Repositioning Nigerian Polytechnic System for Academic Excellence

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Preamble
Chairman of the Occasion,
The Rector & Chairman of Expanded Management Committee,
Other Principal Officers & Members of Expanded Management Committee,
Academic Board members,
Faculty, Staff & Students,
Chairman & Members of the Convocation Lecture Committee,
Graduating Students,
Gentlemen of the Press,
Invited Guests, Ladies and Gentlemen

I am highly delighted to have the rare privilege of giving this lecture in commemoration of the 9th Convocation ceremony of this great institution. I am particularly happy to share my thought with the congregation on this topical issue of academic excellence in Nigerian Polytechnic System. This is a system that has the potential for revamping the national economy, yet relegated to the background to receive little or no attention. In addition, it has continued to suffer low societal estimation among the citizens, the government and the employers of labour to the extent that they discriminate against staff and students of the system.

1. What is Academic Excellence and Why should it be of Concern in the Nigerian Polytechnic System?

Excellence is a characteristic of an institution that empowers faculty, staff, and administrators to carry out university goals and purposes stated in its Mission, Shared Vision, and Strategic Plan. In more specific terms, academic excellence ensures assertiveness of the University's commitment to excellence in teaching and learning; scholarship, creativity, and service; the growth and development of its members; recruitment and retention of a diverse faculty and staff; shared governance; fiscal responsibility and stewardship of resources; and academic decisions guided by their impact on these university goals and purposes (IUN, 2005).

Like universities and other higher education institutions in the world, the core missions of the polytechnics are teaching, research, knowledge transfer and service (Federal Polytechnic Act, 1990). Also, polytechnic graduates are expected to compete with graduates of other higher education sector in the global job market. It is imperative therefore that managers of the polytechnics must ensure institutional and academic programme excellence.

Unfortunately, lack of dynamism in the National Board for Technical Education (NBTE)-approved curricula for Nigerian Polytechnic System makes the relevance and appropriateness of polytechnic education in the contemporary time doubtful. The

changing nature of work, technology, and competition in the global job market has far outpaced what the curriculum offers. For example NBTE is yet to finalize the revision of the curricula for all academic programmes in the polytechnic system after about thirty years of first publication in 1989. The purported "New NBTE Curricula" in circulation are mere working documents or drafts obtained from unorthodox sources or at least from members of the Curriculum Drafting Committees of various programmes.

Another justification for the call to attain academic excellence in our polytechnics is the increasing popularity of global mobility of faculty and students. This phenomenon now places pressure on all higher education institutions in the world to ensure excellence in delivery of their core missions. This is because every institution aspires to have a fair share of foreign income as international students in their enrolments. Indeed, informed candidates or prospective university students use as a guide, the World Universities Rankings Table in their choice of university for their proposed course of study. This perhaps is the reason for the global competiveness and emergence of World Universities Rankings phenomenon of the recent times. Global university performance tables resulting from the ranking process are used to judge research-led universities across all their core missions – teaching, research, knowledge transfer and international outlook.

The objectives of this paper therefore are to:
   a. Examine the concept of academic excellence and global rankings of universities and other higher education institutions that teach at least undergraduates;
   b. Appraise adequacy or otherwise of the institutional structures for conducting academic activities in the polytechnics and the problems associated with performance of these responsibilities;
   c. Make recommendations that will hopefully remedy the pitfalls identified in the institutional framework for discharge of the core mission of the polytechnics; and
   d. Finally, suggest strategies for repositioning of the Nigerian Polytechnic System for academic excellence.

2. Concept of Academic Excellence and the World Universities Rankings

There is no known agreed definition of academic excellence; it is elusive. However, all attempts and explanations of the meaning of the term assert the institutions' commitment to excellence in production of graduates with appropriate skills and right attitude to compete for jobs at the global job market. What is important is that students enter the global economy with the ability to apply what they learned in school to a variety of ever-changing situations that they could not foresee before graduating. That is the mark of a quality education and a truer indication of academic excellence.

