, the National Council on Establishment approved the removal of entry level discrimination against HND holders in the Public Service.

With such bridging programmes sustained, the Committee recommended the abrogation or removal of dichotomy between HND and Degree Holders such that HND holders could progress to GL 17, while also being enabled to attain the maximum grade level in the Civil Service. This would require changing the classification of HND holders in the Scheme of Services of various Public Services Establishments.

Ultimately, these recommendations were to be presented for Federal Executive Council for approval and transmission to the National Council on Establishment for appropriate implementation.

To date, these recommendation have not been faithfully and fully implemented, and so the dichotomy and associated agitations have continued unabated.

It is important to note, at this juncture, that more wide-ranging recommendations covering such other areas as harmonization of entry requirements, review of programme duration, registration criteria by Professional Bodies, the need for Polytechnics to offer degree

programmes, funding, appointment of Professors as Rectors, conduct of one single entrance examination by the Joint Admission and Matriculation Board (JAMB), for prospective candidates into Universities and Polytechnics etc. have been made by a Committee on Modalities for Removal of Ceiling on Career Progression of HND/Holders, set up in 2006, by the then Executive Secretary of the National Board for Technical Education (NBTE). Added to all these is the Senator Akinyelure's Bill against HND discrimination has been passed by the Nigerian Senate, awaiting concurrence at the House of Representatives.

These recommendations have also suffered from poor and inadequate implementation. This has fuelled speculations ***of systematic and in-built bias by key operators of the Public Services***, who, themselves, are products of the Universities.

One is tempted not to believe this, but the question is, why the delay or withholding of full implementation?

- **International Experiences With Foreign Polytechnics.**

  A number of developed countries, particularly in Europe, America and Canada, operate Polytechnic Universities that are degree-awarding, most of them started as non-degree awarding institutions, but later upgraded to degree awarding institutions. Nigeria has a lot to learn from such institutions in her quest to develop degree-awarding Polytechnics, (**Appendix 1).**

  Many Polytechnics in Europe that are engineering and applied science oriented started as mergers of a number of vocational schools. They now offer degree programmes up to Master and Doctorate levels.

  In New Zealand, there are polytechnics that offer a wide range of programmes up to degree in various disciplines and are called Institutes of Technology. They also offer Bacheor's degree programmes, while getting involved in research in technological areas.

In 1904 the Polytechnic University in the Philippines was established to offer courses and programmes leading to officially recognised higher education degrees such as pre-bachelor degrees (certificates, diplomas, associate or foundation), bachelors, Masters and Doctorate degrees in several areas of study. This is its 115 years of existence and is the country's first Polytechnic University.

Also in Australia, there are post-secondary educational institutions that are degree-awarding and are designated as Institutes or Universities of Technology rather than Polytechnics.

A similar situation exists in the United States of America where a number of Post-secondary institutions that claim to be career-focused, and technology-based, adopt hands-on approaches to learning with emphasis on real-life and problem-solving skills. Many of these, offer only engineering technology as opposed to pure engineering. The more prestigious of them offer bachelors and post-graduate degrees.

In Canada, there are Polytechnics whose degree programmes have emerged as an extension of their technical diploma programmes. In the United States and United Kingdom, engineers collaborate extensively with technologists in the performance of engineering jobs, without any form of discrimination.

In Malaysia, there are Polytechnic Universities referred to as Institutes of Technology, Technological University, Technical University, University of Technology, Technological Educational Institute, Polytechnic University, etc. The origin of Polytechnic Universities in Germany which are known as Technical Universities dated back to 18th and 19th centuries. The process for which the Technical Universities emerged where well articulated bearing in mind the then prevailing circumstances, courses, environmental issues and other social influence. All these considerations are not far from what is being said here today which needs to be handled if we are to be like the rest of the world. For instance, Germany has at

least 17 Technical Universities, **(Appendix II).** They have Technical Universities in Munich, Berlin, Dresden, Hamburg-Harburg, Darmstadt, etc. These Universities are highly specialized Universities and are categorized alongside other research Universities but specialized in STEM (science, technology, engineering and mathematics), research. However, they offer programmes in other subject areas with well designed and focused curriculum that lead to acquisition of functional skills.