Consequently, most higher education institutions are more committed to academic excellence in the delivery of their core missions. Also, they are conscious of World University rankings by external agencies and they desire to partake of the huge revenue income in foreign exchange derivable from global mobility of international students. I doubt whether any of Nigerian Universities or Polytechnics have non-Nigerian students making up to 1% of its total student enrolment for obvious reasons. On the contrary, Nigerian government is loosing substantial foreign

exchange as payment of school fees on her nationals schooling abroad in pursuit of better education standards. We can all imagine how much of the TETFUND grant intervention for capacity building is going into training of academic staff from Nigerian universities, polytechnics and colleges of education in foreign universities! Your guess is as good as mine.

Indeed, National Bureau of Statistics (2015) reported that Nigeria remain the largest source of students from sub-Saharan Africa to the United States of America, and that as at January 2012 6,568 Nigerian students were studying in over 733 regionally accredited U.S. colleges and universities.

The Times Higher Education World University Rankings are global university performance table to judge research-led universities across all their core missions – teaching, research, knowledge transfer and international outlook. Ranking Web of Universities (Webometrics Ranking) aim to promote web publication (e-journals, repositories) measures visibility and web presence of university faculty. If the web performance of an institution is below the expected position according to their academic excellence, university authorities should reconsider their web policy, promoting substantial increases of the volume and quality of their electronic publications.

World University Ranking employs performance indicators of academic excellence grouped under the following for the comprehensive and balanced comparisons trusted by students, academics, university leaders, industry and governments:

Performance Indicator grouping	Component	% Of the overall ranking score
Teaching	The learning environment	30
Research	Volume, Income and Reputation	30
Citations	Research Influence	30
Industry Income	Innovation	2.5
International Outlook	Staff, Students and Research	7.5

Other criteria used in ranking universities include: Quality of Education; Internationalization; size (Web size, Size of institution); Research Output (Google scholar; Impact (Link, Visibility, and Citations); and Prestige (Staff Nobel & Field).

However, Times Higher Education World University Rankings excludes universities if they do not teach undergraduates; if they teach only a single narrow subject; or if their research output amounted to fewer than 1,000 articles in five years (i.e. 200 a year). In some exceptional cases, institutions that are below the 200-paper threshold are included if they have a particular focus on disciplines with generally low publication volumes, such as engineering or the arts and humanities.

3. Overview of Institutional Structure for Conducting Academic activities in Nigerian Polytechnics

A fair assessment of how well the polytechnic system provides enabling environment to establish excellence in its core academic activities – teaching, research,

innovation, and knowledge transfer requires a critical review of its statutory functions and the following organizational framework.

a. Statutory functions of the Polytechnics and the Conditions of Service of Academic Staff

The Federal Polytechnics Act (1990) specifies that the polytechnic shall have powers and exercise such functions as:

   i.   To provide full-time and part-time courses of instruction and training:

   a. In technology, applied science, commerce and management; and

   b. In such other fields of applied training relevant to the needs of the development of Nigeria in the areas of industrial and agricultural production and distribution and for research in the development and adaptation of techniques as the Council may from time to time determine;

   ii. To arrange conferences, seminars and study groups relative to the fields of learning specified in paragraph (a) above;

   iii. To perform such other functions as in the opinion of the Council may serve to promote the objectives of the polytechnic.

However, the polytechnics are limited to mount programmes at National and Higher National Diploma levels and only in few cases professional (post-HND) programmes (Decree 16, August 1985).

In addition, the following provisions in the conditions of service for academic staff and guidelines on the curriculum seem to provide the necessary backing, impetus and motivation required by academic staff to undertake research activities in addition to teaching:

   i.   Academic staff must show evidence of productive research work as a pre-condition for promotion or advancement on the Salary Scale for Academic Staff in the polytechnic (CONPCASS). Hence, they are required to publish articles in learned journals and make presentations of scientific papers at national and international conferences. In addition, it is believed that this will enrich their intellectual horizon.

   ii. Instructors, technologists and technicians must show evidence of technological innovations and /or adaptations as a pre-condition for promotion.

   iii. In recognition of the fulfilment of the aforementioned functions, academic staffs in the polytechnics are given in addition to their normal salaries, a percentage of such salaries as Academic Allowances (i.e. Journal allowance, Learned Society allowance).

   iv. In partial fulfilment of the award of National and Higher National Diplomas, final year students of both programmes must complete research projects under the supervision of academic staff.

   v.   NBTE's specified curriculum which, is regarded a minimum guide syllabus allows flexibility such that examples of practical exercises can

be drawn from what is prevalent in the local environment. NBTE believes that the success of the curriculum depends on the articulation of programmes between the polytechnic and industry. The Body therefore, encourage teaching staff in a particular institution to write their own curriculum stating the conditions existing in their institution under which the performance can take place and to follow that with the criteria for determining an acceptable level of performance. This philosophy allows the polytechnic to solve problems peculiar to its immediate community. Similarly, research efforts undertaken by the academic staff in the polytechnic should address developmental needs of its community.

b. Management Structure, Organization and Administration of the Polytechnic

The organizational structure of the polytechnic shows that the academic schools or colleges and support service units makes up the main components of the institution. For a typical Polytechnic, service units are the Registry (the central hub of the administration), the Library, the Bursary, the Works & Services, the Medical Centre, the Directorate of Students Affairs, the Academic & Physical Planning Unit, the Research & Development Centre, the Entrepreneurship Development Centre, the Consultancy & Industrial Services, and the Internal Audit. All academic departments are grouped into academic schools or colleges depending on discipline and headed by Deans or Directors. For purposes of control and co-ordination, the academic departments are linked with the central administration through their respective Deans or Directors.

The Polytechnic is managed by committee system in accordance with the statute of establishment. The School Board of Studies and Academic Board manage the academic matters at the school or college and the institutional levels, respectively. The Polytechnic Management Committee manages routine management issues. The Governing Council is the governing authority of the Polytechnic, and it has custody, control and disposition of all the property and finances of the Polytechnic. The Minister of Education is the Visitor, and he conducts a visitation of the Polytechnic in every five years for the purpose of evaluating the academic and administrative performance of the polytechnic (Federal Polytechnic Act, Amendment, 1993).

c. Academic Programme Development and Curriculum Delivery

NBTE, in addition to developing academic programmes for Polytechnic Education gives the curriculum specifications. Each polytechnic selects and mount programmes for which it has capacity and approval. Available academic programmes covers the fields of Agriculture & related technology, Printing & related technology, Engineering Technology, Science, computing and related technology, Information technology, Environmental Design Studies, Business & related studies, Finance & related studies, Hospitality & related technology, and Professional/Post-HND. Periodically, NBTE publishes "Directory of Accredited Programmes Offered by Polytechnics, Colleges of Agriculture and Similar Tertiary Institutions in Nigeria", the latest being the Year 2010 Edition.

Curriculum development and delivery had been consistent with the goals of training and acquisition of appropriate skills and development of mental, physical and social abilities and competencies as equipment for the individual to live in and contribute to the development of his society.

Characteristic features of the NBTE Curriculum and Course Specifications include the following:

i. The curriculum is in behavioural objectives and based on core of General Education, Foundation and Professional courses.

ii. The course specifications is structured into module; and each module is an independent body of knowledge and skills capable of being on its own or as a foundation for advanced work.

iii. Modules on management & entrepreneurial orientation, and computer & ICT literacy has been added to the General Education Courses

iv. Practical Exposure

v. Entrepreneurship Training

vi. Curriculum Structure

vii. Teacher's activities

viii. Separation of practical contents

ix. Learning resources requirements

x. Weekly activities

All students of specialized engineering, technical, business, applied science or applied arts programmes shall be required to have compulsory supervised industrial attachment as part of their regular studies in such a manner as may be prescribed by NBTE. Furthermore, educational (industrial) visit / field trip have become mandatory for students.

d. Institutional and Programmes Accreditations

NBTE assures quality of academic programmes and service delivery in the Polytechnics and Colleges of Technology through regular and periodic accreditation of the institutions and their academic programmes. Usually the accreditation team led by NBTE officials has representatives of the relevant professional bodies, academia, industry and practitioners.