Korea has its own Polytechnic University in South Korea established in 1998 with well defined structured programmes that meet its objectives which is geared towards developing professional technical manpower with strong field adaptability through practical training. This was through the support of the Ministry of Commerce, Industry and Energy.

Belarus which is in Soviet Union has the Belarusian National Technical University (BNTU) which is the major Technical University in Belarus. It was renamed severally (1. Belarusian State Polytechnic. 2. Belarusian Polytechnic Institute, 3. Belarusian State Polytechnic Academy). It underwent several surgeries before arriving this stage. All these were necessary they needed to have functional education that would meet future needs of individuals and the country.

- **Basic Characteristics of Polytechnic Universities**

  There are certain basic characteristics of Polytechnic Universities which makes them unique in addressing the developmental needs of a developing country like Nigeria.

  Usually, they are career-focused and responsive to the educational needs of their communities. This response to community needs is enhanced by partnerships entered into with industries and other employers of labour.

They also have practical-orientation, that are highly interactive and adopted technologically advanced pedagogical approaches to teaching and learning.

In addition, they provide a wide variety of course offerings covering many fields of endeavour and awarding degrees, diplomas and certificates.

Most of the research conducted by the institutions are of applied nature, address real life problems that benefit industries and the wider community, with a feedback mechanism for both teaching and professional practice.

Their programmes also emphasize personalized small group activities that address current practices and future needs of industries. There is combination of theoretical work and industrial work experience that are intertwined with applied research and commercialization of research findings.

Majority of the students in all the programmes are provided with community-based and laboratory-based learning experiences that give greater relevance to their studies.

- **MAINSTREAMING POLYTECHNIC EDUCATION INTO NIGERIA'S GROWTH AND DEVELOPMENT PLAN**

    In the first instance, this paper is essentially an advocacy paper. It is an advocacy for the immediate full and faithful implementation of the plethora of recommendations of various Committees and Commissions set up by Government and its agencies on the removal of the dichotomy between the Polytechnics and Universities in Nigeria. This is because, if we want to get the best from individuals that will help in the development of the nation, there is need to reduce conflicts arising from incidence of inequality and discrimination. This social influence caused many Polytechnics in United Kingdom to end the era of Polytechnics and they received Royal Assent which gave Polytechnic

University status and degree awarding powers to their Polytechnics. This should be adopted and adapted to our own situation.

Special emphasis is placed on the upgrade of selected Polytechnics in Nigeria to degree-awarding status, to begin with.

Permit me to take the liberty to mention few of them, which, in my view are over-matured for such upgrading. Yaba College of Technology, Kaduna Polytechnic, Kaduna, Federal Polytechnic Nekede, Federal Polytechnic Auchi, Federal Polytechnic Ado Ekiti and other first and second generation Polytechnics are due for upgrading. We may need to infuse zonal or regional spread in establishing these Polytechnic Universities.

It is also urgent and important that the Federal Government should make proper pronouncements in the abrogation of all forms of disparities between Universities and Polytechnics in terms of condition of services of staff, career progression of their graduates, funding and other aspects spelt out in the various committee recommendations outlined earlier.

I urge the Federal Government to immediately set up a Technical committee on Mainstreaming of Polytechnic Education to see to the implementation of the recommendations of the NBTE Committee of 2006 and the Federal Ministry of Education Committee of 2014 seeking to eliminate dichotomy between the Universities and Polytechnics. Such a committee should be made up of the representatives of the Federal Ministry of Education (as the Secretariat), Head of Civil Service of the Federation, Federal Ministry of Labour and Employment; National Universities Commission (NUC); National Board for Technical Education (NBTE); Nigerian Labour Congress, Academic Staff Union of Polytechnics (ASUP); Ministry of Justice, Office of the Secretary to the Government of the Federation, and such other Ministries and agencies as the government may deem fit.