During the programme accreditation exercise, adequacy or otherwise of the available resources including infrastructures, quality and quantity of faculty, staff and students, entry requirements, academic support services and facilities, staff-student ratio, success rate, among others are critically examined. The general well being, management of academic matters and support services, general routine administration and procedures are examined during institutional accreditation.

Polytechnics offering NBTE-accredited programmes can only award the National Diploma, Higher National Diploma or Full Professional Diploma (Post-Higher National Diploma) as appropriate to diplomates of the programmes.

e. Mechanism for Conducting, Funding, Monitoring and Publication of Research Activities

Academic staff in the polytechnics in two ways both as students' projects and as personally initiated projects carries out research activities. Most of the research efforts carried out, as students' projects are usually not original and often do not make significant contribution to knowledge. That is, they do not make large penetrations into scientific unknown. Indeed originality is not a requirement for acceptance of project works presented in partial fulfilment of the award of either of the diploma programmes. In personally initiated research work on the other hand, academic staff strives towards originality and breaking new grounds on the frontiers of knowledge because they want to get results of such efforts published in scholarly journals. Original research works that sought to break new grounds in knowledge are quite expensive and often require assistance of experience and senior colleagues for provision of guidance. Sometimes the facilities needed to carry out original research may be of special nature and sophistication and may not be available within the institution. But for the execution of students' projects and because of time limitation, institution laid as much emphasis as possible on simplicity of research methodology and the use of available infrastructures. This explains in part why not much is usually achieved in terms of paper publication benefit to academic staff in the polytechnic.

As part of staff development efforts directed at assisting polytechnic staff in the personally initiated research projects, Polytechnic Research Committees are established at the institutional and NBTE levels. In addition to funding, the NBTE committee ensures that such research projects are relevant, well planned with adequate and appropriate methodology / design, and the results are of practical application in our community. Monitoring and indeed funding strategies adopted ensure proper execution of well thought out project. The results of the research works that passed through the committee are in most cases accepted for publication in scholarly journals.

Furthermore, every academic staff in the public polytechnics are eligible to receive research grants from TETFUND Natioal Research Fund, an initiative of Tertiary Education Trust Fund. The grant supports research aimed at addressing the critical needs of the Nation's development aspirations.

Research Committee at the institutional level coordinates research activities in the polytechnic by:

vi. Reviewing, validating and endorsing research proposal to be funded by the institution or an external body.

vii. Assisting the researchers to claim their research fund from the sponsoring body.

viii. Advising the Rector on the modality of disbursing research funds to researchers.

ix. Supervising research undertakings being sponsored by the institution or external body in order to ensure performance as contained in the agreement.

x. Recommending appropriate disciplinary actions against defaulters to the institution's authority.

xi. Organising seminars and publicity on research activities of the polytechnics.

The objectives of the NBTE's Polytechnic Research Committee on the other hand, are to:

i. Create appropriate environments for research.

ii. Coordinate and monitor research efforts in the polytechnic system with a view to funding the ones.

iii. Ascertain that information on research activities in the polytechnics can be readily available, as such information will not only cub duplication of efforts but also encourage further development on research already done.

Academic staff wishing to take advantage of the funding facilities provided by NBTE is expected to submit research proposal in a specified format through his institution. The proposal must satisfy the following criteria:

i. The proposal must focus on development of appropriate technology since our local entrepreneurs target the products arising there from for use. On very rare cases do non-technology based projects receive attention for funding. However, such projects, which cannot be funded by NBTE but are found to be relevant to Nigeria's socio-economic sector are recommended for funding either by the institution or sent to related National Body.

ii. The proposal must be from accredited programme in the polytechnic to ensure that the institution has the capacity in terms of physical and human resources to undertake the project as well as minimise the cost of procuring equipment and consumables for the project which are supposed to be mostly available if the programme were accredited.

iii. The institution must have a Research Committee through which an endorsed proposal is routed to Polytechnic Research Committee requires that members should be technically qualified and very conversant with the Polytechnic Research Committee's guidelines on research proposals so as to avoid wasteful attempt of forwarding irrelevant project to the Polytechnic Research Committee.

iv. The proposal which has to be in fifteen copies must be in the right format as contained in the guidelines i.e. Form NBTE/PRC/P.1. In completing this format, investigators should endeavour to give relevant details of the information required since this will form the basis of

judging the project's viability or otherwise. Issues like the title of the project, field of research, delineation or scope, rationale / justification, research procedure to be adopted, project working drawing, available / unavailable facilities or consumables, and academic qualifications of the researcher(s) must be addressed.

The last element of the institutional structure for research activities in the polytechnic is the forms in which results of research projects undertaken by its academic staff are disseminated. Out of the several forms through which research results and innovations or fabrications are disseminated, paper presentation at seminars or conferences and exhibitions organized specifically for Nigerian polytechnics are the most commonly used ways employed by researchers in the polytechnic. Publication in academic or scholarly journal is the least used medium. Because the standard and quality of work required for publication in learned journals is perhaps the highest among the forms of publication of research results, the prestige of academic staff in the polytechnic suffers a drawback. In fact it is the low patronage of scholarly journals that separates the academic staff in the polytechnic from their counterparts in the university in terms of remunerations i.e. salary scale and allowances.

In order to boost the confidence of and encourage the academic staff in the polytechnics in their ability to publish articles in learned journals, NBTE established standard journals of national and international standards. These journals are Journal of Technical Education and Journal of Agricultural Technology. Both journals have on their editorial boards respected and notable academics in the polytechnic and university systems. Unfortunately, NBTE had stopped publications of these journals for undisclosed reasons. Added to this problem is the proliferation of substandard supposedly learned journals emerging from the Polytechnics all over the country and their increasing patronage. It is difficult to ascertain the peer review system of the said journals and it is doubtful whether the journals can meet the ISI Web of Science (now Thomson Reuters Web of Science) standards. Certainly papers published in these substandard journals will not contribute to the research output, impact and prestige for the polytechnic in the Rankings.

4. **Key Issues and Strategies for Achieving Academic Excellence in the Nigerian Polytechnic System**

   a. **Revision of Core Mission of Nigerian Polytechnics**

   Academic programmes offered in the Polytechnics cover a wide range of disciplines. However, the limitation of the power to award Diploma only raises the eligibility question in the Times Higher Education World Universities Rankings. Therefore, the Polytechnic statute must be amended to make the institutions degree awarding.

   Besides inclusion in the World Rankings, empowering the Polytechnics to award degree will further open access to degree programmes for teeming young Nigerians who were unable to gain admission into degree programmes in our universities. Okebukola (2002) while reporting on the state of university education in Nigeria asserted that between 1995 and

2001 less than 13% (average) of those who applied for admission were able to secure placement in universities. He affirmed that the limitation of spaces imposed restriction on access.

b. Maintenance of Healthy Learning Environment in the Polytechnic System

Times Higher Education of World Universities Rankings assesses the learning environment in higher education institutions from the student and the academic perspectives. That is,
   i. Staff-to-student ratio as a measure of teaching quality;
   ii. Ratio of doctoral to bachelor's degrees awarded as measure of teaching category;
   iii. Ratio of doctoral degrees awarded to academic staff as a measure of teaching reputation;
   iv. Institutional income scaled against number of academic staff as a measure of the general status of the institution, which gives a broad sense of the infrastructure and facilities available to students and staff.

All of the above performance indicators excepting those concerning the degrees awarded are not strange to the Nigerian Polytechnic System. Indeed they are parameters used in the NBTE accreditation exercises for institutions and programmes. If the polytechnic is made degree awarding, and that its administrators can continue with the good practice of maintaining a healthy staff to student ratio as stipulated in NBTE guidelines for accreditation the Nigerian polytechnics can then work its way into the World University Rankings. In addition, managers of the Polytechnics should maintain excellence in the application of institutional income to provision of infrastructure and facilities for teaching and research.

c. Reengineering of Research and Development Policy of the Polytechnic System

Research volume, income, reputation and influence are key indicators of the performance of overall research activities of an institution; hence they are used in the Times Higher Education World Universities Rankings. More specifically, the following indicators are rated:
   i. Scholarly papers/academic staff;
   ii. Research income/academic staff;
   iii. Research reputation survey; and
   iv. Research impact measured by citations per paper.