The National Assembly should collaborate with the Federal Ministry of Education in enacting relevant laws giving legislative backing to these changes. ***A time frame of six months will be most ideal for these processe***s. Thereafter, the Stakeholders like the NBTE, NUC, etc, be required to set up a Body to evaluate the existing Polytechnic curriculum in terms of relevance, adequacy and functionality. This will eventually create good scoring position for the country in the next Sustainable Development Goals ranking.

CONCLUSION

- That Nigerian Polytechnics have a major role in the educational and economic development of Nigeria has never been in doubt.

- Their contributions to the production and development of skilled middle and high level manpower that is badly needed for the industrialization of this country is well appreciated.

- However, for them to continue to play their key role in national development, they need to be accorded equal status with their University counterparts, through upgrading of a number of the well-established, well-equipped and internationally-acclaimed Polytechnics as have been identified in this paper.

- In addition, granting equal status to graduates of Polytechnics and Universities in public and private sector employment and career progression within the service will be a major moral booster to the Polytechnics and enhance their contributions to national growth and development.

- The Universities of Technology established in 1980 have since turned to conventional Universities. This has left the coast clear for Polytechnics to step up and award degrees in technical areas and programmes.

- In view of the age long perception against Polytechnics, we should start transforming our Polytechnics to Technical Universities, like in Ghana and others who have done same.

- Hence, it is now time for government, at all levels, to give greater impetus to the implementation of all existing recommendations leading to the mainstreaming of Polytechnic education into Nigeria's economic growth and development plans.

Thank you.

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APENDIX 1: Polytechnic Universities

- Hong kong Polytechnic University
- Florida Polytechnic University
- Romania Polytechnic University of Bucharest in Romania
- Institute of technology, institute of science and technology, technical university, university of technology, Indian institute of technology.
- China – Northwestern Polytechnic University
- Italy - Polytechnic University Milan
- Russia – Tomsk Polytechnic University
- Spain - Polytechnic University Eatabnia
- Spain - Polytechnic University of Valenaa
- Italy - Polytechnic University of Turia
- Turkey – Istanbul Technical University
- USA – Worester polytechnic institute
- Spain - Polytechnic University of Madrid
- Ghana – Accra Technical institute
- **Institute converted to technical university**
- Kumasis- Technical University (Kumasis Polytechnic)
- Accra Technical University (ATU) (Accra Poly) (1993) (1994)
- Cape coast Technical University (CCTU) formerly Cape Coast Poly
- Koforidia Technical University (KTU)
- HO Technical University (HTU) (Formerly HO Poly) 1993
- Takoradi Technical University (TTU) 2016
- Sunyani Technical University (STU) (Formerly Sunyani Poly)
- Bolgatanga Technical University
- Wa Technical University
- Angelia Polytechnic University UK
- California Poly State University Posnona
- Leads and Manchester Polytechnics to Metropolitan Universities
- Bristol Polytechnics to University of the West of England
- Thames and Central London Polytechnics to Greenwich and Westminster
- Liverpool Polytechnics to John Moores University
- Leicester Polytechnic to De Montfort University
- Birmingham Polytechnic now University of Central England.
- Leads and Manchester Polytechnics to Metropolitan Universities
- Bristol Polytechnics to University of the West of England
- Thames and Central London Polytechnics to Greenwich and Westminster
- Liverpool Polytechnics to John Moores University
- Leicester Polytechnic to De Montfort University
- Birmingham Polytechnic now University of Central England.
- City of London Polytechnic to London Guihail University
- Polytechnic of North London to the University of North London.

Appendix II: Technical Universities in Germany

- RWTH Aachen
- Technical University of Berlin
- Technical University of Braunschweig
- Technical University of Chemnitz
- Technical University of Clausthal
- Brandenburg Technical University (BTU) of Cottbus-Senftenberg
- Technical University of Darmstadt (TUD)
- Technical University of Dortmund
- Technical University of Dresden
- Technical University of Bergakademie Freiberg
- Hamburg University of Technology (TUHH)
- Leibniz Universitat Hannover
- Technical University of IImenau
- Technical University of Kaiserslautern
- Karisrushe Institute of Technology (KIT)
- Technical University of Munchen
- University of Stuttgart.

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