Like I noted earlier most of the papers produced by academic staff in the Nigerian Polytechnic System are published in substandard Journals. It must be emphasized that recognized Journals now carry "Impact factor" and by extension, the scholarly papers they contain. Also, there are scholarly sites that automatically record not only the citations, but by who and where? Google Scholar and ResearchGate being the most common.

It appeared therefore that the following problems, which in my opinion are responsible for low level of research activity in the polytechnics, must be addressed:

i. Generally poor research culture and lack of the right attitude and competence of academic staff to undertake research;

ii. Deplorable state of infrastructures and facilities for science and engineering based research;

iii. Lack of time allocated for research work in the determination of lecturer's workload; and

iv. Reward system does not seem to encourage participation in research.

Hopefully, the drawbacks identified can be solved if the following strategies are adopted for implementation:

i. Redefinition of lecturer's workload so that hours can be allocated for research activities as done for lectures and administrative duties;

ii. Establishment of a Research & Development Centre for the general management of institutional and individual research. This must be part of the Research & Development Policy of the Polytechnic;

iii. Making it mandatory for all academic staff to have Google Scholar and ResearchGate accounts so that their citations can be ascertained, harvested and monitored;

iv. Establishment of a Polytechnic Central Research Laboratory where all expensive and highly specialized science equipment and instruments will be pooled for joint utilization of all faculty members and staff;

v. Encourage all academic staff to publish their scholarly papers in ISI Thomson Reuters Web of Science Journals;

vi. Instituting budgetary allocation for research grants to faculty;

vii. Establishment of International Office & Linkages to attract research collaborators from other institutions abroad. This Office will serve as a link to the outside world from where it can source exchange programmes and research grants for both students and faculty;

viii. In line with the present-day practice, the Polytechnic Library should be upgraded and renamed "Learning Resource Centre" to provide support materials for learning and research.
Consequently, the following improvement in the library services are suggested:

    a. Sufficient funding to enable it perform its traditional roles of providing support services to faculty;

    b. Pattern of funding should be fashioned after that of the university, where direct provision is made for the library as a percentage of capital subventions to the institution; and that

    c. Library should have Internet connectivity and register with relevant research report collation sites for literature support.

ix. General funding provision for the Polytechnics should be partly based on the extent of research activities in the institutions.

Efforts should be geared towards improving infrastructures facilities in the polytechnics. This should be addressed seriously. The regular capital allocation in the usual subvention to the polytechnic cannot meet the need for providing infrastructures required for research activities and accreditation of science and engineering based programmes. Laboratory instruments, engineering workshop, and studio equipment are very expensive. Therefore, funding in the form of grant is required to refurbish and raise the standard of the infrastructures facilities in the polytechnics.

d. Strengthening the Polytechnic-Industry Linkage for research and product development

Times Higher Education World Universities Rankings captures in the table, university's ability to help industry with innovations, inventions and consultancy as a measure of knowledge transfer. The Industry income represents research income earned by the institution scaled against the number of academic staff.

The relationship that exists between the polytechnics and the industry is a mere partial involvement in the development and monitoring of the curriculum. The industry absorbs the students for Industrial Work Experience Scheme, only. The institutions have not responded well enough to the research and development needs of the industry. More so, that the polytechnics are performing below expectation especially in the field of research and development. Also, not much has been recorded in the area of copy technology and innovation.

The need to change the trend if the polytechnic would do well in the World Rankings is imperative. The managers of the polytechnics must make concerted efforts first, to identify major industries within their catchment areas with their research and development needs; and second seek collaboration with the industry for research and development solution.

e. Improvement of the visibility (i.e. web page) of the Polytechnics

Web presence and visibility are the key quality parameters of academic excellence that are measured in the Webometrics Ranking of World Universities. The Web covers formal (e-journals, repositories) and informal scholarly communications. In addition, other activities of the academic staff are depicted by their web presence. Consequently, the Webometrics Rank covers: Visibility (external inlinks), 50%; Size (web pages), 20%; Rich Files, 15%; and Scholar (Google), 15%.

I assume that all Nigerian Polytechnics have their website fully functional and that they have deployed Education Portal where administration of students records beginning from admission and registration to collection of academic transcript or statement of results is managed. A fully functional portal will have payment solutions and library management solutions. If it so, a little modification to accommodate the following

operations or activities will suffice to open the polytechnics to the outside world:

    i.   Open institutional e-mail account for all managers, administrators, faculty, staff and students;

    ii.   All faculty members must upload, in an approved format, their profile on the Institution's website;

    iii.   All faculty members must have Google Scholar and ResearchGate Accounts;

    iv.   Create a Repository for the Institution on the website and must be updated regularly by faculty members;

    v.   All academic activities on campus must be announced and reported as News on the website;

    vi.   All faculty members must deliver their lectures using ICT facilities so that lectures, tutorials and assignments must be uploaded on the Polytechnic Portal;

    vii.   The Polytechnic must adopt ICT policy that prohibits connection of link with sites where obscene materials are posted.

f. Establishment of ICT Centre

It is necessary to establish Information and Communication Centre headed by a Webmaster to manage among others the Institution's website and control with the information upload. Competent technical personnel in ICT infrastructures maintenance and Wi-Fi bandwidth management for the institution must support the Webmaster. The Centre must be under the direct supervision of the Rector.

g. Amendment of the Recruitment Policy to promote Internationalization of the Polytechnic

Diversity on university campus and to what extent academics collaborate with international colleagues on research depicts its international outlook and its success on the world stage. Top universities compete for the best faculty around the world. Consequently, the Rankings procedure looks at: ratio of international to domestic students; ratio of international to domestic staff; and proportion of a university's total research journal publications that have a least one international co-author and reward higher volumes.

The question is – how international in outlook are the Nigerian Polytechnics? Of course, the answer is obvious! A cursory look at the mix in a typical Nigerian Polytechnic campus depicts a regional rather than national in outlook despite the prescribed JAMB admission formula. Concerted effort therefore must be made to attract international students and staff to our polytechnics. This means the institution's policies on student admission and staff recruitment must be amended to accommodate influx of foreign students and staff. Additionally, a functional International Office and Linkages, if established will facilitate internationalization of the polytechnic.

5. Conclusion

From the foregoing therefore, I am inclined to conclude this lecture by calling on the Nigerian Polytechnics to be trendy and join in the race for the topmost in the World University Ranking for academic excellence in the delivery of their core mandate of teaching, research, knowledge transfer and service. In addition to earning respect from the global academic community, the polytechnics will be internationalized and attract foreign students and faculty. Furthermore, the polytechnics will generate foreign income through international students. However, certain internal structural and organizational changes must be made in the statute of establishment, faculty's attitude towards research and operational procedures for the conduct of academic activities.

Thank you for your attention.

References
1. Decree 16 (1985) Education (National Minimum Standards and Establishment of Institutions).
2. Federal Polytechnic Act, Amendment (1993)
3. Federal Polytechnic Act. Cap 139, Laws of The Federation of Nigeria. 1990.
4. FGN (1992) Views and Comments of the Federal Government on the Report of the Commission on the Review of Higher Education in Nigeria. Government Press. Lagos. 56pp
5. IUN (2005) Definition and Characteristics of Academic Excellence. Indiana University of Northwest www.iun.edu/.../Definitions_and_Characteristics_of_Academic_Excellence_ draft_8-19-05.doc
6. National Bureau of Statistics (2015) Nigerian Formal Education Sector – Summary Report: 2010-2012. February 2015.
7. Okebukola, P. (2002) The State of University Education in Nigeria.